3200+ NCLEX-RN Sure Pass Archer Review

Question 1

Type: single_choice

The nurse has attended a staff education program about blood transfusion reactions.

➢ Which of the following statements by the nurse would indicate a correct understanding of how to prevent a febrile reaction?

A. "The blood product recipient should be thoroughly screened for any infectious diseases."

B. "Leukocyte-reduced blood products should be used." ✓ Correct

C. "A prescribed antihistamine should be administered before a transfusion."

D. "ABO compatibility should be verified between the blood donor and recipient before transfusion."

Explanation

Choice B is correct. Leukocyte-reduced blood products should be used when possible. Leukocytes in transfused blood can trigger febrile non-hemolytic transfusion reactions by releasing cytokines or causing immune sensitization in the recipient. Clinical guidelines recommend using leukocyte-reduced blood products (RBCs and platelets) to decrease the risk of febrile reactions, as well as to reduce alloimmunization and the risk of transmission of leukocyte-associated pathogens such as cytomegalovirus (CMV).

Choice A is incorrect. The donor's blood product is screened for infectious diseases, not the recipient's. Screening, combined with a detailed donor questionnaire, is performed to minimize the risk of transmitting blood-borne pathogens. Donor blood is tested for diseases such as syphilis, human immunodeficiency virus (HIV), hepatitis B and C, West Nile virus, and other pathogens. Although recipients undergo crossmatching for compatibility in RBC transfusions, this does not relate to infectious disease screening.

Choice C is incorrect. Antihistamines have no role in managing febrile reactions. Febrile non-hemolytic reactions occur due to cytokines released by donor leukocytes or recipient sensitization to donor antigens, not histamine. Antihistamines such as hydroxyzine or diphenhydramine may be prescribed to prevent or treat allergic transfusion reactions, which involve histamine-mediated responses.

Choice D is incorrect. ABO compatibility does not influence febrile reactions. While verifying ABO compatibility is critical before administering fresh frozen plasma or packed red blood cells to prevent hemolytic transfusion reactions, it does not prevent febrile reactions. Platelets generally do not require ABO compatibility, but platelet transfusions may still provoke reactions due to HLA or other antigen incompatibilities.

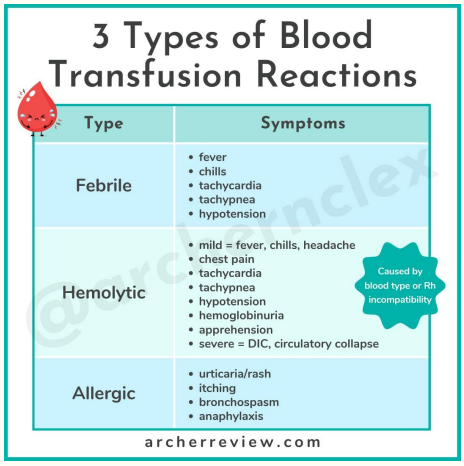
Additional Info

✓ Febrile transfusion reactions occur most often in the client with anti-WBC antibodies, which can develop after multiple WBC and platelet transfusions

✓ Manifestations of a febrile reaction include chills, tachycardia, fever, hypotension, and tachypnea

✓ Treatment includes notifying the physician and administering prescribed medications such as naproxen or acetaminophen

✓ Administering leukocyte-reduced blood or single-donor HLA-matched platelets reduces the risk of this type of reaction



Information Source

Ignatavicius, D., Workman, M. L. (102020). Medical-Surgical Nursing, 10th Edition.

Question 2

Type: single_choice

The nurse is working with a group of students and a student asks what cyanosis means.

➢ What is the nurse's **best** response?

A. Cyanosis is a condition characterized by a yellowish discoloration of the skin and mucous membranes due to excessive oxygenation.

B. Cyanosis is the blue coloring of the skin and mucous membranes in the presence of poorly oxygenated blood. ✔ Correct

C. Cyanosis is the primary indication that the client has pneumonia.

D. Cyanosis is the bluish discoloration of the skin and mucous membranes due to poor peripheral circulation, even in the presence of normal oxygen levels.

Explanation

Choice B is correct. Cyanosis is the bluish discoloration of the skin and mucous membranes that results in the presence of poorly oxygenated blood.

Choice A is incorrect. Cyanosis is not associated with yellowish discoloration; rather, it is characterized by a bluish or purplish tint of the skin and mucous membranes.

Choice C is incorrect. Compromised respiration related to pneumonia may result in cyanosis if treatment is not initiated promptly, or if compromise continues. However, it is not the primary indication of pneumonia.

Choice D is incorrect. Poor peripheral circulation can cause localized bluish discoloration, however, true cyanosis is primarily due to reduced oxygenation of hemoglobin in the blood. Cyanosis does not occur in the presence of normal oxygen level.

Additional Info

✓ Cyanosis refers to a bluish discoloration of the skin, mucous membranes, or nails caused by an increased amount of deoxygenated hemoglobin in the blood. It is often a clinical sign of inadequate tissue oxygenation and can indicate an underlying medical condition or respiratory problem.

✓ When a client presents with cyanosis, it is crucial to assess the extent and distribution of the discoloration. Examine the lips, tongue, nail beds, and extremities for cyanosis, and note whether it is generalized or localized to specific areas.

✓ Measure the client's vital signs, including heart rate, blood pressure, respiratory rate, and oxygen saturation. Monitoring oxygen saturation using pulse oximetry provides objective data on the client's oxygen levels.

Question 3

Type: single_choice

Which of the following clients should the nurse assess first when preparing to do initial rounds?

A. The client with diabetes who is being discharged today.

B. A 32-year-old female with a tracheostomy experiencing copious secretions. ✔ Correct

C. A 16-year-old scheduled for physical therapy this morning.

D. An 80-year-old male with a decubitus ulcer that needs a dressing change.

Explanation

Choice B is correct. The patient with airway compromise should always be given the highest priority. Remember ABC (Airway, Breathing, Circulation).

Choices A, C, and D are incorrect. None of the patients in these answer options indicate a priority for the initial assessment.

NCSBN Client Need Topic: Safe and Effective Care Environment - Coordinated Care, **Subtopic:** Prioritizing Patient Care

Question 4

Type: single_choice

Which of the following members of the intradisciplinary team should be consulted for an infant suspected of having

Celiac disease?

A. Pharmacist

B. Pulmonologist

C. Occupational therapist

D. Dietician ✔ Correct

Explanation

Choice D is correct. Consulting with a dietician is of the utmost importance for the patient who is suspected of having Celiac disease. The dietician is the expert in this area and will provide support, education, and a dietary plan for this patient. Learning to avoid gluten can be difficult for the family, so the dietician is the best resource to help them navigate this.

Choice A is incorrect. A pharmacist may be involved in the intradisciplinary team, but there is another specialist of particular importance in the answer choices (a dietician) for the patient with Celiac disease.

Choice B is incorrect. It is not necessary to consult with a pulmonologist for a patient with Celiac disease. They should not be experiencing respiratory issues, as Celiac disease is a gastrointestinal disorder.

Choice C is incorrect. It is not necessary to consult with an occupational therapist for a patient with Celiac disease. Celiac disease is a gastrointestinal disorder that should not affect the normal functioning and ADLs of this patient.

NCSBN Client Need: Topic: Effective, safe care environment, **Subtopic:** Coordinated care; Pediatrics - Gastrointestinal

Question 5

Type: single_choice

A nurse is preparing a plan of care for a client who is a Jehovah's Witness and may require a blood transfusion during surgery.

➢ The nurse recognizes that the traditional beliefs of this faith may

A. allow a blood transfusion only from another individual of the same faith.

B. allow only blood transfusions that are washed and leukocyte-reduced.

C. permit an autologous blood transfusion.

D. decline a blood transfusion. ✔ Correct

Explanation

Choice D is correct. Jehovah's Witnesses traditionally refuse blood transfusions based on their religious interpretation of scriptures (e.g., Acts 15:28-29) that prohibit the intake of blood. This includes whole blood and its primary components: red cells, white cells, platelets, and plasma. Most adherents will decline blood transfusions even in life-threatening situations. Respecting this belief is a legal and ethical obligation in healthcare.

Choice A is incorrect. Jehovah's Witnesses do not accept blood transfusions regardless of the donor's religious background. Their refusal is not based on the donor's identity but rather on a theological prohibition against receiving blood.

Choice B is incorrect. Washing and leukocyte reduction are methods used to minimize transfusion reactions or immunological complications. Still, they do not change the fact that the blood product contains components Jehovah's Witnesses object to. Therefore, such blood products are still typically refused unless the client accepts the specific fraction individually after informed discussion.

Choice C is incorrect. Jehovah's Witnesses generally do not accept autologous blood removed from the body and stored for later use because they believe blood must remain within the circulatory system. However, some individuals may accept intraoperative blood salvage (cell saver techniques) if the blood is kept in a continuous circuit and not stored. Acceptance varies, so clarifying personal beliefs through informed consent is essential.

Additional Info

✓ Jehovah's Witnesses believe it is against God's will to receive whole blood or certain blood products; therefore, they will often refuse these transfusions, even if it is their own blood.

✓ The willing acceptance of blood transfusions by Jehovah's Witnesses has in some cases led to expulsion from and ostracization by their religious community.

✓ Given the divergent beliefs about receiving blood amongst followers of the religion, it is imperative that the view of each individual Jehovah's Witness client on this aspect be carefully canvassed by the treating health care provider (HCP).

Information Source

DeLoughery, T. GF. (2020). Transfusion replacement strategies in Jehovah's Witnesses and others who decline blood products. *Hematology and Oncology*, *18*(12). https://www.hematologyandoncology.net/files/2020/12/ho1220DeLoughery.pdf

Question 6

Type: single_choice

A client sustained a right leg fracture after an industrial accident and reports tingling and severe pain inside the newly applied plaster cast. Upon inspection, the nurse noted that the exposed toes were cyanotic. What is the **most appropriate** nursing intervention?

A. Apply heat packs on the leg

B. Elevate the affected extremity

C. Contact the physician immediately ✔ Correct

D. Instruct the client to move or wiggle their toes

Explanation

Choice C is correct. Severe pain, tingling, and cyanosis are signs of impaired circulation likely caused by the client's cast resulting in tissue ischemia. Upon the nurse noting these assessment findings, the nurse should immediately assume acute compartment syndrome is developing, a severe complication that may result in limb loss or, in some cases, life. Based on the assessment findings and correlating assumption of acute compartment syndrome, the nurse should immediately notify the client's health care provider (HCP) directly, as the **client's cast should be removed immediately** to relieve the pressure and prevent any tissue damage (or further tissue damage). Following the nurse notifying the HCP, the nurse should gather all of the equipment required to remove the client's cast and have the equipment at the client's bedside ready for use once the HCP arrives at the bedside.

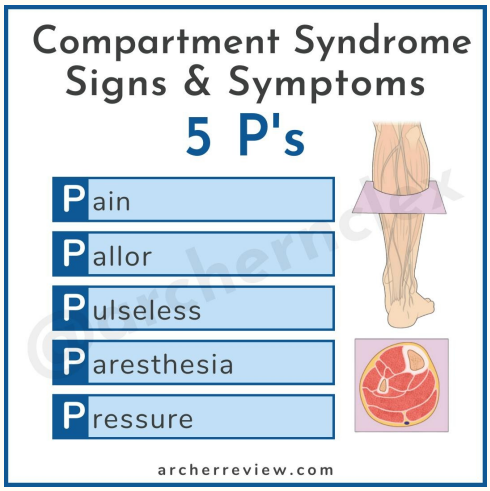
Choice A is incorrect. Applying heat packs on the client's leg will only delay the needed treatment (i.e., cast removal), worsening the client's outcome.

Choice B is incorrect. Elevating the affected extremity will not only decrease any existing blood flow currently perfusing to the extremity but will only serve to delay the needed treatment (i.e., cast removal), ultimately worsening the client's outcome.

Choice D is incorrect. Instructing the client to move their toes will only delay time until the needed treatment (i.e., cast removal) occurs, worsening the client's outcome.

Additional Info

- Compartment syndrome often described as "a self-perpetuating cascade of events," is increased tissue pressure within a closed fascial space, resulting in tissue ischemia.
- The earliest symptom is pain **out of proportion** to the severity of the injury.
- An injury may cause compartment syndrome to the region via trauma, orthopedic procedure, burn, snakebite, compressive device, etc.
- Early recognition of symptoms is imperative.
- Some refer to signs of compartment syndrome as the "five P's of tissue ischemia," including pain, paresthesias, paralysis, pallor, and pulselessness.
- As ischemia progresses, necrosis begins and will continue to worsen.
- If the compartment syndrome remains untreated, limb loss and, at times, death are possible.



Source : Source: Archer Review

Question 7

Type: single_choice

The **most frequent** threat to technological and information security in a healthcare facility is which of the following?

A. Computer hacking by a foreign country

B. Computer hacking by a United States citizen for ransom

C. Failure of employees to log off computer systems and sharing of passwords with others ✔ Correct

D. A major electrical failure in the facility

Explanation

Choice C is correct. The most significant threats to a healthcare facility's technological and information security are the failure of employees to log off computer systems and sharing of passwords with others. These actions put the employee and confidential client medical records at risk.

Choice A is incorrect. Although foreign countries often engage in computer hacking, this type of event is far less frequent than other types of threats.

Choice B is incorrect. Although United States citizens often engage in computer hacking (often for ransom), this type of event is far less frequent than other types of threats.

Choice D is incorrect. Although a significant electrical failure can disrupt internal communications and the use of various types of technology, this type of event is far less frequent than other types of threats.

Additional Info

In 2021, U.S. Department of Health & Human Services (HHS) received reports of data breaches from 578 healthcare organizations, impacting more than 41.45 million individuals.

Question 8

Type: single_choice

The nurse is caring for a client three hours following a bronchoscopy.

➢ Which assessment finding requires follow-up by the nurse?

A. The client coughs when having small sips of water

B. The client reports a sore throat

C. The client has blood-tinged sputum

D. The client reports that he cannot catch his breath ✔ Correct

Explanation

Choice D is correct. The client states they feel short of breath, indicating possible respiratory distress. A common complication of bronchoscopy is pneumothorax. The nurse should immediately assess the client for other pneumothorax symptoms (decreased breath sounds on the affected side, tachypnea, tachycardia) and initiate appropriate interventions.

Choice A is incorrect. The client's coughing indicates that their cough and gag reflexes are returning. These protective reflexes prevent the aspiration of food, water, and other foreign bodies into the lungs.

Choice B is incorrect. Due to the possibility of trauma to the larynx and/or pharynx by the bronchoscope, a temporary sore throat is a possible side effect following a bronchoscopy present in some clients.

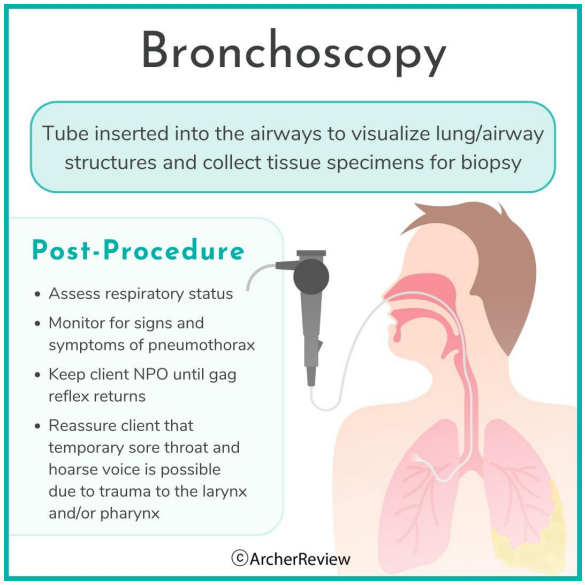
Choice C is incorrect. The client's coughing up blood-tinged sputum should not be a cause for alarm to the nurse as this occurred due to irritation to the throat during the procedure. If the client were experiencing frank bleeding, this would be highly concerning.

Additional Info

✓ A bronchoscopy is a procedure used to examine the lungs and collect tissue samples for biopsy.

✓ Although rare, a pneumothorax does occur in 2-5% of post-transbronchial biopsy clients. Manifestations of this complication may include dyspnea, tachypnea, tachycardia, and coughing.

✓ The nurse should not feed the client until the gag reflex has returned.



Source : Archer Review

Question 9

Type: single_choice

You are the nurse manager of the surgical acute care unit. You have noticed that several clients have almost been sent to the preoperative suite when they are not scheduled for a planned surgical procedure. Fortunately, no clients have gotten a “wrong surgery” because this possible error was caught in time. What is your priority action as the nurse manager?

A. Praise the staff for catching these near misses before a surgical error occurs.

B. Investigate and explore this near miss. ✓ Correct

C. Investigate and explore this medical error.

D. Report the nature and frequency of these medical errors to the State Department of Health.

Explanation

Choice B is correct. You, as the nurse manager of this surgical unit, should investigate and explore this near miss to prevent further medical errors in the future. This is your priority action. It’s important to conduct near-miss investigations within 24 to 48 hours of the incident while memories are fresh about what happened and how the incident could have been prevented.

Know these definitions:

- **Near miss**: A near miss is defined as "any event that could have had adverse consequences but did not and was indistinguishable from fully-fledged adverse events in all but outcome." In a near miss, an error was committed, but the patient did not experience clinical harm, either through early detection or sheer luck. In the above question, the clients have not undergone the wrong surgery and therefore, it’s a near miss.
- **Sentinel event:** An unexpected occurrence involving death or serious physical/psychological injury. These events are called “sentinel” because they signal the need for immediate investigation and response. In the above question, the harm has not occurred. Therefore, it’s not a sentinel event.

Note that the terms "sentinel event" and "error" are not synonymous. Not all sentinel events occur because of an error and not all errors result in sentinel events.

Choice A is incorrect. Although you should praise the staff for catching these near misses before a surgical error occurs, the priority is to investigate what led to the near miss.

Choice C is incorrect. These near misses are not an actual medical error.

Choice D is incorrect. These near misses are not an actual medical error, so it does not have to be reported to the State Department of Health.

Question 10

Type: single_choice

The nurse is planning care for a child admitted with Rubeola. Which infection control precautions should the nurse implement?

A. contact transmission precautions

B. droplet transmission precautions

C. airborne transmission precautions ✔ Correct

D. no isolation precautions

Explanation

Choice C is correct. The infection control measure that must be initiated is airborne transmission precautions because the mode of transmission for rubeola, or measles, is airborne. This type of transfer occurs when the pathogen is carried in dust or droplets and remains in place for enough time to infect a person exposed to this air. Airborne precautions require the client to be placed in a room with negative airflow. Healthcare staff should don a respirator or N95 mask prior to entering the client's room. The door should remain closed.

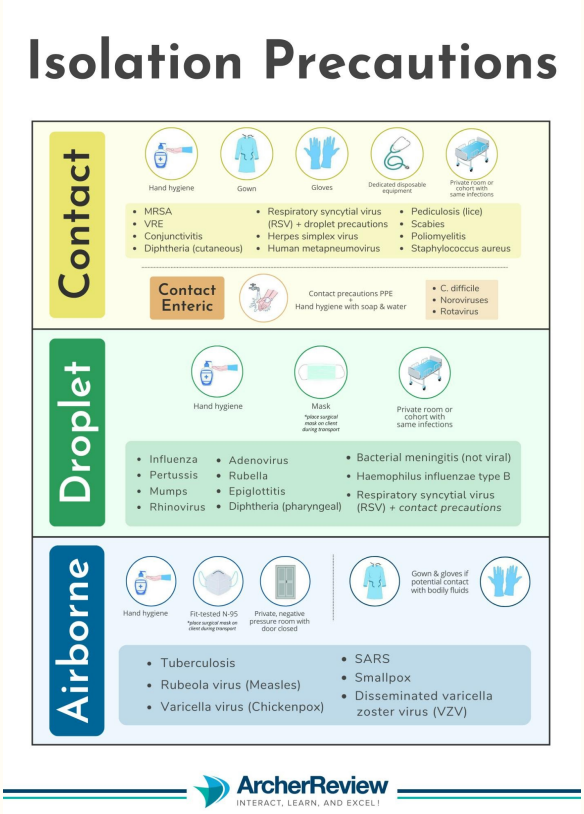
Do not confuse rubeola with rubella. Rubeola (measles) requires airborne precautions, whereas rubella requires droplet precautions.

Choice A is incorrect. Contact transmission precautions are used for infectious diseases spread with contact with the client or the client's environment. Contact transmission precautions prevent infections such as C. difficile and shigella.

Choice B is incorrect. Droplet transmission precautions prevent infections from spreading with particle drops larger than 5 microns. Droplet transmission precautions prevent rubella, pneumonia, and scarlet fever.

Choice D is incorrect. Isolation of a client with rubeola requires airborne precautions.

Additional Info



Question 11

Type: single_choice

The nurse is providing the client with information regarding advanced directives.

➢ The nurse understands that giving this information supports the client's

A. right to privacy.

B. right to emergency care regardless of the ability to pay.

C. self-determination. ✔ Correct

D. ability to receive appropriate treatment for their pain.

Explanation

Choice C is correct. A client who completes advanced care planning documents is asserting and using their fundamental right to self-determination. Self-determination is defined as the intrinsic right of all people, including healthcare consumers, to make autonomous decisions about accepting or rejecting care or treatments. Self-determination is respecting the client and their ability to outline care for themselves if they become incapacitated,

such as formulating advanced directives.

Choice A is incorrect. The right to privacy is essential for all clients. Privacy fosters an environment allowing the client to be honest. This is not an example of self-determination.

Choice B is incorrect. The right to emergency care, regardless of the ability to pay, is mandated in most countries. In the United States, this is referred to as the emergency medical treatment and active labor act (EMTALA).

Choice D is incorrect. The client receiving appropriate treatment for their pain is part of the client's bill of rights, not self-determination.

Additional Info

✓ Self-determination granted individuals the right to determine the medical care they wanted if they became incapacitated.

✓ Documentation of self-determination is accomplished by completing an advance directive (AD)

✓ Self-determination threads to a client's autonomy and requires the client to be informed of advanced directive options

Question 12

Type: single_choice

Ergonomic principles are most closely associated with:

A. Normal bodily alignment ✔ Correct

B. The control of infection

C. Preventing congenital abnormalities

D. Preventing hospital-acquired infections

Explanation

Choice A is correct. Ergonomic principles are most closely associated with normal bodily alignment. Ergonomics is defined as a body of knowledge and laws related to human anatomy, physiology, and proper physical alignment. Ergonomics and the ergonomic design of workplace items aim to protect the safety, comfort, and efficiency of work processes.

Choice B is incorrect. Standard precautions and transmission-based precaution principles are closely associated with the control of infection, not ergonomic principles.

Choice C is incorrect. Ergonomic principles have nothing to do with the prevention of congenital abnormalities. However, proper prenatal care standards and policies do.

Choice D is incorrect. Standard precautions and transmission-based precaution principles are closely associated with preventing hospital-acquired infections, not ergonomic principles.

Question 13

Type: single_choice

A nurse receives a client who has just returned from a circular skin punch biopsy to confirm a skin cancer diagnosis. The nurse should **prioritize** observing the site for:

A. Dehiscence

B. Infection

C. Bleeding ✔ Correct

D. Swelling

Explanation

Choice C is correct. A punch biopsy is usually performed using a circular blade ranging in size from 1 mm to 10 mm. The priority post-procedure concern is to monitor the site for bleeding.

Choice A is incorrect. Dehiscence is a partial or total separation of previously approximated wound edges due to a failure of proper wound healing. This scenario typically occurs 5 to 8 days following surgery when healing is still in the early stages. Additionally, dehiscence is more likely to occur in extensive wounds of the abdomen or thorax than minor wounds similar to those incurred while undergoing a punch biopsy.

Choice B is incorrect. Although infection is always a concern when a break in the skin occurs, this is not the primary concern at this time for two reasons. First, this wound was performed in a sterile, controlled environment. Second, if an infection is present, it would be too early for any signs or symptoms of an infection to be present.

Choice D is incorrect. Swelling is a normal reaction to any event that breaks the skin.

Additional Info

- Punch biopsy removes a full-thickness skin plug (up to 10 mm in diameter) and is useful in identifying diseases marked by pathologic changes in the deeper dermis.
- Sutures may not be needed for small punch biopsy sites.
- Small punch biopsy wounds (i.e., < 3mm) often do not require suture closure.
- Larger punch biopsy wounds are often closed with sutures.

Question 14

Type: single_choice

The nurse is teaching a leadership and management course and is discussing client referrals.

➢ Which of the following statements best describes the purpose of referrals?

A. "Allows the nurse to demonstrate their leadership abilities."

B. "Care is appropriately routed to an individual or discipline." ✔ Correct

C. "Ensures that care is unilateral and cost-effective."

D. "Focuses on empowering the client's decision making."

Explanation

Choice B is correct. The primary purpose of referrals is to ensure the completeness and appropriateness of the client's care. A registered nurse completes a referral to ensure that an appropriate individual or discipline meets the client's needs. For example, a client with a pressure ulcer or new ostomy is referred by the registered nurse to a wound/ostomy nurse for specialized treatment and counseling.

Choice A is incorrect. While making referrals is a professional responsibility, its primary purpose is not to showcase a nurse's leadership skills but to ensure clients receive specialized care.

Choice C is incorrect. Referrals aim to provide appropriate client care rather than focusing primarily on unilateral care. While cost-effectiveness may be a consideration, referrals are intended to ensure the client's needs are met through the correct provider, not to prioritize cost above all else. Care should be comprehensive and client-centered, not unilateral.

Choice D is incorrect. Although empowering clients is important, referrals are made to ensure clients receive specialized care from the correct provider. The purpose of referrals is more about routing care than directly empowering decision-making.

Additional Info

✓ The nurse makes referrals to ensure that clients receive appropriate and specialized care from the most qualified healthcare professionals or services.

✓ Referrals help direct the client to the right provider based on their specific needs, whether for medical, therapeutic, or support services.

✓ This process ensures that the client's health concerns are addressed promptly, effectively, and holistically, promoting optimal outcomes and continuity of care.

✓ Referrals also enhance the interdisciplinary collaboration necessary to deliver comprehensive care.

Question 15

Type: single_choice

A nurse is preparing to initiate an intravenous (IV) infusion for a client. As the nurse was about to connect the distal end of the IV tubing to the client's needleless access device, the tubing slipped and made contact with the top of the bedside table.

➢ Which of the following actions should the nurse take next?

A. Discard the tubing and replace it with new sterile tubing ✔ Correct

B. Discard the client's current needleless access device and replace it with a new one

C. Wipe the distal end of the tubing with povidone-iodine to render it sterile

D. Clean the needleless access device with an alcohol swab

Explanation

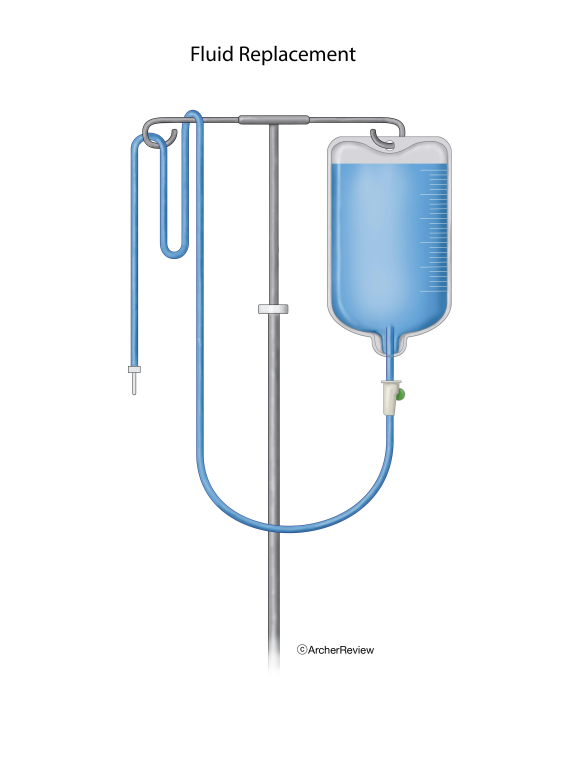
Choice A is correct. Once IV tubing has touched a non-sterile surface (like a bedside table), it is no longer sterile. Attaching it to the client would introduce a risk of bloodstream infection. The tubing must be replaced to maintain

aseptic technique and client safety.

Choice B is incorrect. There is no need to discard and replace the client's needleless access device, as this is not the device that has been contaminated.

Choice C is incorrect. Wiping the contaminated end of the tubing with povidone-iodine is insufficient and will not render this tubing sterile.

Choice D is incorrect. Although the client's needleless access device will be cleaned with an alcohol swab or other aseptic before connecting the intravenous infusion (after new tubing has been attached), here, for purposes of this question, there is no need to clean the client's needleless access device with an alcohol swab for purposes of decontamination. Following the exposed tubing slipping and hitting the top of the client's bedside table, the client's needleless access device was not the item that was contaminated.



Source : Archer Review

Additional Info

✓ Contamination of IV tubing should warrant it to be replaced.

✓ IV tubing can be a source of both peripheral and central line-associated bloodstream infections if the nurse does not adhere to appropriate spiking and priming.

✓ The nurse is not required to wear gloves while spiking and priming. However, the nurse should have performed hand hygiene prior to performing this task.

Information Source

Ignatavicius, D., Heimgartner, N., Rebar, C. (2023). Medical-Surgical Nursing, 11th Edition. p. 309

Question 16

Type: single_choice

The health care provider (HCP) places an order to administer gentamicin intravenously to a client with acute diverticulitis. It is important the nurse knows that intravenous gentamicin is administered:

A. Over one minute via IV push

B. Over two minutes via IV push

C. As an IV infusion over 15-20 minutes

D. As an IV infusion over 30 minutes to two hours ✓ Correct

Explanation

Choice D is correct. Gentamicin is a weight-based medication requiring the client's pretreatment body weight to calculate the correct dosage. For this reason (and to clarify the above order), it would be reasonable for the nurse to contact the health care provider (HCP) to clarify the above order prior to administration. Regarding the administration of gentamicin, the medication may be given intramuscularly or by intravenous infusion. An additional form of gentamicin is available in eyedrop form. When administering a single dose of intravenous gentamicin, the medication

is diluted in 50 to 200 mL of normal saline solution or 5% dextrose in water and intravenously infused over a period of 30 minutes to two hours.

Choice A is incorrect. Gentamicin is not recommended to be administered via intravenous push.

Choice B is incorrect. Gentamicin is not recommended to be administered via intravenous push.

Choice C is incorrect. Gentamicin is not recommended to be administered via intravenous bolus.

Additional Info

- Peak and trough serum concentrations of gentamicin are required to determine the adequacy and safety of the medication dosage.
- When such measurements are feasible, they should be carried out periodically during therapy to assure adequate but not excessive drug levels.

Question 17

Type: single_choice

Which activity would **best promote** a school-age child's development?

A. Pull toys

B. Pat-a-cake

C. Simon Says ✔ Correct

D. Shopping

Explanation

Choice C is correct. The most appropriate action for school-age children is Simon Says, as it promotes cooperation with some competition, refines communication skills (the children receive both inhibition and activation commands), and is a group activity.

Choice A is incorrect. Pull toys are best for developing autonomy and gross motor skills in toddler-age clients.

Choice B is incorrect. Pat-a-cake promotes imitation and development most appropriate for infant-age clients.

Choice D is incorrect. Shopping is most appropriate for adolescents, as it serves as a way to promote financial responsibility.

Additional Info

- Simon Says promotes listening and speaking skills in school-age children.
- The game also incorporates movement while promoting social interaction with peers.
- Simon Says also encourages the child to take the initiative, as the individual leading the game must choose and call out commands.

Question 18

Type: multiple_response_all

➢ Which of the following assessment findings require immediate follow-up? **Select all that apply.**

Answer Choices

A. 2+ pulse

B. fever Correct

C. influenza vaccine status

D. daily tobacco use

E. pleuritic chest pain Correct

F. systolic murmur Correct

G. petechiae on the skin Correct

Explanation

- The client's fever, night sweats, systolic murmur, pleuritic chest pain, and petechiae are concerning. While the

fever and night sweats suggest an infectious process, it is the petechiae and systolic murmur that indicate a more concerning pathology.
- A 2+ pulse is normal. A pulse of +1 is considered weak/thready and may be concerning for hypovolemia or atherosclerosis. A pulse of +3 is considered bounding and is concerning for fluid volume overload.
- Influenza vaccination status and daily tobacco use are not immediate concerns for the nurse. While this should be addressed during the client's care, it does not prioritize the client's physical issues of a febrile illness.

Question 19

Type: matrix_multiple_response

➢ For each client finding below, click to specify if the finding is consistent with the disease process of infective endocarditis, pulmonary tuberculosis, or influenza.

Each finding may support more than one (1) disease process.

client findings	infective endocarditis (IE)	pulmonary tuberculosis	influenza
fever	✔	✔	✔
cardiac murmurs	✔		
night sweats	✔	✔	
petechiae	✔		
nonproductive cough	✔		✔

Explanation

- Fever, cardiac murmur, night sweats, petechiae, and nonproductive cough are associated with infective endocarditis (IE). Other manifestations associated with IE include anorexia, malaise, abdominal pain, and weight loss.
- Fever and night sweats are classic features of pulmonary tuberculosis. The cough with pulmonary tuberculosis is often productive and may contain blood (hemoptysis). Pulmonary TB does not cause cardiac murmurs.
- Fever and a nonproductive cough are classic findings associated with influenza. Symptoms of influenza are often abrupt and include body aches, malaise, and headache.
- Night sweats are not found with influenza.

Question 20

Type: drop_down_cloze

➢ Complete the following sentence by choosing from the list of options.

Sentence Structure

The client is at highest risk for developing **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **infective endocarditis.** Correct
- pneumonia.
- pulmonary tuberculosis.

Correct Answer: infective endocarditis.

Explanation

- The client is at risk for infective endocarditis (IE). The client's history of intravenous drug use is a significant risk factor for IE. The manifestations also support this finding of IE (fever, cardiac murmur, night sweats, and petechiae).
- Clinical manifestations do not suggest pneumonia as petechiae and murmur are not expected findings of pneumonia. Clients with pneumonia present with more pronounced respiratory symptoms such as a productive cough and abnormal lung sounds.
- Pulmonary tuberculosis is excluded because cardiac murmur and petechiae are unrelated to TB. The client also has no history of TB exposure, no hemoptysis, and no weight loss, which are more typical of TB.

Question 21

Type: drop_down_cloze

➢ **Complete the following sentence by choosing from the list of options.**

Sentence Structure

The physician suspects that the client has infective endocarditis. To confirm this diagnosis, the nurse anticipates the physician will order a **[Dropdown]** that would reveal **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **echocardiogram** Correct
- exercise electrocardiogram (ECG) testing
- chest radiograph (x-ray)
- complete blood count

Correct Answer: echocardiogram

Dropdown #2

- reduced ejection fraction (EF).
- **vegetation or abscess.** Correct
- leukocytosis.
- myocardial ischemia.

Correct Answer: vegetation or abscess.

Explanation

- To confirm the diagnosis of IE, the physician will order echocardiography. This echocardiography can be the standard transthoracic or transesophageal. IE would be confirmed with the presence of vegetation or abscess.
- Exercise electrocardiogram (ECG) testing is used to detect myocardial ischemia. This type of testing attempts to identify coronary artery disease and whether further intervention with percutaneous coronary intervention (PCI) is necessary. In this testing, the physician will be evaluating the ST segment at specific intervals of the testing. This test is not used in diagnosing IE.
- Chest radiograph (x-ray) would not assist in the identification or confirmation of IE. This test would likely exclude a mediastinal shift or pulmonary disease.
- A complete blood count (CBC) would be done for an individual with IE. It will likely show leukocytosis. However, this is a supporting factor of IE. This is not a confirmatory diagnostic test because *many* pathologies increase the white count.

Question 22

Type: drop_down_cloze

The nurse reviews the vital signs, diagnostic results, laboratory results, and orders.

➢ **Complete the following sentences by choosing from the lists of options.**

Sentence Structure

Prior to the nurse administering the prescribed levofloxacin, the nurse should **[Dropdown]** The nurse reviews the orders with the client and the nurse should explain that the PICC line is necessary because **[Dropdown]** The nurse will need to notify the physician and question the order/prescription for **[Dropdown]** The nurse should also notify the physician with concerns regarding the client's **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **ensure that the blood cultures have been collected.** Correct
- question the order with the physician because of the client's documented allergy.
- wait for the temperature to return to normal limits.
- infuse the prescribed piperacillin-tazabactam first.

Correct Answer: ensure that the blood cultures have been collected.

Dropdown #2

- the prescribed antibiotics are vesicants.
- **the client will require several weeks of antibiotics.** Correct
- the client will require total parenteral nutrition.
- of the need for hemodynamic measurements.

Correct Answer: the client will require several weeks of antibiotics.

Dropdown #3

- acetaminophen (APAP).
- **ibuprofen.** Correct
- two sets of blood cultures.
- consultation with psychiatry.

Correct Answer: ibuprofen.

Dropdown #4

- ejection fraction (EF).
- serum electrolytes.
- **daily tobacco use.** Correct
- fever.

Correct Answer: daily tobacco use.

Explanation

- The echocardiogram shows the client has vegetation on the mitral valve. This finding confirms the diagnosis of infective endocarditis (IE).
- The nurse must ensure the blood cultures are obtained **before** administering the prescribed antibiotics. This is necessary so that the correct antibiotics are ordered.
- It is not required that antibiotic administration be delayed until the temperature returns to normal limits. The nurse has an order for APAP. That is sufficient to mitigate the fever.
- The client's allergy to azithromycin does not contraindicate the administration of levofloxacin.
- A PICC line is commonly indicated in the management of IE because several weeks of antibiotic therapy are necessary.
- Levofloxacin and Piperacillin-tazobactam are not vesicants. A vesicant antibiotic would be vancomycin.
- TPN is not relevant in the treatment of IE.
- This client is hemodynamically stable, and the purpose of the PICC line is for antibiotic administration, not hemodynamic measurements.
- The client's creatinine is elevated, and the nurse should notify the physician regarding the prescription for ibuprofen. Ibuprofen is an NSAID and may worsen renal insufficiency.
- A psychiatric consult is appropriate, considering the client's resort to IV drugs for increased anxiety. This is a maladaptive coping strategy requiring mitigation.
- Two sets of blood cultures are commonly ordered. One is for aerobic organisms; the other is for anaerobic organisms. The nurse must make sure that the samples are not contaminated. To do this, the nurse should clean the skin thoroughly with an antiseptic solution before collection.
- APAP is appropriate for this client as she is febrile.
- The client's EF is normal. An EF of less than 40% is a diagnosis of systolic heart failure. An EF of at least 55% is within normal limits.
- The physician needs to be contacted regarding the client's tobacco use. Nicotine withdrawals are unpleasant, and the physician may consider prescribing a nicotine patch to lessen the withdrawal.
- The nurse has a prescription for acetaminophen for the client's fever, so there is no need to notify the physician of an already ordered treatment.
- The client's electrolytes are within normal limits.

Question 23

Type: multiple_response_all

Three days later, the client is discharged to a rehabilitation facility with a peripherally inserted central catheter (PICC). Which of the following statements made by the client would require further teaching? **Select all that apply.**

Answer Choices

A. "My dressing will be changed every three days." Correct

B. "I should not lift any object heavier than five pounds."

C. "I will have to wear a mask while my dressing is changed."

D. "I will need to wear a cover over my PICC line when I shower."

E. "Because I am already getting antibiotics, I won't need to worry about infection." Correct

Explanation

Choice A is correct. A central line dressing change is completed every 7 days unless it is visibly soiled or not adherent to the skin—the more frequent the dressing changes, the greater the risk for infection. This statement requires follow-up because the client's understanding is incorrect.

Choice E is correct. This client will receive several weeks of antibiotics, but that doesn't negate the fact that the client cannot get another infection. This infection can be another strain of bacteria or a fungus. This statement requires follow-up because the client's understanding is incorrect.

Choice B is incorrect. A client discharged with PICC should not lift objects greater than five pounds because of the risk of catheter kinking or migration. This statement does not require follow-up because the client's understanding is correct.

Choice C is incorrect. During a dressing change, the client and the nurse will wear a mask to prevent the

transmission of droplet pathogens. This statement does not require follow-up because the client's understanding is correct.

Choice D is incorrect. While a client showers, they should wear a cover. These covers can be purchased at medical supply stores. The client should be instructed not to get the catheter wet or immerse it in bath water or a pool. This statement does not require follow-up because the client's understanding is correct.

Additional Info

✓ Infective endocarditis occurs primarily in clients with injection drug use (IDU) and those who have had valve replacements, have experienced systemic alterations in immunity, or have structural cardiac defects.

✓ This condition is caused by the invasion of bacteria that enter the client through contaminated needles, oral cavity following dental procedures, and/or skin abscesses.

✓ Classic manifestations of IE include

• Fever associated with chills, night sweats, malaise, and fatigue

• Anorexia and weight loss

• Cardiac murmur (newly developed or change in existing)

• Petechiae • Splinter hemorrhages

• Osler nodes (on palms of hands and soles of feet)

• Janeway lesions (flat, reddened maculae on hands and feet)

• Roth spots (hemorrhagic lesions that appear as round or oval spots on the retina) Positive blood cultures

✓ Treatment of IE is antibiotic therapy for several weeks.

✓ Complications include myocardial infarction, congestive heart failure, renal infarction, stroke, and septic arthritis.

Question 24

Type: single_choice

The nurse is reviewing laboratory data for assigned clients.

➢ Which laboratory result requires **immediate** follow-up with the primary healthcare provider (PHCP)?

A. Elevated amylase result in a client diagnosed with acute pancreatitis

B. Elevated white blood cell (WBC) count in a client with an infected leg wound.

C. Urinalysis positive for leukocytes and nitrites for a client receiving chemotherapy ✔ Correct

D. Serum glucose of 235 mg/dL (13.05 mmol/L) [70-110 mg/dL; 4–6 mmol/L] in a client with diabetes mellitus (type one)

Explanation

Choice C is correct. Chemotherapy agents increase clients' risk of infection due to **immune suppression**, specifically by decreasing neutrophils. **Neutropenia,** a reduction in the blood neutrophil count, is common in chemotherapy clients. The client's risk of bacterial and fungal infections increases with worsening neutropenia. Furthermore, if a bacterial or fungal infection occurs, the infection's likelihood of spreading to other parts of the body increases. Early antibiotic intervention may prevent sepsis. In a urinalysis, the **presence of leukocytes and nitrites** is indicative of a **urinary tract infection**. This result should alert the nurse to a potential urinary tract infection in this **immunocompromised** client, warranting the nurse to notify the PHCP of the result so a **complete blood count** (CBC) can be obtained and **antibiotic therapy** may be initiated **immediately.**

Choice A is incorrect. An elevated amylase result in a client diagnosed with acute pancreatitis is an anticipated finding and would not warrant reporting the result to the PHCP.

Choice B is incorrect. In a client diagnosed with an infected leg wound, an elevated white blood cell count (leukocytosis) is an anticipated finding. Leukocytosis usually occurs in response to infection, trauma, or inflammation. Since this client is known to be septic, the leukocytosis is an expected finding and, therefore, does not warrant the nurse immediately reporting this lab result to the PHCP.

Choice D is incorrect. The client's serum glucose level of 235 mg/dL (13.05 mmol/L) is above the normal range of 70-110 mg/dL (4-6 mmol/L). However, this is a relatively common finding in clients with type I diabetes mellitus and does not necessitate immediate reporting to the PHCP.

Additional Info

Source : Archer Review

✓ Neutropenia predisposes the client to bacterial and fungal infections.

✓ The risk of infection is proportional to the severity of neutropenia, with clients with **severe** neutropenia [**absolute neutrophil counts < 500/mcL (< 0.5 × 10^9/L)**] at the most significant risk.

✓ **Febrile neutropenic** clients are typically treated with **broad-spectrum** antibiotics **pending definitive identification** of the infection.

✓ Antibiotic prophylaxis may be indicated for some high-risk clients.

Question 25

Type: single_choice

The nurse is speaking with a client who is being evaluated for possible acute leukemia. Which of the following questions from the nurse is **most relevant**?

A. "How would you describe your sleeping patterns recently?"

B. "Have you experienced respiratory or other infections recently?" ✓ Correct

C. "Over the past few months, have you experienced weight fluctuations?"

D. "Have you noted any recent bowel changes?"

Explanation

Choice B is correct. A client with leukemia is at risk for bleeding tendencies and recurrent infections. The nurse should ask the client about the frequency and severity of infections, including common colds, influenza, pneumonia, bronchitis, and/or any unexplained fevers occurring over the preceding six-month period. Additionally, the nurse should inquire about any abnormal bleeding tendencies, which is another primary clinical manifestation of leukemia.

Choice A is incorrect. Although leukemia may be associated with insomnia, this is not one of the primary clinical manifestations of the disease.

Choice C is incorrect. Whether a client experiences weight loss (and the degree of any weight loss experienced) often correlates significantly with the type of leukemia the client is ultimately diagnosed. Some leukemias tend to cause higher rates of unexplained weight loss and/or loss of appetite in clients than other types of leukemias. If unexpected weight loss transpires, the client does not traditionally "experience weight fluctuations," as implied in the nurse's question above, as the client would be more likely to experience an unexplained weight loss.

Choice D is incorrect. Changes in a client's bowel habits should be cause for concern, as this may be a warning sign of cancer and should therefore be addressed by the appropriate health care provider (HCP). However, bowel changes are typically associated more with colorectal cancer than leukemia. While the nurse should ensure that the client is referred to the proper health care provider(s) (HCP) for evaluation of this concern, the main priority at this time is ensuring the client receives a complete evaluation for possible acute leukemia.

Additional Info

- Leukemia is a type of cancer found in the blood and bone marrow, caused by the rapid production of abnormal white blood cells (i.e., leukocytes).
- Changes in immunity increase the risk of infection in the client with leukemia.
- These abnormal leukocytes are not able to fight infection and impair the ability of the bone marrow to produce red blood cells and platelets.
- Although a blood count may indicate a normal or elevated level of leukocytes in a leukemia client, these cells are immature and thus unable to protect the client from infection.
- Leukemia also interferes with platelet function by reducing the ability to clot adequately.

Question 26

Type: single_choice

A 52-year-old client with a 20-year history of alcohol abuse is hospitalized with mild ascites, jaundice, and bruising. Imaging demonstrates the presence of esophageal varices, while the client's elevated serum ammonia level indicates hepatic encephalopathy. The nurse is concerned the client's esophageal varices may rupture and proceeds to educate the client accordingly. Which item should the nurse include in the client's education session?

A. "Do not lift heavy objects." ✔ Correct

B. "Avoid walking briskly."

C. "Avoid taking barbiturates."

D. "Avoid ingesting antacids."

Explanation

Choice A is correct. Primary prophylaxis to prevent the initial variceal bleeding episode is one of the most important strategies for reducing mortality in cirrhotic clients. As such, client education plays a significant role in managing esophageal varices. Lifting heavy objects, straining during defecation, stretching, and the Valsalva maneuver may cause a marked increase in variceal pressure and should, therefore, be avoided by clients with esophageal varices, cirrhotic clients, and those with portal hypertension.

Choice B is incorrect. Brisk walking is not contraindicated in clients with esophageal varices.

Choice C is incorrect. The use of barbiturates is not contraindicated in clients with esophageal varices.

Choice D is incorrect. The use of antacids is not contraindicated in clients with esophageal varices.

Additional Info

- Variceal bleeding is a consequence of portal hypertension, which, in turn, is the major complication of liver cirrhosis.
- The risk of variceal bleeding increases as variceal pressure increases.
- Variceal rupture is the most common fatal complication of cirrhosis.
- The severity of liver disease correlates with the presence of varices and the associated risk of bleeding.
- Bleeding from esophageal varices is the third most common cause of upper gastrointestinal bleeding (following only duodenal and gastric ulcers).

Question 27

Type: single_choice

A neonate is suspected of having a tracheoesophageal fistula.

➢ Which of the following findings would be consistent with a diagnosis of a tracheoesophageal fistula?

A. hypersensitive gag reflex.

B. dry mouth.

C. cyanosis. ✔ Correct

D. decreased level of consciousness.

Explanation

Choice C is correct. Cyanosis is a notable symptom in a neonate with a tracheoesophageal fistula. The cyanosis often results from a laryngospasm (a protective mechanism that the body has to prevent aspiration into the trachea).

Choice A is incorrect. A hypersensitive gag reflex is not a symptom traditionally related to a tracheoesophageal fistula. However, regurgitation can occur from secretions that pool in a blind pouch of the fistula. These infants may need more suctioning.

Choice B is incorrect. Individuals afflicted with tracheoesophageal fistulas typically display excessive salivation and drooling, not a dry mouth.

Choice D is incorrect. A decreased level of consciousness is not a symptom commonly associated with a tracheoesophageal fistula.

Additional Info

✓ A tracheoesophageal fistula is an abnormal passage or connection between the esophagus (typically the lower) and the trachea.

✓ Cyanotic spells, also known as blue spells, dying spells, or apparent life-threatening events, refer to a bluish tone visible in the mucosal membranes and skin caused by an oxygen decrease in the peripheral circulation.

✓ Esophageal atresia and tracheoesophageal fistula often occur together. The two conditions are also frequently seen in children with other birth defects of the spine, heart, kidney, genitals, ears, and limbs and delayed mental

development, physical development, or both.

Information Source

Murray, S., & McKinney, E. (2019). *Foundations of maternal-newborn and women's health nursing* (7th ed.). Elsevier. p. 685

Question 28

Type: single_choice

The nurse is planning client assignments in the mental health unit.

➢ Which task should the nurse delegate to the licensed practical/vocational nurse (LPN/VN)?

A. conduct a suicide assessment on a newly admitted client

B. administering prescribed lithium to a client with bipolar disorder ✔ Correct

C. leading a group therapy session for clients with depressive disorders

D. monitoring a client who is talking on the phone to a family member

Explanation

Choice B is correct. It would be appropriate for the nurse to delegate to the LPN/VN to administer prescribed medications. Administering medications by mouth, topically, intramuscular, otic, subcutaneous, intranasal, and intravenous piggyback is within the scope of the LPN/VN.

Choice A is incorrect. A registered nurse should administer a suicide assessment. The LPN/VN may collect data on a client's thought process, but the RN should execute a comprehensive assessment.

Choice C is incorrect. The RN should lead the group therapy session for clients as this will require facilitation and teaching skills.

Choice D is incorrect. The licensed practical nurse (LPN) should not be tasked with listening to the client's phone conversation, as the client should be provided privacy while communicating with others.

Additional Info

✓ The nurse who delegates a responsibility maintains overall accountability for the client. However, the delegatee performs the delegated activity, skill, or procedure.

✓ The nurse cannot delegate nursing judgment or any activity that involves nursing judgment or critical decision-making.

✓ Nursing responsibilities must be delegated by someone with the authority to do so.

✓ Any decision to delegate a nursing responsibility must be based on the needs of the client or population, the stability and predictability of the client's condition, the documented training and competence of the delegatee, and the ability of the licensed nurse to supervise both the delegated task and its outcome—with particular consideration given to the available staff mix and client acuity.

Question 29

Type: single_choice

You receive the change-of-shift report for an infant whose family has just been informed of the infant's cystic fibrosis diagnosis. As the nurse caring for this pediatric client and the family, which of the following should you **prioritize**?

A. Arrange and schedule a follow-up appointment with a pediatric pulmonologist

B. Provide emotional support for the family ✔ Correct

C. Arrange for financial assistance

D. Arrange for parental genetic testing, as the parents mention they want another child soon

Explanation

Choice B is correct. Following the recent diagnosis of a chronic and incurable genetic condition such as cystic fibrosis, this family will require significant emotional support. Throughout the shift, the parents will likely have numerous questions regarding the need to follow up on genetic counseling, treatment options, prognosis, and/or resources, making **Choice B** the priority.

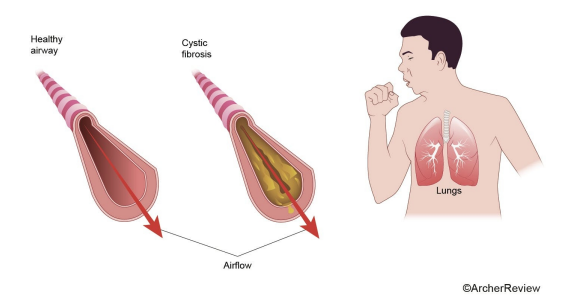
Choice A is incorrect. Based on the information in this question, there is no indication that this infant's discharge is pending, nor has a pediatric pulmonology referral been written.

Choice C is incorrect. Arranging for financial assistance is typically a lengthy, multi-step process. Procurement of financial assistance is the type of goal one would establish as a long-term goal for this family.

Choice D is incorrect. The parents must understand the risks of conceiving additional children but at this time, arranging for parental genetic testing is not the priority.

Additional Info

Source : Archer Review



Source : Archer Review

Source : Archer Review

Question 30

Type: single_choice

A client has used a condescending tone towards the nurse, subsequently angering the nurse. Which response by the nurse would be **most therapeutic**?

A. "That tone of voice makes me feel upset." ✔ Correct

B. "You make me angry when you talk like that."

C. "Are you trying to upset me?"

D. "Why do you use that tone of voice with me?"

Explanation

Choice A is correct. This response allows the nurse to provide feedback to the client without directly holding the client responsible for the nurse's reaction to the client's behavior.

Choice B is incorrect. Stating that the client made the nurse angry is accusatory and will likely block the opportunity for any further communication.

Choice C is incorrect. The client may construe this response as a challenging remark, leading to power struggles, lowering the client's self-esteem, and/or blocking open communication in the future. Additionally, this type of combative comment from the nurse could inadvertently trigger a defensive reaction from the client.

Choice D is incorrect. A nurse may be tempted to ask the client to explain why they believe, feel, or act in a certain way. However, requesting an explanation through the use of "why" questions is an inappropriate therapeutic communication technique and should be avoided. Questions starting with "why" or "what were you thinking" often indicate a presumption about the client, causing clients to interpret "why" questions as accusations. Asking the client "why" they thought, felt, or behaved a certain way can be very intimidating and implies that the client must defend their behavior or feelings. Instead of the current option, a more effective response for the nurse would be, "Describe what you were feeling just before you spoke to me."

Additional Info

- Therapeutic communication techniques are specific responses that encourage the expression of feelings and ideas and convey acceptance and respect.
- Nontherapeutic communication techniques discourage the expression of feelings and ideas and provoke negative responses or behaviors in others.

Question 31

Type: single_choice

While working in the nursery, a nurse assesses a newborn born less than two hours ago. Which of the following findings by the nurse would necessitate further investigation?

A. A diamond-shaped soft area present at the top of the newborn's head

B. Greasy, white substance that resembles cheese on the newborn's neck, back, and thighs

C. A single crease on the palm ✔ Correct

D. Acrocyanosis

Explanation

Choice C is correct. It is widely accepted that a finding of a single transverse palmar crease on the palm – often referred to as a simian line or simian crease – is often observed in a wide range of chromosomal defects, including, but not limited to, Down syndrome, congenital limb deficiency, trisomy 13/18/21, 4p, 18q, etc. Although this finding does not in and of itself render a diagnosis of a chromosomal disorder, this finding by the nurse would necessitate the need to alert the newborn's primary health care provider (HCP), as genetic and chromosomal testing will likely need to be performed.

Choice A is incorrect. Fontanels are one of a newborn's skull's most prominent anatomical features, helping to facilitate the movement and molding of the newborn's cranium through the birth canal during labor. The diamond-shaped soft area present at the top of the newborn's head is the anterior fontanel (also commonly referred to as a fontanelle), the largest of the six fontanels present at birth. The anterior fontanel typically fuses between 12 and 18 months of age.

Choice B is incorrect. This finding is indicative of vernix caseosa. At birth, a newborn's skin may be covered with vernix caseosa, a grayish-white, cheese-like substance composed of a mixture of sebum and desquamating cells. If it is not entirely removed during the post-birth bath, the newborn's skin will absorb any remaining vernix caseosa within 24 to 48 hours.

Choice D is incorrect. Acrocyanosis is often seen in healthy newborns and refers to the peripheral cyanosis around the mouth and the extremities (hands and feet). Unlike other causes of peripheral cyanosis with significant pathology (e.g., septic shock), acrocyanosis is a harmless condition caused by benign vasomotor changes that result in peripheral vasoconstriction and increased tissue oxygen extraction. Additionally, acrocyanosis is further differentiated from peripheral cyanosis as acrocyanosis occurs immediately after birth in healthy infants and is a common finding, at times persisting for 24 to 48 hours.

Additional Info

- Using simian creases to screen for certain known congenital chromosomal disorders and syndromes could be useful in conjunction with other diagnostic practices.
- Simian creases can be examined quickly without causing physical pain or incurring expensive medical bills.
- However, the detection of simian creases should not be used independently for diagnosing known associated chromosomal disorders and/or other disorders, but rather in combination with other diagnostic tests.
- A consensus statement based on the results of a study conducted by the National Association of Neonatal Nursing (NANN) and the Association of Women's Health Obstetrical and Neonatal Nursing (AWHONN) directed "removal of all vernix is not necessary for hygienic reasons" and "vernix may provide antibacterial promotion and wound healing."

Information Source

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Question 32

Type: single_choice

The nurse is providing care to an 11-week pregnant client who is complaining about hemorrhoids. The nurse recognizes that hemorrhoids can occur due to pressure on the rectal veins from the growing fetus. Which of the following measures is **not** recommended for alleviating hemorrhoid pain in this client?

A. Instruct the client to use mineral oil to soften her stools. ✔ Correct

B. Rest in a side-lying position daily.

C. Increase the client's fiber and water intake.

D. Apply a cold compress to the area.

Explanation

Choice A is correct. Mineral oil is not recommended during pregnancy as it can interfere with the absorption of fat-soluble vitamins and may have adverse effects. Safer alternatives, such as increasing fiber and water intake, should be encouraged.

Choice B is incorrect. Sleeping in a side-lying position removes the weight of the fetus on the superior and inferior vena cava, promoting venous return and decreasing venous pressure. This may help reduce pressure on the rectal veins, potentially alleviating hemorrhoid pain. It is a recommended measure during pregnancy.

Choice C is incorrect. Increasing fiber and water intake is a recommended measure to soften stools and prevent constipation, which can contribute to hemorrhoid development. It is considered a safe and effective approach during pregnancy.

Choice D is incorrect. Applying a cold compress can provide relief by reducing inflammation and discomfort associated with hemorrhoids. It is a safe and commonly recommended measure for alleviating hemorrhoid pain during pregnancy.

Additional Info

✓ Some studies suggest that up to 50% of pregnant women may develop hemorrhoids during their pregnancy. The risk tends to increase with advancing gestational age, and it's particularly common in the third trimester.

✓ Recommend Kegel exercises to strengthen pelvic floor muscles. These exercises can improve circulation in the pelvic area and may contribute to reducing the risk of hemorrhoids.

✓ Emphasize the importance of adequate rest and proper positioning to reduce pressure on the rectal veins. Suggest comfortable positions for sitting and sleeping to minimize discomfort.

Question 33

Type: single_choice

The nurse is planning a staff development conference about anaphylaxis. Which of the following information should the nurse include?

A. 0.9% saline should be infused once vascular access is established. ✔ Correct

B. The initial treatment is intravenous diphenhydramine.

C. The client should carry a prefilled syringe of hydrocortisone.

D. If shock occurs, the client should be positioned in reverse Trendelenburg.

Explanation

Choice A is correct. Anaphylaxis quickly causes a loss of vascular tone resulting in hypotension. Establishing intravenous access is **essential** as the client will require isotonic fluids to restore circulating volume, corticosteroids, and diphenhydramine. Epinephrine, the priority drug to be administered, should be given intramuscular (IM).

Choices B, C, and D are incorrect. *The immediate treatment of anaphylaxis is intramuscular (IM) epinephrine.* Diphenhydramine is commonly prescribed after epinephrine, but this would not be the immediate treatment. If a client is at risk for anaphylaxis, the client should be prescribed a prefilled syringed of epinephrine, not hydrocortisone. If a client should endure shock with anaphylaxis, raising the feet and legs would be appropriate. This position will facilitate perfusion to critical organs.

Question 34

Type: single_choice

The nurse has administered prescribed fluoxetine to a client with generalized anxiety disorder. The nurse discovers in the medical record that the client is also taking prescribed tranylcypromine. Which clinical manifestations would indicate that the client is experiencing an adverse effect from these two medications?

A. Low blood pressure and urinary retention

B. Muscle rigidity and hyperthermia ✔ Correct

C. Shortness of breath and pink, frothy sputum

D. Weakness and diaphoresis

Explanation

Choice B is correct. Fluoxetine is an SSRI, and tranylcypromine is an MAOI. Administering both an SSRI and MAOI puts the client at risk for serotonin toxicity (syndrome). Serotonin syndrome is a potentially life-threatening condition resulting from increased central nervous system serotonergic activity. Serotonin syndrome is often characterized by muscle rigidity, hyperthermia, autonomic hyperactivity, and altered mental status. Upon noticing these symptoms, the nurse must report these symptoms to the health care provider (HCP) immediately to initiate medical intervention.

Choice A is incorrect. Low blood pressure and urinary retention are not symptoms associated with serotonin syndrome.

Choice C is incorrect. Shortness of breath and pink, frothy sputum are symptoms typically related to pulmonary edema, not serotonin syndrome.

Choice D is incorrect. Weakness and diaphoresis are symptoms associated with hypoglycemia, not serotonin syndrome.

Additional Info

✓ Fluoxetine is in a class of medications called selective serotonin reuptake inhibitors (SSRI).

✓ Tranylcypromine is in a class of medications called monoamine oxidase inhibitors (MAOIs).

✓ Serotonin syndrome can result from therapeutic drug use, overdose of some drugs, or, most commonly, from unintended drug interactions when two drugs that each stimulate serotonin receptors (i.e., serotonergic drugs) are taken simultaneously.

✓ Both SSRIs and MAOIs are medications that, when combined, can cause serotonin syndrome.

✓ In severe cases, serotonin syndrome can cause seizures, coma, and even death.

✓ Treatment of serotonin syndrome typically involves discontinuing the offending medication(s) and providing supportive care for the symptoms.

Information Source

Tanen, D. (2023, March). *Serotonin syndrome.* Merck Manuals Professional Edition. Retrieved March 24, 2023, from https://www.merckmanuals.com/professional/injuries-poisoning/heat-illness/serotonin-syndrome

Question 35

Type: single_choice

The nurse is caring for a client who is postoperative following a lobectomy. The client is receiving fentanyl via an epidural. The nurse should monitor the client for which complication?

A. Diarrhea

B. Hypotension ✔ Correct

C. Hyperventilation

D. Urinary incontinence

Explanation

Choice B is correct. Epidural analgesia **commonly** causes clients to experience hypotension. The medication administered via epidural has an immediate onset and may cause a reduction in venous return and a decrease in afterload. Both of these factors will reduce the client's blood pressure. To prevent this complication, intravenous isotonic fluids are commonly prescribed before initiating the epidural. The nurse should also stress to the client the need to change positions slowly and call for help before getting out of bed to prevent orthostatic hypotension.

Choice A is incorrect. Opioids are commonly implicated in causing a decrease in gastrointestinal motility which results in constipation.

Choice C is incorrect. The nurse should monitor the client's vital signs frequently while receiving epidural analgesia because sedation leads to hypoventilation (not hyperventilation).

Choice D is incorrect. Urinary retention may occur associated with spinal and epidural analgesia because of the blockade of the efferent and afferent nerves supplying the bladder. Urinary incontinence is unexpected with this type of analgesia.

Additional Info

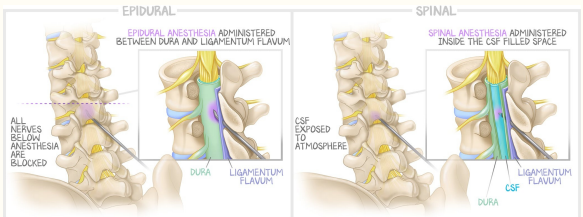
✓ The epidural space is entered at the L3-L4 interspace (below the end of the spinal cord), and a catheter is passed through the needle into the epidural space

✓ The catheter allows continuous infusion or intermittent medication to relieve pain during labor and vaginal or cesarean birth

✓ Epidurals are also used for lung surgeries to provide more targeted pain control

✓ Nursing care involves frequent assessment of vital signs, fall precautions, and monitoring for urinary retention

✓ The infusion of epidural medication also may be regulated by a patient-controlled epidural analgesia (PCEA) pump



Source : Archer Review

Question 36

Type: single_choice

A 12-year-old is diagnosed with a vaso-occlusive sickle cell crisis and complains of severe headaches. What should be the nurse's initial action?

A. Give oxygen at 6 liters per minute via nasal cannula.

B. Assess the client's neurologic status. ✔ Correct

C. Give an intravenous dose of morphine.

D. Increase the client's IV fluid rate.

Explanation

Choice B is correct. This client with sickle cell crisis has a high risk of cerebrovascular accidents (CVA). Since the client has a severe headache, it is best to rule out a CVA before initiating all other interventions.

Choice A is incorrect. Giving oxygen can help reduce the cells' sickling, but this is not the first intervention for the client's headache. Furthermore, oxygen-carrying capacity is reduced when the cells are actively sickling. Increasing oxygen content in the blood will not significantly improve the oxygen-carrying capacity in a non-hypoxemic sickle cell client. There is no indication that the client is hypoxemic. (Note: *If the information is absent in the question stem, that vital is considered normal. When evaluating the questions, do not add additional information to the question stems on the NCLEX).*

Choice C is incorrect. The nurse must first assess to determine whether the pain is from what is expected with the disease process or whether it is a complication. Administering pain medications right away would mask the actual disease process.

Choice D is incorrect. Hydration can help in decreasing the sickling of cells. Choice D indicates that IV hydration is already in place. In SCD, the client should be kept euvolemic. Hypervolemia should be avoided because it can cause additional problems that come from fluid overload. Increasing the IV hydration without assessing the volume status is not the first intervention for this client.

Question 37

Type: single_choice

The nurse is caring for a client who has an exacerbation of Bell palsy and is experiencing paralysis of their eye.

➢ Which of the following actions should the nurse take?

A. Tape an eye patch to the affected eyelid at all times.

B. Instruct the client to keep both eyes closed.

C. Assess the pupil's size and reactivity to light.

D. Apply the prescribed ocular lubricant to the affected eye. ✔ Correct

Explanation

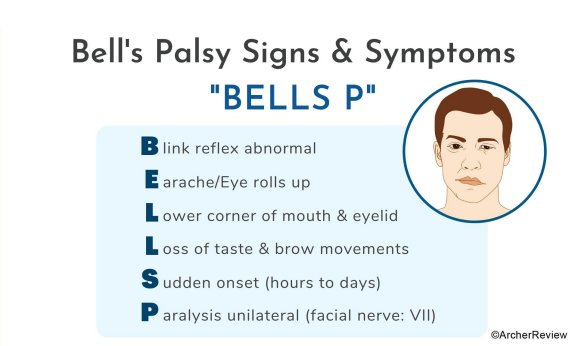
Choice D is correct. Bell's palsy is a lower motor neuron facial nerve palsy that can result in the weakness of facial muscles and the muscles responsible for eye closure (orbicularis oculi). A client with Bell's palsy who cannot blink would be unable to close the affected eye. As a result, the cornea becomes overly dry, leading to an increased risk of corneal ulceration and scarring. Eye lubricant (i.e., typically artificial tears) must be applied as often as every hour during the day to keep the eye moist and prevent corneal drying.

Choice A is incorrect. Applying an eye patch with tape on the eyelid may cause the patch to slip into the open eye and cause a corneal abrasion. During the day, the client should protect the open eye with glasses or goggles. At night, the client may use a soft eye patch to cover the open eye, but it should not be taped to the eyelid. Instead, the soft eye pad should be secured with one end of the tape on the client's forehead and the other end on the cheek diagonally.

Choice B is incorrect. It is not necessary for the client to keep the unaffected eye closed.

Choice C is incorrect. Bell's palsy does not affect the pupil's reaction to light and accommodation.

Additional Info



Information Source

Ignatavicius, D., & Workman, M. L. (2020). *Medical-Surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier. p. 831

Question 38

Type: single_choice

A client in a psychiatric clinic tells the nurse, "I want to kill my wife. The moment I see her, I am going to kill her." Which of the following should be the nurse's next action?

A. Respect the client's right to privacy and confidentiality

B. Document the client's statements

C. Notify the client's psychiatrist of the comments ✔ Correct

D. Explore the client's feelings about his wife

Explanation

Choice C is correct. Confidentiality plays a critical role in client care; however, there may be certain circumstances where confidentiality must be breached to not only ensure the safety of the client, but also to protect a third party (or parties). This concept is referred to as the 'duty to warn' or 'duty to protect.' These types of situations most often arise when a client reports suicidal ideation (SI), homicidal ideation (HI), or when the client makes a threat against an identifiable third party, even if the threat was made during a private therapy session.

Choice A is incorrect. As mentioned above, confidentiality plays a critical role in client care; however, there may be certain circumstances where confidentiality must be breached to not only ensure the safety of the client, but also to protect a third party (or parties).

Choice B is incorrect. Clear and accurate documentation of the client's statements and the context of the conversation is vital; however, the priority for the nurse is to ensure the safety of the client and the client's wife, likely best achieved by prompt reporting of the client's statements to the client's psychiatric health care provider (HCP).

Choice D is incorrect. Assisting the client in exploring their feelings regarding their wife would potentially further increase the client's anger toward her. Therefore, this is not an appropriate action for the nurse to take at this time.

Additional Info

- There is a wide range of 'duty to warn' and 'duty to protect' legal variations across the country, with nurses being impacted in varying degrees.
- It is crucial for all health care providers (HCPs) of all levels to know the laws in the state(s) in which they practice, as there are significant legal variations from state to state.
- Failure to know the applicable state statutes and/or regulations may lead to inadvertent violations of the Health Insurance Portability and Accountability Act of 1996.

Question 39

Type: multiple_response_all

➢ **Which of the following assessment findings require immediate follow-up? Select all that apply.**

Answer Choices

A. pulse, respirations, and blood pressure

B. neurological assessment Correct

C. temperature and pulse oximetry reading

D. current medications Correct

E. reports of dizziness Correct

F. lung sounds

G. reports of nausea Correct

H. arm pain

Explanation

- The neurological assessment requires follow-up because reports of dizziness, speech latency (the delayed time it takes for a client to respond to a question), and sluggish pupillary reaction to light all suggest a neurological injury.
- Nausea is also concerning because when a client has a head injury, nausea supports a potential concussion or injury.
- The client's current medications require follow-up because the client has been prescribed apixaban, an anticoagulant that may contribute to hemorrhage. Head injuries are serious enough, but the damage may be severe when a client takes an anticoagulant or antiplatelet.
- The client's vital signs are normal and do not require follow-up. Hypovolemia should be detected and treated promptly to maintain adequate cerebral perfusion pressure and avoid secondary brain injury. The systolic BP should be maintained at or above 110 mm Hg for most clients with traumatic brain injury (TBI). The client's blood pressure is comfortably above that level.
- The client's lung sounds being diminished isn't ideal but is not of significant concern. The client has no tachypnea or shortness of breath. If the client were suspected of having a pneumothorax, chest pain, coughing, and decreased pulse oximetry would be noted. This is not the case with this client.
- While the client does have arm pain, they have a full range of motion in the extremity without impaired pulses. This assessment finding is concerning but does not require immediate follow-up when compared to the impaired neurological status of the client.

Question 40

Type: matrix_multiple_choice

➢ Click to specify the issues the client is at risk of developing

Each row must have one (1) response selected

Potential issue	At risk	Not at risk
pulmonary embolism		Correct
abdominal aortic aneurysm rupture		Correct
traumatic brain injury	Correct	
bacterial meningitis		Correct
ischemic stroke		Correct
arm injury	Correct	

Explanation

- The client is at risk for developing a traumatic brain injury based on having fallen from the ladder, taking an oral anticoagulant, and having a neurological impairment documented on the history and physical.
- Pulmonary embolism and ischemic stroke are highly unlikely because the client takes an anticoagulant. The client is at risk for bleeding, not a clot.
- An abdominal aortic aneurysm (AAA) is caused by uncontrolled hypertension and atherosclerosis, not a head injury. Also, an AAA rupture would present with pulsatile abdominal mass, hypotension, and abdominal pain. The client has none of these manifestations.
- Bacterial meningitis is highly unlikely because while the scalp laceration allows for a portal of injury for pathogens, it will not allow pathogens to infect the meninges. If a skull fracture were present, this would be a concern, allowing pathogens to infect the meninges directly.
- An arm fracture is concerning because of the arm pain and discomfort in the extremity accompanied by bruising.

Question 41

Type: ngn_multiple_choice

➢ The client is at highest risk of developing

A. pulmonary embolism.

B. right arm contracture.

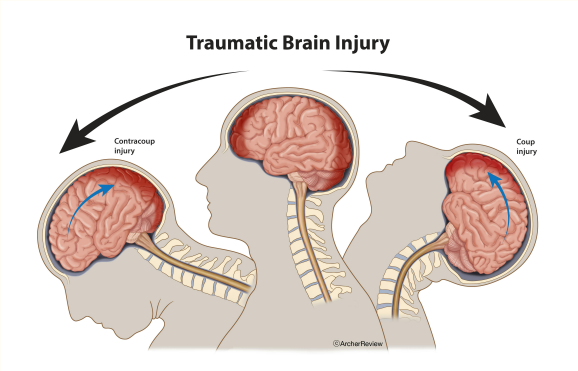
C. ischemic stroke.

D. traumatic brain injury. ✔ Correct

Explanation

- The client is at the highest risk of developing a traumatic brain injury (TBI) because of the client's anticoagulant use and head trauma. This is significantly concerning because of the client's clinical manifestations (headache, dizziness, nausea, and pupil alterations).
- The client has a lower risk of pulmonary embolism because they are taking anticoagulants.
- An arm fracture is concerning, but not a contracture. An arm fracture is due to pain and bruising in the right lower arm.
- Intracranial hemorrhage is a concern due to the prescribed apixaban, not an ischemic stroke.

Additional Info



Source : Archer Review

Question 42

Type: matrix_multiple_choice

The nurse reviews the Nurses' Note from 1619

➢ **For each potential order, click to specify whether the potential order is indicated or not indicated for the client**

Each row must have at least one (1) option selected

Potential Orders	Indicated	Not Indicated
intravenous fluid boluses		Correct
wound care	Correct	
computed tomography scan (CT) of the head	Correct	
right arm radiograph	Correct	
seizure precautions	Correct	
intravenous glucocorticoids		Correct
neurological assessment once every six hours		Correct

Explanation

- According to the vital signs, this client is hemodynamically stable. In clients with traumatic brain injury (TBI), cerebral blood flow autoregulation is impaired. Therefore, maintaining **euvolemic status** is essential to maintaining cerebral perfusion pressure because any event of hypotension is likely to cause secondary brain injury. The systolic BP should be maintained at or above 110 mm Hg for most clients with TBI. The client's blood pressure is comfortably above that level. The nurse should target euvolemic status. Maintenance intravenous fluid with isotonic saline should be initiated to prevent hypovolemia. However, fluid overload should be avoided because hypervolemia may increase cerebral edema. Therefore, IV fluid boluses are not indicated at this time. If the client is hypotensive, prescribed isotonic solution boluses are administered.
- The client has a laceration, and wound care will be ordered to stop the bleeding and promote healing. Irrigation of the wound is likely, and considering the size of the laceration, suturing may be necessary.
- A head CT scan is **essential** because of the client's neurological status. Additionally, the client's neurological status is deteriorating. Therefore, CT scanning of the head is quite important.
- The client's right arm pain may suggest a fracture, and a radiograph will be necessary to determine the damage to the extremity.
- The high suspicion of a traumatic brain injury is concerning for a complication of seizures. Thus, all clients with suspected and confirmed TBIs receive seizure precautions.
- Glucocorticoids have been shown to worsen outcomes for clients with a TBI and are not recommended. While the reasoning is unclear, it is likely because they may cause bleeding.
- Neurological assessments are required for this client, but an interval of every six hours is too long and may

cause the nurse to miss if the client is deteriorating. The client should have neurological assessments every 30 minutes to one hour until they are stabilized.

Question 43

Type: drop_down_cloze

The nurse reviews the diagnostic results

➢ **Complete the following sentences by choosing from the list of options**

Sentence Structure

After reviewing the diagnostic imaging results, the nurse should **[Dropdown]** The nurse should prepare the client for possible **[Dropdown]** To reverse the anticoagulant effects, the nurse should obtain a prescription for **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- place a warm compress on the client's right lower arm.
- **communicate the results to the physician.** Correct
- assess the client's swallowing ability by giving the client 240 mL of room temperature water.

Correct Answer: communicate the results to the physician.

Dropdown #2

- **surgical intervention.** Correct
- admission to the medical-surgical unit.
- casting of the right lower arm.

Correct Answer: surgical intervention.

Dropdown #3

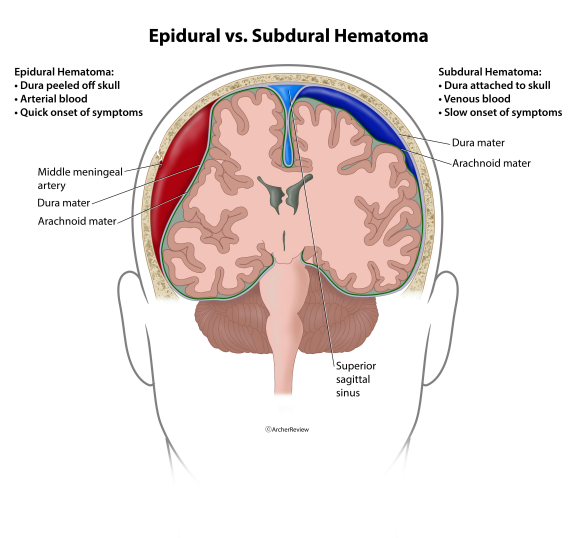
- protamine sulfate.
- platelet transfusion.
- **andexanet.** Correct

Correct Answer: andexanet.

Explanation

- The client has a large subdural hematoma, a **critical** finding that should be promptly reported to the provider.
- The client should be kept NPO because the client's condition is unstable and will require surgical intervention.
- The client's x-ray of the arm is not concerning because a fracture has been excluded. Casting is done for a fracture and will not be necessary. Supportive measures such as elevating the extremity with a cool compress will help treat the swelling.
- The client's declining condition and a large subdural hematoma on the CT warrant potential surgical intervention.
- The client's apixaban is a significant contributor to the bleeding, and to reverse the effects of the apixaban, the nurse should be prepared to administer the antidote of andexanet.
- Protamine is the reversal agent for heparin, and platelets would have no utility in reversing anticoagulants (FFP would be the desired blood product).

Additional Info



Source : Archer Review

Question 44

Type: drop_down_cloze

The nurse prepares for the client to be transferred to the neurological intensive care unit

➢ **Complete the sentence below by choosing from the list of options**

Sentence Structure

It is essential for the nurse to prioritize a **[Dropdown]** assessment before transferring the client to the intensive care unit.

Dropdown Options & Correct Answer

Dropdown #1

- musculoskeletal
- **Glasgow coma scale** Correct
- pain

Correct Answer: Glasgow coma scale

Explanation

- A Glasgow coma scale assessment is necessary before the client gets transferred to the neurological intensive care unit. This key neurological assessment assesses the client's best eye-opening, verbal, and motor responses. The highest GCS score is 15.
- A pain assessment and musculoskeletal assessment are relevant but not the priority considering the client's neurological decline.

Question 45

Type: single_choice

The nurse is preparing a 3-year-old child for an incision and drainage of a large left leg abscess. The nurse understands which of the following types of anesthesia will be administered to the child?

A. Peripheral nerve block

B. Spinal anesthesia

C. General Anesthesia ✔ Correct

D. Local Anesthesia

Explanation

Choice C is correct. A large leg abscess will need significant time for incision and drainage (I&D). Children who are not yet adolescents are not mature enough to cooperate adequately during such surgical procedures. Children

undergoing most surgeries require general anesthesia because this minimizes their fears of intrusive or mutilating procedures. General anesthesia provides necessary sedation so the surgery can be safely performed.

Choice A is incorrect. A peripheral nerve block will not be able to provide adequate anesthesia to proceed with the I&D procedure of a large leg abscess. For the child to cooperate with such surgery, sedation is necessary. General anesthesia provides necessary analgesia and sedation to the child.

Choice B is incorrect. Although spinal anesthesia may achieve an analgesic effect, the child still may not cooperate with the surgical procedure because spinal anesthesia does not provide sedation.

Choice D is incorrect. Local anesthesia is helpful while addressing small abscesses. A large abscess requires more time and requires the child to cooperate. Children undergoing such procedures require general anesthesia to provide necessary sedation as well because this minimizes their fears of intrusive or mutilating procedures.

Question 46

Type: single_choice

A nasogastric tube has been inserted into a client with bowel obstruction for gastric decompression. The nurse should set the suction on which setting?

A. Intermittent suction at 70 mmHg ✔ Correct

B. Intermittent suction at 100 mmHg

C. Continuous suction at 100 mmHg

D. Continuous suction at 70 mmHg

Explanation

Choice A is correct. Gastric decompression should always be intermittent and at low suction pressure. A suction pressure below 80 mmHg is considered low suction.

Choices B, C, and D are incorrect. Continuous and high suction pressure for gastric decompression should be avoided as this predisposes the gastric mucosa to injury and ulceration.

Question 47

Type: single_choice

The nurse is reviewing acetaminophen (APAP) toxicity with students. The nurse should remind students that the maximum acetaminophen dosage for an adult is

A. 2,000 mg per day

B. 4,000 mg per day ✔ Correct

C. 5,000 mg per day

D. 6,000 mg per day

Explanation

Choice B is correct. The ceiling for acetaminophen dosing is no more than 4,000 mg every 24 hours. The symptoms of APAP toxicity may peak within 72-96 hours after ingestion.

Choices A, C, and D are incorrect. Acetaminophen overdosing requires the support of the poison control center and this agency is often consulted during overdoses. The client needs to be cautioned that unintentional APAP overdoses can be avoided by thoroughly reading the packaging material of over-the-counter medications. Often cough and cold remedies contain APAP as an active ingredient.

Additional Info

✓ APAP is commonly used for mild to moderate pain

✓ APAP is also indicated for pyrexia

✓ 4000 mg every 24 hours is the dosing ceiling

✓ Toxicity may cause a client to develop symptoms such as nausea and vomiting, or they may be asymptomatic

✓ Liver function tests may rise as early as eight hours following ingestion

✓ Peak injury is within 72-96 hours following ingestion

✓ Acetylcysteine is a treatment for APAP toxicity

Question 48

Type: single_choice

The nurse is planning a series of classes for young pregnant women. Which of the following discussion topics should the nurse include in a class related to nutrition during pregnancy?

A. The need to increase caloric intake by about 350 calories during the second trimester of gestation ✔ Correct

B. The need to increase caloric intake by about 450 calories during the second trimester of gestation

C. The need to increase caloric intake by about 350 calories during the third trimester of gestation

D. The need to increase caloric intake by about 400 calories during the third trimester of gestation

Explanation

Choice A is correct. Young pregnant women should be taught that most women (carrying one fetus) with a healthy pre-pregnancy weight require an additional **350 extra calories per day** beginning in the **second trimester** of pregnancy (i.e., weeks 13 to 26). Similarly, an increase of approximately **450 calories per day** is indicated during the **third trimester** (i.e., after 26 weeks) and continuing throughout the pregnancy (following birth, nutritional requirements vary based on whether the client is breastfeeding).

Choice B is incorrect. Although there is a need to increase the caloric intake during the **second trimester** of gestation, the recommended increase for a woman with a healthy pre-pregnancy weight is for an additional 350 extra calories per day beginning in the second trimester of pregnancy (i.e., weeks 13 to 26), not an additional 450 calories per day. Consuming more than recommended calories and gaining excess weight may put the client at risk for gestational diabetes and high blood pressure.

Choice C is incorrect. Although increasing the daily caloric intake by approximately 350 calories per day seems sufficient, waiting until the beginning of the third trimester is not recommended, as the recommended dietary caloric increase should have occurred at the beginning of the second, not the third trimester.

Choice D is incorrect. Waiting until the beginning of the third trimester to increase caloric intake is not recommended. Additionally, caloric intake should be increased by additional 350 calories per day starting the second trimester, not 400 calories per day.

Additional Info

- Weight gain during pregnancy depends on the client's pre-pregnancy health and body mass index (BMI).
- Excess weight during pregnancy is associated with several pregnancy and childbirth complications, including high blood pressure, preeclampsia, preterm birth, and gestational diabetes.
- During the second trimester, women carrying twins should consume about 600 extra calories daily. Women carrying triplets should consume 900 additional calories daily.

Information Source

American College of Obstetricians and Gynecologists. (2021, December). *Nutrition during pregnancy.* ACOG. https://www.acog.org/womens-health/faqs/nutrition-during-pregnancy

The U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2023, May 26). *Eat healthy during pregnancy: Quick tips.* health.gov. https://health.gov/myhealthfinder/pregnancy/nutrition-and-physical-activity/eat-healthy-during-pregnancy-quick-tips#:~:text=Get%20the%20right%20amount%20of%20calories%20for%20you.&text=Most%20women%20with%20a%20healthy,450%20extra%20calories%20a%20day

Question 49

Type: single_choice

The nurse is planning care for a client with a low serum albumin level.

➢ Which of the following interventions should the nurse include in the client's plan of care?

A. Obtain a capillary blood glucose

B. Implement seizure precautions

C. Implement strict bed rest

D. Collaborate with a registered dietician ✔ Correct

Explanation

Choice D is correct. Normal albumin levels are 3.5-5.0 g/dL, 34–50 g/L. Collaboration with a registered dietitian (RD) is recommended for numerous reasons. First, the registered dietician can perform a nutritional assessment. Second, following the nutritional assessment, the registered dietician can focus on increasing the protein intake necessary for healing. Third, the registered dietician can make recommendations regarding appropriate foods that may be integrated into the client's diet based on the client's personal preferences. Fourth, the registered dietician can perform client education and educate the client regarding the nutritional needs of the client and food sources of protein. Therefore, collaborating with a registered dietician will significantly benefit this client experiencing

hypoalbuminemia and should be included in the client's care plan.

Choice A is incorrect. Capillary blood glucose monitoring is not required for a client with hypoalbuminemia.

Choice B is incorrect. Seizure precautions are not necessary for clients with hypoalbuminemia. This would be required if the client had severe hyponatremia (< 125 mEq/l, mmol/L).

Choice C is incorrect. Strict bed rest is not indicated for hypoalbuminemia clients.

Additional Info

✓ Albumin is a major serum protein that is below normal, often found in clients who have had inadequate nutrition for extended durations of time.

✓ Albumin synthesis takes place in the liver, after which it is excreted into the bloodstream.

✓ Low albumin values are associated with longer hospital stays.

✓ Hypoalbuminemia is the most common nutrition-related abnormality in clients with infection.

✓ Albumin plays a key role in fluid and electrolyte balance.

✓ For some clients, severe undernutrition results in decreased serum albumin and prealbumin, resulting in delayed healing and third spacing. One must treat the underlying cause of hypoalbuminemia.

✓ High albumin may indicate dehydration. Look for increased hemoglobin and/or hematocrit in such clients.

✓ Some causes of low albumin may include the use of intravenous fluids, rapid hydration, and overhydration; cirrhosis or other liver diseases (including chronic alcoholism); burns, nutritional deficiencies, or protein-losing enteropathies (including Crohn's disease and ulcerative colitis).

Information Source

Anderson, C. F., & Wochos, D. N. (1982). The utility of serum albumin values in the nutritional assessment of hospitalized patients. *Mayo Clinic proceedings*, 57(3), 181–184.

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier.

Vincent, J.-L., Russell, J. A., Jacob, M., Martin, G., Guidet, B., Wernerman, J., Ferrer, R., McCluskey, S. A., & Gattinoni, L. (2014). Albumin administration in the acutely ill: What is new and where next? *Critical Care, 18*(4), 231. https://doi.org/10.1186/cc13991

Question 50

Type: single_choice

The nurse cares for many clients at the end of life who experience symptoms, such as pain, that are physically distressing to the client and their loved ones. Which statement reflects the American Nurses Association's position on pain management at the end of life?

A. Advocate for pain management unless life-threatening side effects occur.

B. Advocate for pain management even if the life-threatening side effects hasten death. ✔ Correct

C. Prohibit the respiratory system from depressing drugs because this is euthanasia.

D. Allow families to administer respiratory system depressing drugs to hasten death.

Explanation

Choice B is correct. The American Nurses Association (ANA) advocates for pain management even if the life-threatening side effects hasten death. In the past, pain management agents like narcotic analgesics were not given if they caused respiratory depression that could lead to the cessation of life. This administration of respiratory system depressing drugs at the end of life is not considered euthanasia. The American Nurses Association does not encourage families to administer respiratory system-depressing drugs to hasten death but it does allow families to administer respiratory system-depressing drugs to relieve pain at the end of life.

Choice A is incorrect. This is not fully in alignment with the ANA's position, as it introduces a condition (life-threatening side effects) that could potentially limit the administration of pain management. The ANA's stance emphasizes the importance of pain management as a primary goal, and healthcare providers should seek to minimize side effects but not withhold pain relief solely based on potential side effects.

Choice C is incorrect. This statement suggests prohibiting the use of respiratory system-depressing drugs to prevent euthanasia. While it addresses euthanasia concerns, it does not fully align with the ANA's position, as it does not emphasize the importance of effective pain management and comfort for patients at the end of life.

Choice D is incorrect. This statement suggests allowing families to administer drugs that depress the respiratory system to hasten death, which is not in line with the ANA's position. The ANA focuses on appropriate pain management and comfort care, rather than intentionally hastening death. However, it does allow families to apply respiratory system depressing drugs to relieve pain at the end of life.

Additional Info

✓ In situations where ethical dilemmas arise, nurses may seek guidance from an ethics committee or consultant to ensure that the care provided aligns with the ANA's principles and ethical standards.

✓ Pain management at the end of life often requires collaboration with other healthcare professionals, such as palliative care specialists, pharmacists, and social workers. Effective teamwork ensures a holistic approach to care.

✓ Continuous assessment of pain and its management is crucial. Pain is dynamic and can change over time, so healthcare providers should regularly evaluate and adjust the pain management plan as needed.

Information Source

American Nurses Association . (2018, June 15). The ethical responsibility to manage pain and the suffering it causes - ANA position statement. https://www.nursingworld.org/ana/. https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/the-ethical-responsibility-to-manage-pain-and-the-suffering-it-causes/

Question 51

Type: single_choice

The nurse is caring for a client who had a chest tube inserted two days ago for a pneumothorax. Which assessment finding indicates that the procedure has produced its desired effect?

A. Consolidation is seen in the chest x-ray.

B. Clear breath sounds are auscultated bilaterally. ✔ Correct

C. There is rapid bubbling in the suction chamber of the chest drainage system.

D. There is crepitus at the insertion site.

Explanation

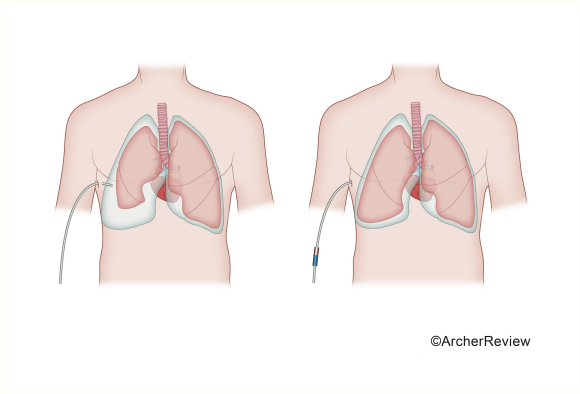
Choice B is correct. Bilateral breath sounds indicate that both the clients' lungs have expanded, which is the procedure's objective. A pneumothorax produces diminished or absent breath sounds in the affected lung. Once the chest tube has exerted its desired effect, the lung sounds should become clear.

Choice A is incorrect. Consolidation occurs when fluid or exudates are present in the lungs, indicating pneumonia. This shows a deterioration in the status of the client.

Choice C is incorrect. Rapid bubbling in the suction chamber indicates an air leak. This is not an indication that the treatment is effective, as this is a complication of the therapy.

Choice D is incorrect. Crepitus indicates subcutaneous emphysema, indicating oxygen escape into the surrounding tissues. This complication is associated with a chest tube, not a therapeutic finding.

Additional Info



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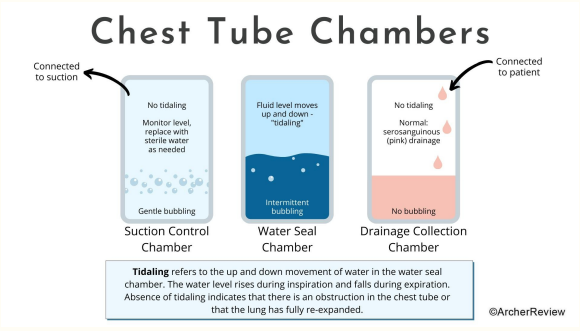


Source : Archer Review

Question 52

Type: single_choice

The nurse is caring for a client with a breast tumor. The client reports trouble breathing, a puffy face/neck, nasal congestion, and a raspy voice. The nurse would suspect which of the following?

A. Spinal cord compression

B. Non-Hodgkin's Lymphoma (NHL)

C. Superior vena cava syndrome ✔ Correct

D. Shock

Explanation

Choice C is correct. This patient's tumor originates in the breast. Breast cancer may spread locally into the chest wall and lymph nodes. Due to its proximity to the superior vena cava (SVC), a locally advanced tumor or metastatic lymph node enlargement in the chest may obstruct blood flow to and from the superior vena cava. Such an obstruction results in venous congestion (puffiness in the face/ neck) and jugular-venous distension. Frequent clinical features of venous congestion in superior vena cava syndrome include **blurred vision, hoarse voice, stridor, dyspnea,** and **nasal congestion**.

Choices A, B, and D are incorrect. These do not explain the patient's presentation. Spinal cord compression (choice A) may present with motor and sensory deficits, not puffy face and dyspnea. Non-Hodgkin's lymphoma (choice B) may cause SVC obstruction. However, the client has breast cancer, likely responsible for the SVC obstruction, not an occult lymphoma. Shock (choice D) presents with hypotension and impaired perfusion, not a puffy face and stridor.

Question 53

Type: single_choice

A patient in the prenatal clinic has stated her intention to choose formula feeding for her infant. Identify which action by the nurse is most appropriate in being a patient advocate.

A. Remind the patient of why breast feeding is the best method of infant feeding.

B. Request a referral to the lactation consultant.

C. Determine the patient's knowledge base related to infant feeding options. ✔ Correct

D. Accept the patient's decision without further discussion

Explanation

Choice C is correct. A central concept of patient advocacy is ensuring that the patient's decisions are based on sufficient information and understanding while supporting the patient's right to exercise autonomy.

Choice A is incorrect. This answer does not serve to support the patient's right to autonomy.

Choice B is incorrect. A referral to the lactation consultant is not necessarily indicated.

Choice D is incorrect. While the nurse should support the patient's choice, it is essential to confirm that the patient's decision-making process is based on adequate information.

Bloom's Taxonomy – Analyzing

Question 54

Type: single_choice

The nurse is evaluating a client three days post-operative for signs and symptoms of infection. Which of the following is **not** a sign of infection from a surgical wound?

A. Pus and clear drainage from the site

B. Some redness along the edges of the site ✔ Correct

C. Increasing warmth from the wound

D. Red streaks from the site

Explanation

Choice B is correct. Some redness at the surgical site is a normal finding three days after surgery. Signs of infection include pus, excess wound drainage, increasing warmth from the wound, and red streaks from the site.

Choice A is incorrect. While light, clear drainage is an expected finding three days post-operatively, pus drainage is not. Pus indicates a developing infection.

Choice C is incorrect. While some heat is normal, an increase in temperature produced by the wound indicates infection at the site.

Choice D is incorrect. Red streaks indicate a potentially dangerous infection at the wound and could mean the development of a disease and even sepsis.

Additional Info

✓ Consider the client's medical history, especially any pre-existing conditions that might compromise the immune system or increase the risk of infection.

✓ Take into account the nature of the surgical procedure. Certain surgeries may inherently pose a higher risk of infection.

✓ Accurately document all assessments, interventions, and client responses in the medical record to facilitate communication within the healthcare team.

Question 55

Type: single_choice

The nurse is caring for a client in labor. The following tracing was on the fetal heart rate monitoring strip. The nurse recognizes that this tracing is a

See the exhibit.

A. variable deceleration.

B. late deceleration. ✔ Correct

C. early deceleration.

D. normal variability pattern.

Explanation

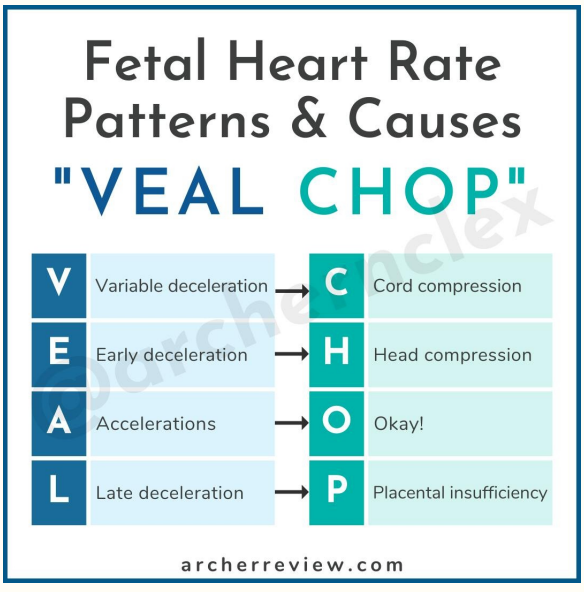
Choice B is correct. This strip indicates a late deceleration. Late decelerations are visually apparent and usually symmetric in shape, with a gradual decrease and return of the fetal heart rate (FHR) to baseline. Late decelerations are caused by decreased perfusion to the fetus. Maternal repositioning is an effective intervention for this nonreassuring pattern. Other interventions include oxygen administration and the administration of intravenous isotonic fluids.

Choice A is incorrect. This strip does not show a variable fetal deceleration. This strip indicates the presence of another fetal heart pattern other than variable fetal deceleration.

Choice C is incorrect. This strip does not show early fetal deceleration. This strip indicates the presence of another fetal heart pattern other than initial fetal deceleration.

Choice D is incorrect. This strip does not have a normal variability pattern. This strip indicates a non-reassuring finding.

Additional Info



Source : Archer Review

Source : Archer Review

Late decelerations become more concerning when they are recurrent (present with 50% or more of the uterine contractions in a 20-minute period). Late decelerations are caused by placental insufficiency. Interventions for late decelerations include -

• Maternal repositioning (either lateral or hands and knees)

• Intravenous fluid boluses

• Administering oxygen (via nonrebreather 10 L/min)

• Discontinuing oxytocin infusion (if applicable)

Question 56

Type: single_choice

Which of the following clients, receiving normal saline via IV infusion, is at the highest risk for bloodstream infections?

A. A client who has a midline IV catheter in the left antecubital fossa.

B. A client with a peripherally inserted central catheter (PICC) line in the right upper arm.

C. A client with an implanted port in the right subclavian vein.

D. A client who has a non-tunneled central line in the left internal jugular vein. ✔ Correct

Explanation

Choice D is correct. Several factors increase the risk of infection for this client. **Central lines** are associated with a higher risk of infection because the neck and chest skin harbor a high number of microorganisms. Additionally, because the line is **non-tunneled**, the risk for infection is higher. **Non-tunneled** catheters are mostly used for **short-term access** in indications requiring rapid resuscitation or pressure monitoring. Such non-tunneled catheters are good for about 5 to 7 days. They carry a higher risk of infection and are inappropriate for patients who require central venous access for longer than 2 weeks.

Choices A and B are incorrect. Peripherally inserted IV lines such as **midline catheters and PICC** (peripherally inserted central catheter) lines are associated with a **lower infection incidence**.

Choice C is incorrect. Implanted ports are placed **under the skin** and are **less likely to be associated with catheter infection** than a non-tunneled central IV line.

NCSBN Client Need Topic: Safe and Effective Care Management; Subtopic: Safety and Infection Control

Question 57

Type: single_choice

A 16-year-old adolescent client is brought to the emergency department following an injury at a skating rink. The client's left knee is bruised and swollen. Upon interview, the nurse finds out that the client has hemophilia A. Which medication would be **most appropriate** for this client?

A. Codeine phosphate ✔ Correct

B. Aspirin

C. Ibuprofen

D. Oxycodone terephthalate and acetyl-salicylate

Explanation

Choice A is correct. Codeine phosphate is an analgesic medication with no aspirin components and is used for moderate to severe pain.

Choice B is incorrect. Clients with hemophilia should avoid aspirin (and all other nonsteroidal anti-inflammatory drugs (NSAIDS)), as these medications inhibit proper platelet functioning. Aspirin is a nonsteroidal anti-inflammatory drug (NSAID). If given to this client, aspirin would aggravate the client's condition by inhibiting platelet aggregation, likely increasing this client's bleeding and worsening this client's current condition.

Choice C is incorrect. As mentioned above, clients with hemophilia should avoid nonsteroidal anti-inflammatory drugs (NSAIDs), as these medications inhibit proper platelet functioning. Ibuprofen is an NSAID and should therefore be avoided in clients with hemophilia.

Choice D is incorrect. Oxycodone terephthalate and acetylsalicylic acid possess aspirin. Acetylsalicylic acid (ASA) is a generic name for aspirin. Similar to *Choice B*, the aspirin in this medication renders this choice contraindicated for this client. Hemophilia clients should avoid all aspirin-containing medications, as these medications inhibit proper platelet functioning. If given to this client, aspirin would aggravate the client's condition by inhibiting platelet aggregation, likely increasing this client's bleeding and worsening this client's current condition.

Additional Info

- Hemophilia A occurs when there is a deficiency of factor VIII.
- Hemophilia A accounts for 80% of all hemophilia cases.

- Clients with hemophilia bleed into tissues (e.g., hemarthroses, muscle hematomas, retroperitoneal hemorrhage, etc.) following minimal trauma.

Question 58

Type: single_choice

The nurse is preparing a staff education program about physiological responses of stress.

➢ Which of the following is a physiological alteration that can occur with stress?

A. Decreased visual acuity

B. Increased peristalsis

C. Decreased glucocorticoids

D. Hyperglycemia ✔ Correct

Explanation

Choice D is correct. Hyperglycemia is a physiological alteration that can occur during a stress response among both diabetic and non-diabetic clients. More specifically, glucose is increased by various factors, including elevated levels of cortisol, glucagon, and epinephrine (often referred to the "fight or flight" phenomena). These hormones may, in turn, lead to insulin resistance, further increasing hyperglycemia.

Choice A is incorrect. Increased, rather than decreased, vision is a physiological alteration which occurs during the "fight or flight" phenomena, allowing the individual to be more vigilant and aware of the surrounding environment. This occurs due to the release of adrenaline which causes the pupils to dilate, allowing in more light and make it easier to detect potential threats.

Choice B is incorrect. During the body's stress-related response, peristalsis slows (or even stops) to allow the body to divert some (or all) resources to bodily functions deemed higher priority than gastric functioning. Therefore, decreased, not increased peristalsis occurs. Nervousness, while related to stress, is considered a specific emotional or mental state that can activate the body's stress response to varying degrees. Whether nervousness increases peristalsis depends on the intensity and type of nervousness, as well as the individual's physiological response.

Choice C is incorrect. The secretion of glucocorticoids is a classic endocrine response to stress. During the body's stress-related response, an increased, not decreased, secretion of glucocorticoids occurs.

Additional Info

✓ Stress-induced hyperglycemia generally refers to transient hyperglycemia during illness and is usually restricted to clients without previous evidence of diabetes.

✓ Clients experiencing stress-induced hyperglycemia during hospitalization have been shown to exhibit worse overall outcomes.

✓ Educate on the long-term effects of stress, such as impaired immune function and risk of chronic diseases like diabetes due to persistent hyperglycemia.

Information Source

Workman, D.I.M. L. (2021). Medical-Surgical Nursing (10th ed.). Elsevier Health Sciences (US).

Question 59

Type: single_choice

The nurse in the obstetrics clinic is interviewing a client who is pregnant and reporting nocturnal leg cramps.

➢ The nurse should encourage the client to consume foods rich in

A. magnesium. ✔ Correct

B. iron.

C. vitamin c.

D. phosphorus.

Explanation

Choice A is correct. Leg cramping is common in pregnancy and may occur more in the overnight hours. For a pregnant client endorsing these leg cramps, the client should be instructed to increase their dietary intake of foods rich in vitamin D and magnesium. Foods rich in vitamin D and magnesium include avocados, blackberries, spinach, and collard greens.

Choice B is incorrect. Iron helps prevent iron deficiency anemia, the most common type of anemia in pregnancy. However, food rich in iron will not mitigate the symptoms of leg cramps.

Choice C is incorrect. Vitamin C is helpful in the formation of collagen, tissue integrity, and, to a certain extent, immunity. Vitamin C has no role in preventing and treating leg cramps.

Choice D is incorrect. Phosphorus and calcium have a reciprocal relationship. When phosphorus increases, calcium decreases. Dietary items high in phosphorus include colas, fish, and bran cereals. Leg cramps may also be caused by a client having low serum calcium.

Additional Info

✓ Nocturnal leg cramping is common in the latter half of pregnancy.

✓ Encouraging a diet rich in magnesium and vitamin D may be helpful.

✓ Other measures to mitigate discomfort include dorsiflexion of the foot, warm showers, increased hydration, and ice massage.

Information Source

Murray, S., McKinney, E. (2018). Foundations of Maternal-Newborn and Women's Health Nursing, 7th Edition. p. 138

Question 60

Type: single_choice

A newly licensed registered nurse is tasked by a nurse educator to perform a wet-to-dry dressing change on a client with a stage 3 pressure ulcer. Which action would indicate to the nurse educator that the registered nurse is following proper technique?

A. The registered nurse cleans the ulcer from the outside, rotating into the inside of the ulcer.

B. The registered nurse packs the incision with sterile gauze, then pours sterile normal saline over the dressing.

C. The registered nurse packs wet gauze into the ulcer without overlapping it onto the skin. ✔ Correct

D. The registered nurse saturates the old dressing with sterile saline before removing it.

Explanation

Choice C is correct. The wet dressing should not touch the intact skin as this may cause skin breakdown and potentially introduce additional pathogens into the wound.

Choice A is incorrect. The registered nurse should clean in a circular motion, beginning from the inside and rotating outward. Once the nurse reaches the edge of the wound, the nurse should change gloves and equipment.

Choice B is incorrect. When a wet-to-dry dressing is ordered, dressings are to be soaked before application to the client's tissue. The dressing is then allowed to dry while on the client, therefore allowing the removal of that dressing to essentially debride a small portion (i.e., existing debris and necrotic tissue if applicable) of the wound before the replacement dressing is applied.

Choice D is incorrect. Saturating the existing dressing prior to removal would defeat the purpose of having the dressing removed dry. Dry removal allows debris and necrotic tissue to be removed with the dressing.

Additional Info

- A wet-to-dry dressing is a dressing that provides a type of mechanical debridement.
- The dressing should consist of one continuous length of gauze.
- Utilize the expertise of wound care clinicians in the treatment of pressure ulcer clients.
- Pressure injuries can develop secondary to immobilization and hospitalization, particularly in clients who are elderly, incontinent, and/or undernourished.
- Base the risk of pressure injury on standardized scaling systems and on the assessment of skilled clinicians.

Question 61

Type: multiple_response_all

The nurse reviews the history and physical and vital signs

➢ **Which findings are most significant? Select all that apply**

Answer Choices

A. Temperature Correct

B. Papules and vesicles Correct

C. Reports of burning and itching Correct

D. Blood pressure

E. Location of the lesions Correct

Explanation

The clinical findings that are the most significant include the client's temperature, which indicates a fever. The presence of papules and vesicles that burn and itch is a common characteristic of varicella. Additionally, the location of the lesions as varicella characteristically has a centripetal outbreak starting at the trunk and working outward.

The client's blood pressure is within normal limits.

Additional Info

Normal Pediatric Vital Signs

Age Group	Heart Rate	Respirations	Systolic Blood Pressure
Preterm	120-180	50-70	40-60
Newborn (0 to 1 mo)	100-160	35-55	50-70
Infant (1 mo to 1 year)	80-140	30-40	70-100
Toddler (1 to 3 years)	80-130	20-30	70-110
Preschool (3 to 6 years)	80-110	20-30	80-110
School age (6 to 12 years)	70-100	18-24	80-120
Adolescents (12+ years)	60-100	14-22	100-120

Source : Archer Review

Source : Archer Review

Question 62

Type: drop_down_cloze

➢ **Complete the following sentence by choosing from the list of options**

Sentence Structure

The primary healthcare provider diagnoses the client with varicella. The nurse understands that this virus is primarily spread through **[Dropdown]** The primary intervention to prevent transmission of varicella is **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **aerosolized droplets.** Correct
- contaminated water.
- surfaces of objects.

Correct Answer: aerosolized droplets.

Dropdown #2

- **immunization.** Correct
- a prescription for valacyclovir.
- screening those in the household.

Correct Answer: immunization.

Explanation

- High concentrations of the varicella-zoster virus are found in the nasopharynx. The virus is primarily transmitted through aerosolized droplets. This is why the client is placed on airborne precautions.
- Varicella is not spread through contaminated water, nor are surfaces of objects an effective vector for transmission.
- Primary prevention stems from education and immunization. To advocate for the primary prevention of varicella, the nurse should encourage immunization.
- Screening and early treatment is a secondary prevention measure.
- Valacyclovir is an antiviral that is used once varicella has been diagnosed. Valacyclovir does not prevent the transmission of varicella to other individuals.
- Treatment aimed at preventing complications is a tertiary level of prevention.

Question 63

Type: ngn_multiple_choice

➢ **The nurse determines that if the client's itching is not controlled, which complication may develop?**

A. Cellulitis ✓ Correct

B. Pneumonia

C. Encephalitis

D. Desquamation

Explanation

The most common complication of varicella infections is secondary bacterial skin infections such as cellulitis. This is caused when bacteria enter from a break in the skin.

Pneumonia and encephalitis are common complications of varicella, but they are not triggered by incessant itching. These complications are common for immunocompromised individuals and arise from the migration of the virus.

Desquamation is the peeling of the skin. This is a normal process that occurs once the lesion has crusted over. This is not a complication, yet, an expected finding towards the end of the infection.

Question 64

Type: matrix_multiple_choice

The nurse creates a plan of care for the client

➢ **Click to specify if each intervention is indicated or not indicated**

Intervention	Indicated	Not Indicated
Apply hydrogen peroxide solution to the affected area		Correct
Educate the client on appropriate hand hygiene	Correct	
Education on baths with baking soda for itching	Correct	
Administration of prescribed acetaminophen	Correct	
Collection of blood cultures		Correct

Explanation

Interventions that are indicated include appropriate hand hygiene. Frequent hand sanitation will decrease the likelihood of cellulitis if the skin is broken by itching. Educating on comfort measures such as baths with baking soda or oats is indicated to soothe itching. Acetaminophen would be helpful if the client has a fever.

Hydrogen peroxide does not hasten healing and may irritate the lesions. This would not be indicated. Varicella is a virus and would not reflect if blood cultures were obtained.

Question 65

Type: drop_down_cloze

The nurse receives orders and prescriptions from the primary healthcare provider

➢ **Complete the following sentence by choosing from the list of options**

Sentence Structure

The nurse understands that the acetaminophen is prescribed to treat the client's **[Dropdown]** Additionally, the diphenhydramine has been prescribed to **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- pruritus.
- **pyrexia.** Correct
- skin lesions.

Correct Answer: pyrexia.

Dropdown #2

- **decrease symptoms of pruritus.** Correct
- decrease the pyrexia.
- prevent viral replication.

Correct Answer: decrease symptoms of pruritus.

Explanation

Pyrexia is a common feature of varicella infections. The pyrexia (fever) can be mitigated with acetaminophen.

Diphenhydramine is an antihistamine and can be used to mitigate symptoms of pruritus. This medication is intended to decrease the symptoms of pruritus (itching) and promote comfort.

Question 66

Type: multiple_response_all

The nurse provides discharge education

➢ **Click to specify the information the nurse should include in the discharge teaching? Select all that apply**

Answer Choices

A. Your child may return to school once all the lesions have crusted. Correct

B. Warm baths with baking soda or oats may help with the itching. Correct

C. Contact the school to report your child's infection. Correct

D. Watch for signs of skin infection including swelling, drainage, and pain. Correct

E. To treat the fever, you may alternate between acetaminophen and aspirin.

Explanation

Once *all* of the lesions have crusted over the child may resume attending school. The school should be notified of the infection to initiate appropriate notification to those who could be infected. Treatment of varicella is primarily symptomatic through antipyretics and antihistamines. Warm baths with baking soda or oats may provide additional relief from itching. Cellulitis is a complication of varicella caused by bacteria that enters the skin that is excessively itched.

Aspirin should not be used because it may cause Reye's syndrome.

Additional Info

Varicella is a highly contagious viral infection primarily spread by aerosolized droplets and direct contact with the lesions. Treatment is symptomatic with prescribed acetaminophen and therapeutic baths with warm water and uncooked oatmeal or baking soda. Prescribed antivirals, such as valacyclovir, may shorten the symptoms' duration.

Until the lesions have crusted over, the client should be isolated using airborne and contact precautions.

Question 67

Type: single_choice

Following the application of a fiberglass cast to treat the client's severe ankle sprain (i.e., Grade 3), a nurse performs client education. During this discussion, the client asks, "How long will my cast take to dry?" Based on this type of cast, the nurse should respond:

A. Eight hours

B. 30 minutes ✔ Correct

C. At least 24 hours

D. At least 48 hours

Explanation

Choice B is correct. Fiberglass, a waterproof synthetic casting material, can dry and become rigid within minutes.

Typically, the cast will be fully dried within 30 minutes of application. Although the client would be allowed to bear weight on the cast 30 minutes after application if allowed by the health care provider (HCP), crutches or another assistive device may be indicated.

Choice A is incorrect. Typically, a fiberglass cast will be fully dried within 30 minutes of application. Depending on the size and location of the cast, a plaster cast takes at least 24 hours to dry.

Choice C is incorrect. Plaster was the traditional material used for casts but is used less often today. Depending on the size and location of a plaster cast, this type of cast would take at least 24 hours to dry. Here, since the client received a fiberglass cast, this would not be the correct response.

Choice D is incorrect. As mentioned above, plaster was the traditional material used for casts but is used less often today. Depending on the size and location of a plaster cast, this type of cast would take at least 24 hours to dry. Clients who receive large plaster casts may require 48 hours or more to dry completely.

Additional Info

- Grade 3 sprains may require a short leg cast or cast-brace for 10 to 14 days.
- During the initial phase of ankle sprain, early weight-bearing as tolerated is typically recommended during this phase.
- Crutches may be needed due to pain during ambulation.

Information Source

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* (10th ed.). Elsevier.

Kruckeberg, B. M., Beahrs, T., & Haddad, S. L. (2022, April). *Sprained ankle.* OrthoInfo [American Academy of Orthopaedic Surgeons]. Retrieved May 5, 2023, from https://orthoinfo.aaos.org/en/diseases--conditions/sprained-ankle/

Question 68

Type: single_choice

The nurse is caring for a toddler diagnosed with Reye's syndrome.

➢ Upon assessment of the child's medical history, which condition should the nurse expect?

A. cellulitis

B. influenza ✔ Correct

C. meningitis

D. mumps

Explanation

Choice B is correct. Upon assessment of the child's medical history, the nurse should anticipate a finding of a **viral** infection, specifically **influenza (A or B**) or **varicella,** within the preceding **two-week** period. This is because individuals with these viral infections may have a fever, and taking aspirin could trigger this complication.

Choice A is incorrect. Cellulitis is a bacterial infection not typically associated with Reye syndrome.

Choice C is incorrect. Meningitis, including viral meningitis, is not commonly associated with Reye syndrome.

Choice D is incorrect. Mumps, although viral, is not generally associated with Reye syndrome.

Additional Info

✓ Reye syndrome is a rare form of acute encephalopathy and fatty infiltration of the liver that tends to occur after some acute viral infections, mainly when **salicylates** (aspirin) are used during the illness.

✓ Symptoms include abrupt onset of vomiting, diarrhea, hyperventilation, restlessness, seizures, and coma.

✓ In June 1982, the Secretary of Health and Human Services began a public campaign to educate against using salicylates in pediatric clients. The *New York Times* ran a front-page article that included the following first line: "The Government announced plans today to advise doctors and parents against using aspirin to treat children's chicken pox or flu-like symptoms because studies have linked aspirin to Reye's Syndrome, a rare but often fatal children's disease." With decreased use of salicylates among children, Reye's syndrome is now very rare.

Question 69

Type: single_choice

The nurse is caring for a client experiencing an exacerbation of rheumatoid arthritis (RA).

➢ The nurse should obtain a prescription for

A. allopurinol.

B. verapamil.

C. prednisone. ✔ Correct

D. methotrexate.

Explanation

Choice C is correct. Rheumatoid arthritis is a chronic autoimmune disease that can lead to joint damage and disability. The steroid prednisone is a fast-acting and effective treatment for rheumatoid arthritis and is often prescribed alongside disease-modifying antirheumatic drugs. More specifically, prednisone is a corticosteroid with anti-inflammatory and immunosuppressive properties used to treat rheumatoid arthritis. In general, most clients will experience benefits from prednisone within one to four days if the prescribed dose is adequate to reduce the client's level of inflammation.

Choice A is incorrect. Allopurinol, a xanthine oxidase inhibitor, is an FDA-approved urate-lowering medication most commonly used for managing gout. This medication lowers the client's uric acid levels by reducing the production of uric acid in the body. Allopurinol is not utilized in the treatment of rheumatoid arthritis.

Choice B is incorrect. Verapamil is a calcium channel blocker that may be used in hypertension, Raynaud's phenomena, or migraine headache prophylaxis. This medication does not have utility in rheumatoid arthritis.

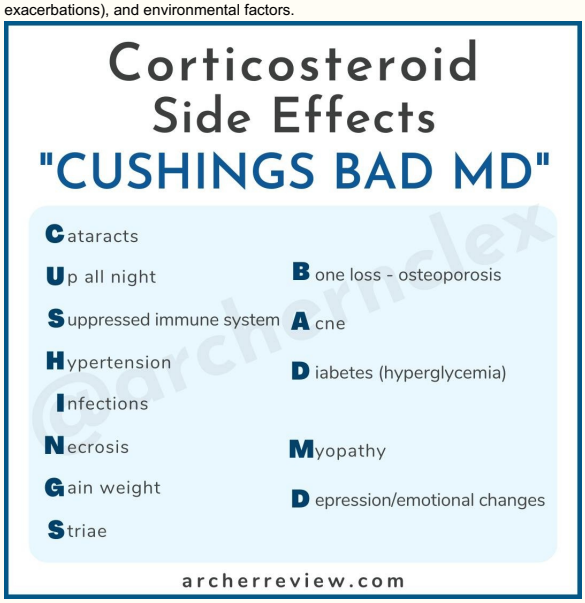
Choice D is incorrect. Methotrexate is an immunomodulating medication used to prevent exacerbations of rheumatoid arthritis. This is a maintenance medication. Other maintenance medications used in RA include etanercept and hydroxychloroquine.

Additional Info

✓ The typical age of onset for those with rheumatoid arthritis occurs between the ages of 35 to 45.

✓ Rheumatoid arthritis is more prevalent in females than males.

✓ Risk factors for rheumatoid arthritis include autoimmune (i.e., genetic factors), emotional stressors (which trigger exacerbations), and environmental factors.



Source : Source: Archer Review

Information Source

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Qurie, A., Preuss, C. V., & Musa, R. (2022, September 21). *Allopurinol.* National Library of Medicine. Retrieved April 6, 2023, from https://www.ncbi.nlm.nih.gov/books/NBK499942/

Rheumatology Research Foundation. (2022, February). *Azathioprine (Imuran).* American College of Rheumatology.

Rheumatology Research Foundation. (2022, February). *NSAIDs (nonsteroidal anti-inflammatory drugs).* American College of Rheumatology.

Question 70

Type: single_choice

The nurse is caring for a client with hypothermia who is receiving warmed intravenous fluids.

➢ The nurse recognizes that rewarming a client with hypothermia must be done slowly to prevent

A. superficial burns.

B. ventricular fibrillation. ✔ Correct

C. frostbite.

D. muscle spasms.

Explanation

Choice B is correct. Rewarming a client with hypothermia must be done slowly and carefully because rapid rewarming can lead to serious cardiac complications, most notably ventricular fibrillation. Gradual rewarming allows the cardiovascular system to adjust slowly and reduces the risk of cold blood from the extremities returning quickly to the core, which could further lower the core temperature in a phenomenon called "afterdrop." Controlled rewarming helps prevent this, supporting a more stable cardiac response.

Choice A is incorrect. Superficial burns may occur if external heat sources like heating pads are applied improperly, but this is not a concern with warmed IV fluids or controlled internal rewarming.

Choice C is incorrect. Frostbite refers to localized tissue freezing and is treated differently from hypothermia; it does not relate to the speed of rewarming the body as a whole.

Choice D is incorrect. Muscle spasms can be a symptom of cold stress, but are not a major complication of rewarming and do not carry the same degree of danger as ventricular fibrillation.

Additional Info

✓ Rapid rewarming can disrupt the body's metabolic processes, leading to acid-base status and electrolyte levels imbalances, potentially further compromising organ function and/or overall health.

✓ For clients with moderate to severe hypothermia, therapy is determined by the presence or absence of a perfusing rhythm.

✓ Continuously monitor the client's core body temperature, vital signs, heart rhythm, and oxygen saturation during the rewarming process.

✓ Regularly assess the client's skin color, temperature, and perfusion of the extremities.

Information Source

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier.

Part 10.4: Hypothermia. (2005). *Circulation (American Heart Association), 112*(4), 136–138. https://doi.org/10.1161/circulationaha.105.166566

Question 71

Type: single_choice

A nurse is caring for a client receiving metformin. Which of the following laboratory data should be reported to the provider?

A. Decreased blood urea nitrogen (BUN) level

B. Decreased glomerular filtration rate (GFR) ✔ Correct

C. Decreased fasting plasma glucose

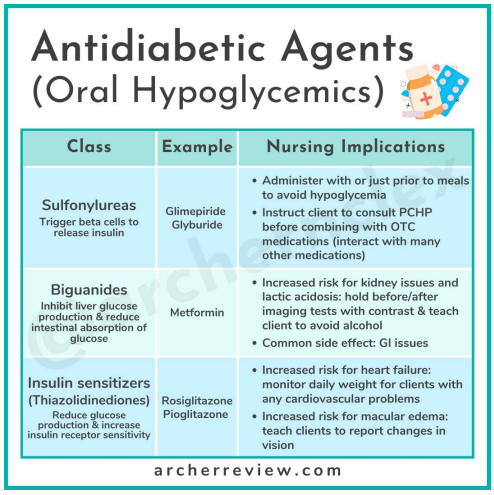
D. Decreased hemoglobin A1C

Explanation

Choice B is correct. Metformin is an oral anti-diabetic indicated for type 2 diabetes mellitus. Metformin may cause renal impairment and a decrease in glomerular filtration rate (GFR) would be such evidence. During Metformin therapy, the client's renal function will be periodically monitored.

Choices A, C, and D are incorrect. A reduction in the blood urea nitrogen (BUN) level does not indicate nephrotoxicity (a high creatinine would indicate nephrotoxicity). A decrease in both the hemoglobin A1C and fasting plasma glucose would be the therapeutic effect of the medication.

Additional Info



Source : Archer Review

Metformin is the first-line therapy for type II diabetes mellitus. Metformin is efficacious in having clients lose weight and decrease their hemoglobin A1C. The most common side-effect associated with Metformin initiation is **gastrointestinal side effects** such as bloating, diarrhea, nausea, or vomiting. The nurse should counsel the client that these side effects are transient and may be **lessened by taking the medication with food**. Metformin should not be taken within 48 hours of a contrast procedure because should contrast-related nephrotoxicity occur, Metformin metabolites accumulate and cause lactic acidosis.

Question 72

Type: single_choice

A nurse in the emergency department is assessing a client who presents with agitation, anxiety, hypertension, mydriasis, and diaphoresis.

➢ Based on these findings, the nurse suspects intoxication with which substance?

A. opioids

B. barbiturates

C. amphetamines ✔ Correct

D. cannabis

Explanation

Choice C is correct. Fever, mydriasis, agitation, paranoia, hypertension, and tachycardia are all manifestations of amphetamine intoxication. Substances producing this type of intoxication include amphetamines, methamphetamines, and cocaine, a central nervous stimulant. When a client experiences amphetamine withdrawal, they are likely to experience hypersomnia, fatigue, increased appetite, and dysphoria.

Choice A is incorrect. Opioid intoxication typically presents with symptoms such as respiratory depression, pinpoint (constricted) pupils, sedation, and a decreased level of consciousness.

Choice B is incorrect. Barbiturate intoxication is associated with symptoms such as central nervous system depression, sedation, and a decreased level of consciousness.

Choice D is incorrect. Cannabis use can lead to symptoms such as anxiety, paranoia, and altered perception, but it typically does not cause mydriasis (dilated pupils) or diaphoresis (excessive sweating) to the extent seen in the scenario.

Additional Info

✓ Amphetamine intoxication can produce severe hypertension and tachycardia

✓ Cardiovascular monitoring is recommended in severe cases, along with medications such as lorazepam to decrease hyperactivity and paranoia

✓ Assess the client's safety and the safety of others in the immediate environment. Clients intoxicated with amphetamines may be agitated, impulsive, and potentially aggressive. Ensure a safe environment by removing any potential hazards and providing appropriate supervision.

Information Source

Halter, M. (2017). Varcarolis' Foundations of Psychiatric Mental Health Nursing, 8th Edition. p. 418

Question 73

Type: single_choice

The nurse is caring for a client receiving total parenteral nutrition (TPN) through a central line. The nurse plans on taking which appropriate action?

A. Inserting an indwelling urinary catheter.

B. Weighing the client in the morning before the first void.

C. Placing a mask on the client before changing the central line dressing. ✔ Correct

D. Establishing continuous cardiac monitoring.

Explanation

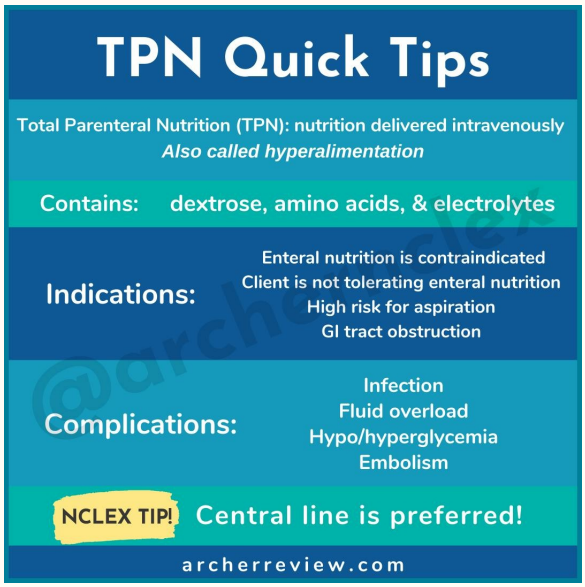
Choice C is correct. Clients receiving TPN are very susceptible to infection. The concentrated glucose solutions are an excellent medium for bacterial growth. A strict sterile technique prevents a central line-associated bloodstream infection (CLABSI). A key part of a central line dressing change (completed every seven days) is to have the client and nurse don a surgical mask.

Choice A is incorrect. An indwelling urinary catheter is not required for a client receiving TPN. By inserting an indwelling urinary catheter, the client has a higher risk of developing an infection.

Choice B is incorrect. The client should receive daily weights while receiving TPN. However, the daily weights should occur in the morning *after* the first void. The same scale should be used, and the client should wear the same clothing. If clients respond favorably to the TPN, they can expect their weight to increase.

Choice D is incorrect. Continuous cardiac monitoring is not necessary for a client receiving TPN.

Additional Info



Source : Archer Review

Source : Archer Review

Question 74

Type: single_choice

The nurse is developing a teaching plan for a client with post-gastrectomy dumping syndrome.

➢ Which of the following statements should the nurse make to the client?

A. "Take small sips of water during meals to soften the food for easier digestion."

B. "Symptoms will resolve in about 4-6 weeks as the stomach adjusts post-surgery."

C. "Plan rest periods of 10 minutes after every meal."

D. "Meals should consist of dry foods with low carbohydrates, moderate fat, and high protein content." ✔ Correct

Explanation

Choice D is correct. The client should be instructed to eat frequent small meals high in protein and fiber but low in carbohydrates. Additionally, liquids and solids should be separated during meals. Dumping syndrome is one of the most common causes of diarrhea in a post-gastrectomy client. Because the pyloric sphincter is bypassed or disrupted in a gastrectomy client, hyperosmolar food material (predominantly carbohydrate load) rapidly empties into the small intestine (dumping). As a result, the osmolarity in the small bowel lumen increases, drawing fluid into the

bowel lumen and triggering the release of vasoactive intestinal peptides and serotonin. Early symptoms occur within 15 to 30 minutes, including nausea, vomiting, abdominal cramps/pain, diarrhea, lightheadedness, palpitations, and flushing. A post-prandial insulin peak may occur, and hypoglycemia follows. Treatment involves incorporating dietary changes (a diet low in carbohydrates but high in fiber and protein).

Choice A is incorrect. Clients experiencing dumping syndrome should be instructed to avoid drinking liquids during meals to prevent fullness and distention. Clients should be instructed only to drink in between meals at least 30-45 minutes before eating and one hour after eating.

Choice B is incorrect. Symptoms of dumping syndrome generally resolve in several months to a year after gastrectomy surgery.

Choice C is incorrect. Post-meal rest periods should be at least 30 minutes to allow enough time for the digestion process to begin.

Additional Info

Client Education for Dumping Syndrome

✓ Avoid foods high in simple carbohydrates (candy, cookies, cakes, fruit juices, sweetened drinks, ice cream, canned fruits in heavy syrup, sugar alcohol).

✓ Eat protein with each meal and snack (eggs, cheese, meats, fish, poultry, legumes, low-fat milk).

✓ Avoid drinking liquids with meals. Instead, drink 30 to 45 minutes before and 1 hour after the meal.

✓ Limit the use of caffeine, tea, and alcohol. These beverages can stimulate gastric motility. Discuss the appropriate intake of alcohol with your healthcare provider.

✓ Eat five to six small meals daily to avoid overloading the stomach.

✓ Lie down for about 15 minutes after eating to help slow gastric emptying.

✓ Avoid very hot or very cold foods and liquids; they can increase the severity of DS.

✓ Choose high-fiber foods to decrease the risk of late dumping

Information Source

Rodgers and Phillips (2018) https://www.myamericannurse.com/wp-content/uploads/2017/12/ant1-Dumping-1218.pdf

Ignatavicius, D., & Workman, M. L. (2020). *Medical-Surgical nursing: Concepts for interprofessional collaborative care.* (10th ed.). Elsevier. p.1106

Question 75

Type: single_choice

A 28-year-old woman presents to the trauma bay after being shot in the upper back. She can move the left side of her body but cannot move the right. However, she cannot feel any pain in the left. The nurse knows these symptoms suggest which type of spinal cord injury?

A. Incomplete spinal cord injury, central cord syndrome

B. Incomplete spinal cord injury, Brown-Sequard syndrome ✔ Correct

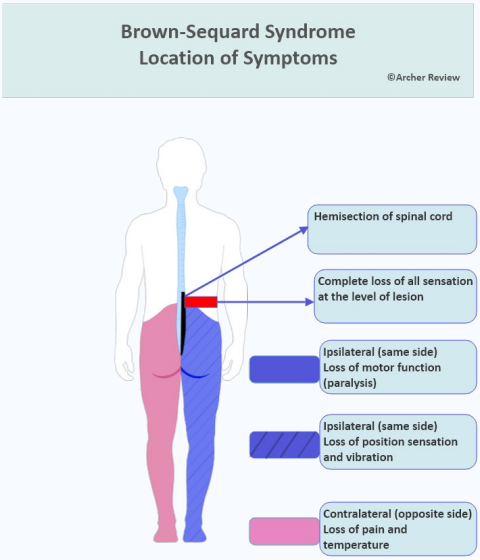
C. Complete spinal cord injury, paraplegia

D. Incomplete spinal cord injury, anterior cord syndrome

Explanation

Choice B is correct. This is the best answer based on the patient's symptoms of weakness on one side but sensory loss (pain sensation loss) on the other. The **Brown-Sequard syndrome** is an **incomplete spinal cord injury** characterized as a **weakness/paralysis** (**hemi-paraplegia**) on the **ipsilatera**l (same) side of the body and **sensory loss** (**hemianesthesia**) on the **contralateral** (opposite) side of the body **below the level of injury.** It is also known as the hemi-section of the spinal cord. **At the level of the injury**, there is a complete loss of sensation and flaccid paralysis. **Below the level of the injury**, there is **spastic paralysis** and the **Babinski reflex (extensor plantar response) on the ipsilateral side.**

Brown-Sequard Syndrome may be due to traumatic or non-traumatic injuries. However, traumatic injuries such as gunshot wounds, stab wounds, motor vehicle accidents, or blunt trauma are more common causes than non-traumatic etiologies.



Choice A is incorrect. Central cord syndrome is the most common form of incomplete SCI, characterized by an inability to move the hands and arms (more significant neurologic deficit in the upper extremities than in the lower extremities). Pain, temperature, light touch, and pressure sensation below the level of injury are lost. The spinal tracts that serve the arms are involved due to their **central location** in the cord, while the corticospinal tracts that supply the legs are spared due to their peripheral location. Most of the time, it is caused by trauma to the cervical spinal cord due to hyperextension in older patients with spinal stenosis/cervical degenerative joint disease or from flexion injuries in young patients.

Choice C is incorrect. Complete Paraplegia is characterized as the inability to move the bottom half of the body and is often due to a **complete** spinal cord injury.

Choice D is incorrect. **Anterior cord syndrome** is an **incomplete SCI** characterized by **loss of pain/temperature sensation and motor function** (paralysis) below the level of injury. This is due to injury to the anterior portion of the spinal cord or a decrease in the blood supply from the anterior spinal artery. Common causes are vertebral fractures, dislocations, and disc herniations. Spinothalamic tracts (pain/temperature sensation) and corticospinal fibers (motor function) in the anterior position of the cord are damaged. **Touch and proprioception (position sensation) are preserved** because dorsal (posterior) columns control them.

Additional Info

Spinal cord injuries (SCI) are classified as incomplete and complete. In an **incomplete SCI,** there is a partial loss of motor function and sensations below the level of injury. The client may exhibit more functioning/sensations in one extremity than the other or on one side of the body than the other. Incomplete SCI also displays “sacral sparing” – some degree of preservation of sensation or motor function in the areas innervated by S4 to S5. In a **complete SCI,** there is a total loss of motor function and sensations below the level of injury. Both sides of the body are equally affected.

Spinal Cord Injuries	
Incomplete	**Complete**
Central cord syndrome	Spinal shock syndrome
Anterior cord syndrome	Complete Paraplegia
Posterior cord syndrome	
Brown-Sequard syndrome	

Question 76

Type: single_choice

The nurse is caring for a client who has recently arrived at the emergency department after experiencing a very traumatic event. The client appears calm and in control. The nurse assesses this behavior as which of the following defense mechanisms?

A. Projection

B. Denial ✔ Correct

C. Rationalization

D. Regression

Explanation

Choice B is correct. Based on the available information this client is likely experiencing denial. Denial involves refusing to accept reality or acknowledge the existence of a problem or traumatic event. In this scenario, the client's calm and controlled demeanor immediately after experiencing a traumatic event may indicate they are in denial. The client may be attempting to block out or minimize the impact of the trauma by appearing calm and composed, even though they may be struggling internally. Denial allows the individual to temporarily avoid confronting the full

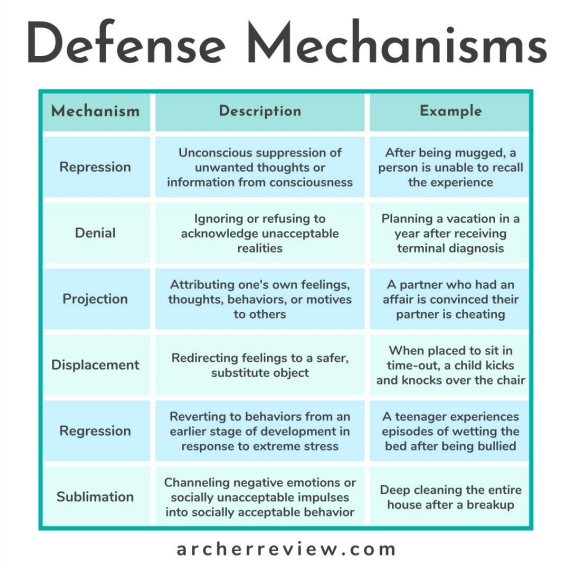
emotional weight of the traumatic experience, providing a sense of psychological protection in the face of overwhelming distress.

Choice A is incorrect. Projection is a defense mechanism where the client takes their personal feelings and places them onto someone else, believing the other person is experiencing the undesired feelings.

Choice C is incorrect. In rationalization, individuals acknowledge the reality of the situation but provide themselves with rational explanations or justifications for their behavior or emotions. They make an effort to make their actions or feelings seem reasonable or acceptable to themselves or others.

Choice D is incorrect. Regression is a coping mechanism where a client behaves in a manner reminiscent of an earlier, safe time in their life. While regression could occur later as a coping mechanism, the immediate response described in the scenario does not align with a regressive state.

Additional Info



Information Source

Hall, P.P.A.P.P.S. A. (2021). Fundamentals of Nursing (11th ed.).

Question 77

Type: single_choice

The nurse is caring for a client in labor. During a contraction, the nurse notes a decrease in fetal heart rate from 150 to 120 bpm. The heart rate slows for about 10 seconds and increases back to 150 bpm as the contraction ends.

➢ Which of the following correctly classifies this observation?

A. Late deceleration

B. Moderate variability

C. Early deceleration ✔ Correct

D. Marked variability

Explanation

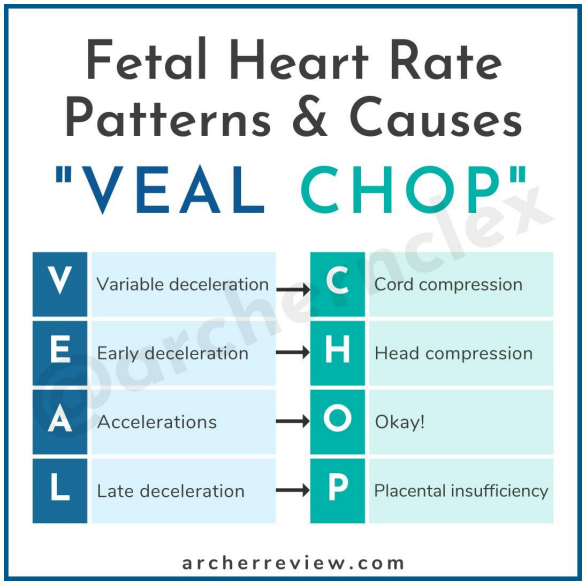
Choice C is correct. Early decelerations occur when the fetal heart rate decreases at the same time as a contraction. In this question, the nurse noted a decrease from 150 to 120 bpm with the contraction and then a return to baseline. This occurs due to the pressure of the fetus's head on the pelvis or soft tissue, and no intervention is required by the nurse after an early deceleration.

Choice A is incorrect. Late decelerations are a decrease in the fetal heart rate that occurs after a contraction. They are a non-reassuring sign on a fetal heart rate strip. In this question, the nurse noticed an early deceleration because it occurred with a contraction, not after.

Choice B is incorrect. Fetal heart rate variability is defined as fluctuations from baseline. A moderate amount of variability is expected and considered a reassuring sign. This question does not mention the variability of the fetal heart rate; instead, it notes an early deceleration.

Choice D is incorrect. Variability in a fetal heart rate is defined as the fluctuations in the fetal heart rate from the baseline. Marked variability is a dramatically increased amount of these fluctuations. This question does not mention the variability of the fetal heart rate; instead, it notes an early deceleration.

Additional Info



Source : Archer Review

Source : Archer Review

Information Source

Lowdermilk, D. L., Cashion, K., Allen, K. R., Olshansky, E. F., & Perry, S. E. (2024). Maternity and women's health care

Question 78

Type: single_choice

The nurse is researching evidence-based practice and needs related literature. The nurse understands that the best source of reliable writing is:

A. Systematic review and meta-analysis studies ✔ Correct

B. Expert opinions

C. Qualitative studies

D. Case studies

Explanation

Choice A is correct. Systematic reviews and meta-analysis studies provide current, recently summarized evidence, making them the most reliable form of evidence for studies.

Choice B is incorrect. Expert opinions may involve bias on the subject, making them unreliable sources of data.

Choice C is incorrect. Qualitative studies involve interpretation of the database on the author's understanding of the subject, making these types of literature unreliable sources of data.

Choice D is incorrect. Case studies may also involve bias from the authors, making them unreliable sources of data as well.

Question 79

Type: single_choice

The nurse manager plans to establish quality metrics for the nursing unit based on national metrics and compare them to other healthcare organizations. This process is identified as

A. benchmarking. ✔ Correct

B. continuous quality improvement.

C. performance Improvement.

D. quality management.

Explanation

Choice A is correct. In Benchmarking, the nurse manager compares best practices from top hospitals with the unit and adapts the unit's methods to improve unit performance. This is often when the nurse manager compares metrics (for example, bar-coded medication administration rate) with other healthcare facilities.

Choice B is incorrect. Continuous quality improvement continually assesses and evaluates the effectiveness of client care. Benchmarking may be involved with this process. However, the specific method of comparing metrics to other facilities is benchmarking.

Choice C is incorrect. Performance improvement establishes a system of formal evaluation for job performance and recommends ways to improve performance as well as promote professional growth.

Choice D is incorrect. Quality management oversees all activities and tasks needed to maintain a desired level of excellence. This includes determining a quality policy, creating then implementing quality planning and assurance, and quality control/improvement.

Additional Info

✓ Benchmarking can help nurse managers assess resource allocation in terms of staffing, equipment, and supplies. By comparing their facility's resource utilization with that of high-performing institutions, nurse managers can identify areas where resource allocation may be optimized to enhance client care.

✓ Benchmarking can inform the development of individualized care plans tailored to meet the unique needs and preferences of each client. Nurse managers can use benchmarking data to identify best practices and evidence-based interventions that align with the client's clinical condition, cultural background, and personal goals.

✓ According to a survey by the American Society for Quality, 87% of healthcare organizations use benchmarking to improve their performance.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 80

Type: single_choice

The emergency department nurse is caring for a client reporting colicky abdominal pain, nausea, vomiting, and yellowing of their eyes.

➢ The nurse suspects the client is experiencing

A. peptic ulcer disease.

B. hepatitis C.

C. cholecystitis. ✔ Correct

D. hepatic encephalopathy.

Explanation

Choice C is correct. Cholecystitis is a suspected diagnosis because all manifestations coincide with the client's presentation. Cholecystitis manifestations include episodic, colicky pain in the epigastric area of the abdomen that radiates to the back and shoulder. Pain in cholecystitis resembles indigestion or chest pain after eating fatty or fried foods. Nausea, vomiting, fever, and yellowing of the eyes are also linked with this condition.

Choice A is incorrect. Peptic ulcer disease may present with gnawing-like pain worsened with ingesting food (or relieved with food), but would not cause yellowing of the eyes.

Choice B is incorrect. Liver disorders, such as hepatitis, may cause yellowing of the eyes, nausea, vomiting, and a sense of unwellness; however, colicky abdominal pain is not a manifestation found with hepatitis.

Choice D is incorrect. Hepatic encephalopathy commonly causes altered mental status because of the accumulation of neurotoxins such as ammonia. It does not feature colicky abdominal pain.

Additional Info

✓ **Risk factors for cholecystitis include:**

• Women of all ages (risk of calculi increases with aging)

• American Indian, Mexican American, or Caucasian

• Obesity

• Rapid weight loss or prolonged fasting; low-fat diet

• Increased serum cholesterol and lipids

• Women on hormone replacement therapy (HRT)

✓ **Manifestations of cholecystitis include:**

• Abdominal pain in the right upper quadrant radiating to the right shoulder blade (pain is often aggravated with a high-fat meal)

• Significant nausea and vomiting

• Fever

• + Murphy's sign

• Yellowing of the eyes

Question 81

Type: single_choice

A nurse at an obstetric clinic has conducted a teaching class on sexuality during pregnancy. Which of the following comments from a participant would indicate that the teaching has been effective?

A. "At around the time I would normally have my period, I should abstain from intercourse."

B. "I should no longer have sex during the last trimester of pregnancy."

C. "My sexual desire will remain the same for the entire pregnancy."

D. "The best time to enjoy sex is in the second trimester." ✔ Correct

Explanation

Choice D is correct. Sexual pleasure is heightened during the second trimester of pregnancy. In the **second** trimester, most women experience significant relief from the discomforts of early pregnancy (nausea and vomiting, breast tenderness). The uterus is not too large to interfere with comfort and rest. The second trimester is also the time when pelvic organs are congested with blood, increasing pleasure in sexual activities.

Choices A and B are incorrect. As long as risk factors such as preterm labor or incompetent cervix are not present, intercourse should not harm the pregnancy. Sexual intercourse **should not be a cause of concern even in the third trimester unless risk factors such as preterm labor or placenta previa are present**.

Choice C is incorrect. Many women experience changes in sexual desire at different stages in pregnancy, depending on their general sense of well-being and the presence of certain discomforts brought about by the pregnancy. It is **not the same throughout pregnancy**.

Question 82

Type: single_choice

The nurse is caring for a client reporting phantom limb pain after a below-the-knee amputation. The client is experiencing what type of pain?

A. Perceived pain

B. Somatic pain

C. Neuropathic pain ✔ Correct

D. Nociceptive pain

Explanation

Choice C is correct. A client who is reporting of phantom limb pain after a below-the-knee amputation (BKA) is most likely experiencing **neuropathic pain**. Peripheral neuropathic pain, such that occurs with neuralgia, phantom limb pain, and carpal tunnel syndrome, is described as a burning, sharp and shooting pain, and it is often chronic.

Choice A is incorrect. Although a client who is reporting of phantom limb pain after a below-the-knee amputation is feeling and perceiving pain, this pain after a below-the-knee amputation is not referred to as perceived pain.

Choice B is incorrect. A client who is reporting of phantom limb pain after a below-the-knee amputation is not likely to be experiencing somatic pain. Somatic pain is a type of nociceptive pain that results from damage to the bones, skin, and muscles.

Choice D is incorrect. A client who is reporting of phantom limb pain after a below-the-knee amputation is not experiencing peripheral nociceptive pain. Nociceptive pain is classified as bodily nociceptive pain and visceral nociceptive pain, not peripheral nociceptive pain.

Additional Info

✓ Gabapentin or pregabalin may be prescribed for individuals with neuropathic pain. Drowsiness is the most significant side effect associated with these medications.

Question 83

Type: single_choice

The nurse is performing a physical assessment on a client who has a round, non-tender nodule on the left wrist. It would be appropriate for the nurse to identify this as a

A. janeway lesion.

B. bouchard node.

C. ganglion cyst. ✔ Correct

D. pilar cyst.

Explanation

Choice C is correct. Ganglion cysts are common, benign tumors over a tendon sheath or joint capsule. They are typically non-tender unless the tumor puts pressure on a nerve. When on the wrist, they become more noticeable with flexion. A ganglion cyst generally resolves on its own and does not require treatment, but can be drained/removed if causing discomfort.

Choice A is incorrect. Janeway lesions are flat, reddened maculae on hands and feet and commonly associated with infective endocarditis (IE).

Choice B is incorrect. A Bouchard node refers to a hard, non-tender bony overgrowth on the proximal interphalangeal joint, commonly seen in osteoarthritis.

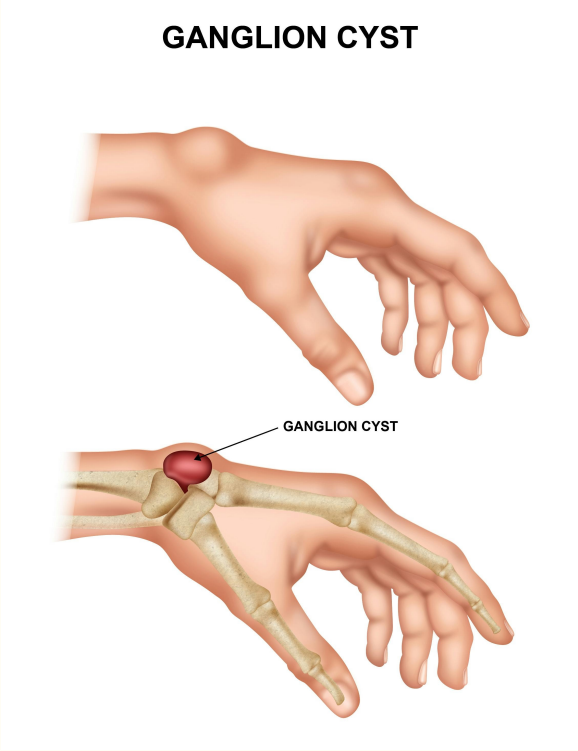
Choice D is incorrect. A pilar cyst is a fluid-filled cyst that originates in a hair follicle. Pilar cysts are commonly found on the scalp.

Additional Info

✓ Ganglion cysts are generally benign and commonly found on the hand and wrist.

✓ They tend to occur right over a tendon.

✓ If they cause a client any pain or weakness, they may be removed using local anesthesia by a dermatologist.



Information Source

Ignatavicius, D., Workman, M. L. (102020). Medical-Surgical Nursing, 10th Edition. p. 983

Question 84

Type: single_choice

The nurse is caring for a client with chronic obstructive pulmonary disease (COPD) with a chronically increased red blood cell count (RBC). The nurse understands that this finding is likely from

A. Increased carbon dioxide levels

B. Low blood oxygen levels ✔ Correct

C. Insensible water loss

D. Decreased fluid intake

Explanation

Choice B is correct. Polycythemia is a condition with increased red blood cells in the blood. Low blood oxygen levels, a clinical feature associated with COPD, cause the kidneys to respond by releasing erythropoietin (EPO), which stimulates red blood cell production. The red blood cell count is elevated to compensate for hypoxia or low oxygen levels. More cells are available to carry and deliver the maximum amount of oxygen.

Choices A, C, and D are incorrect.

- Hypercapnia, which is too much carbon dioxide in the blood, would not contribute to an increase in the red blood cell count (RBC) (choice A).
- Both insensible fluid loss and decreased fluid intake would result in dehydration. While dehydration (caused by sensible or insensible fluid loss) would cause hemoconcentration, dehydration is not a clinical finding linked to COPD. Moreover, dehydration causes **transient** hemoconcentration (relative/ **spurious** polycythemia) but **not an actual**, chronic increase in the RBC mass (choices C and D).

Additional Info

Polycythemia (PV) is a condition in which the number of RBCs in the blood is greater than normal. The blood hemoglobin levels in PV are sustained at **greater than 16.5 g/dL in men** or greater than **16.0 g/dL in women** (WHO definition of polycythemia).

- Polycythemia may be primary (bone marrow problem such as myeloproliferative disorder), secondary (COPD, EPO producing tumors), or relative (dehydration).
- Patients with COPD commonly have secondary polycythemia caused by **hypoxia,** which prompts erythropoiesis (red cell production).

Question 85

Type: single_choice

The nurse is instructing a female client who is neutropenic. It would be appropriate for the nurse to recommend that she

A. brush her teeth every other day.

B. use pads instead of tampons during the menstrual cycle. ✔ Correct

C. wear a face shield when out in public.

D. disinfect surfaces in the home with hot water.

Explanation

Choice B is correct. Tampons may cause vaginal mucosal tears that could lead to infection. Therefore, clients on neutropenic precautions should avoid using them and utilize pads during the menstrual cycle. Further, all forms of intercourse should be avoided because of the risk of infection.

Choices A, C, and D are incorrect. Teeth should be brushed twice daily with a soft toothbrush to help prevent infection. The mouth is an enormous reservoir for pathogens, and skipping brushing could lead to infection. Healthy visitors are usually acceptable, and the client should avoid any individual who is ill. Common surfaces in the household should be cleaned and disinfected with a product that contains isopropyl alcohol or bleach. Hot water is not sufficient to eliminate pathogens on surfaces. Wearing a face shield would protect the client against splashes but not provide filtration like a surgical mask to prevent the transmission of infected droplets. Face shields are only used if a procedure is used and there is a risk of splashing bodily fluids. The client should wear a surgical mask, not a face shield.

Additional Info

✓**For a client who is neutropenia, some teaching points include**

✓ Avoid all forms of intercourse until the neutropenia has resolved

✓ Clean commonly touched surfaces with a disinfectant

✓ Avoid crowded places

✓ Avoid cleaning up after pets

✓ Practice good oral hygiene with a soft toothbrush

✓ Clean the toothbrush weekly with a dilutional bleach solution

Question 86

Type: multiple_response_select

Which of the following three (3) assessment findings requires **immediate** follow-up?

A. lung sounds

B. reports of dizziness Correct

C. previous suicide attempts

D. pulse, respirations, blood pressure Correct

E. abdominal assessment findings

F. pulse oximetry reading

G. capillary blood glucose result Correct

Explanation

The client's **dizziness, pulse, respirations, blood pressure**, and **capillary blood glucose** require follow-up. The dizziness suggests hypovolemia, supported by the thready peripheral pulses and capillary refill > 3 seconds. The pulse is high, and blood pressure is low, supporting the diagnosis of dehydration. The high respiratory rate, combined with hyperglycemia, strongly suggests diabetic ketoacidosis. The DKA diagnosis is likely because the client reports an illness that raises blood glucose, making DKA a likely complication if the sick day rules are not followed. The sick days were not followed because the client reports not taking her insulin which should be taken during illness.

The lung sounds being clear is not of concern. The client's previous suicide attempts are not of concern because the current illness does not suggest self-harm. The abdominal assessment is insignificant because the client has had nausea for some time, and the hypovolemia is the most significant concern.

Question 87

Type: matrix_multiple_response

➢ For each client finding below, click to specify if the finding is consistent with the disease process of diabetic ketoacidosis (DKA) or hyperglycemic-hyperosmolar state (HHS). Each finding may support more than 1 disease process

Client Findings	hyperglycemic-hyperosmolar state (HHS)	diabetic ketoacidosis (DKA)
hyperglycemia	✔	✔
fluid volume deficit	✔	✔
urine ketones		✔
abrupt onset of symptoms		✔
altered level of consciousness	✔	✔

Explanation

- This client has an abrupt onset of DKA symptoms, acetone type of breath, fluid volume deficit (tachycardia, dry skin, thready pulses), and altered level of consciousness, which suggest and coincide with diabetic ketoacidosis.
- The significant dehydration in DKA and HHS explains the altered LOC. The acidosis in DKA causes the client to experience hyperkalemia, requiring the nurse to implement continuous cardiac monitoring.
- The condition the client is experiencing is likely because DKA occurs with type I diabetes mellitus, whereas type II diabetes mellitus may adversely occur with HHS.
- HHS has a more gradual onset of symptoms that is driven by dehydration. Ketones in the blood and urine is not a finding associated with HHS.

Question 88

Type: drop_down_rationale

➢ Complete the sentence below by choosing from the list of options

Sentence Structure

The client is at highest risk of developing **[Dropdown]** as evidenced by the client's **[Dropdown]**

Dropdown Options & Correct Answers

Dropdown #1 Cause

- suicide
- **diabetic ketoacidosis** Correct
- hyperglycemic hyperosmolar state

Correct Answer: diabetic ketoacidosis

Dropdown #2

- history of suicide attempts.
- recent international travel.
- **fluid volume deficit.** Correct

Correct Answer: fluid volume deficit.

Explanation

The client is at the highest risk for DKA, as evidenced by the client's tachypnea, hyperglycemia, fluid volume deficit, lethargy, and history of type I diabetes mellitus. A client with type II diabetes mellitus is unlikely to experience DKA because they have enough insulin to prevent ketosis. The client's international travel has no relevance except that is where she may have gotten the initial gastrointestinal infection. The client has not voiced or has any manifestations of self-injury, and thus, suicidality is not a problem at this time.

Question 89

Type: drop_down_cloze

The outpatient clinic nurse gives the intensive care unit nurse a telephone handoff report

The client arrives at the ICU, and the ICU nurse reviews the nurses' notes, medical history, and physician orders

➢ **Complete the sentences below from the list of options**

Sentence Structure

The nurse understands that the rationale for the prescribed intravenous fluids is to **[Dropdown]** The nurse understands that the rationale for the prescribed intravenous regular insulin is to **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- increase urinary output.
- lower blood glucose.
- **restore circulatory volume.** Correct

Correct Answer: restore circulatory volume.

Dropdown #2

- rapidly drop the blood glucose.
- **treat the ketoacidosis.** Correct
- restore circulatory volume.

Correct Answer: treat the ketoacidosis.

Explanation

The treatment of DKA involves two modalities - intravenous fluid and regular insulin.

DKA occurs because a lack of insulin causes the body's increase in metabolism in a less efficient attempt to use other energy sources. The result is the burning of lipids from fat stores. Ketones are formed due to lipolysis, and metabolic acids are produced. Serum osmolality increases slightly, drawing fluid and sodium from cells, resulting in dehydration and increased urinary output. Blood lactate levels rise, further contributing to acidosis. The most common causes are underlying infection, disruption of insulin treatment, and new or initial-onset DM.

The treatment goal for the isotonic saline bolus is to rehydrate the client and restore circulatory volume. This will also lower blood glucose but emphasizes treating hypovolemia. Increasing UOP would be unhelpful because this would cause further dehydration. The client with DKA has polyuria which primarily causes dehydration.

The treatment goal for regular insulin is to stop the ketoacidosis and allow insulin into the cell, allowing carbohydrates to be the fuel source - not fats. The treatment goal is to lower the blood glucose by 50-75 mg/dL/hr. A rapid decrease in blood glucose could cause life-threatening hypoglycemia and an osmotic fluid shift.

Question 90

Type: multiple_response_select

The intensive care unit (ICU) nurse obtains vital signs, reviews the physician's orders, and makes an entry into the nurses' note

➢ **It would be a priority for the nurse to implement which two (2) physician orders based on the 1145 nursing note entry?**

A. Establish peripheral vascular access devices Correct

B. Two liters of 0.9% saline to run concurrently over one hour Correct

C. Ondansetron 4 mg intramuscular (IM) every six hours PRN nausea and vomiting

D. Acetaminophen 1 gram every eight hours PRN pain

E. 5 units of regular insulin intravenous (IV) push x 1 dose

F. Obtain laboratory testing

G. Consult endocrinology

H. Educate the client that they are NPO

Explanation

- **The nurse should immediately implement two orders: establishing the peripheral vascular access device and administering intravenous fluids**.
- The client's blood pressure has declined, and the pulse has increased, which indicates that the client's clinical status is declining.
- Using the airway, breathing, and circulation principle, the nurse **must** address the client's circulatory decline by administering isotonic fluids.
- Correcting the glucose levels via regular insulin can wait because while their glucose has increased, their decline in blood pressure is concerning.
- The other orders can wait until the client's condition stabilizes. The priority treatment in DKA is restoring fluid volume status and normalizing blood glucose levels.

Question 91

Type: matrix_multiple_choice

The nurse reviews the nurses' note entries from 1250 [ICU Nurses' Notes (2)] and compares them to the 1030 entry [clinic nurses' notes]

➢ **For each assessment finding, click to specify if it is improved, unchanged, or worsening**

Note: Each row must have 1 response option selected.

Assessment finding	Improved	Unchanged	Worsening
Pulse rate	Correct		
Blood pressure	Correct		
Capillary blood glucose	Correct		
Pain level			Correct
Reports of nausea		Correct	
Peripheral pulses		Correct	

Explanation

- Although the client's vital signs are not within desired limits, the two liters of isotonic saline have improved the client's volume status.
- Compared to the client's vital signs at the outpatient clinic, the pulse rate has decreased, and the blood pressure has increased. This is an objective clinical improvement. It would be wise for the nurse to contact the physician for further hydration orders.
- Isotonic saline rehydration also showed a minor improvement in the client's capillary blood glucose compared to baseline.
- The client's headache pain is worsening, and the report of nausea is unchanged compared to the admission assessment.
- The peripheral pulses being thready is also unchanged, further supporting the need for the nurse to get further orders for hydration.

Question 92

Type: multiple_response_select

The nurse reviews the history and physical and laboratory data

➢ **Select four (4) client findings that require follow-up**

A. Glasgow coma scale

B. Weight gain Correct

C. Triiodothyronine (T3) level

D. Thyroid stimulating hormone (TSH) level Correct

E. Thyroxine (T4) level Correct

F. Peripheral pulses

G. Flattened affect Correct

H. Lung sounds

Explanation

- Some aspects of the client's history and physical (H&P) assessment require follow-up, including the client's EENT assessment revealing slight periorbital edema, trace pedal edema, weight gain, constipation, hypoactive bowel sounds, generalized weakness, irregular menstruation, flattened affect, and social withdrawal.
- The client's lung sounds are expected, considering this client has a history of asthma; diminished breath sounds in the bases are expected and attributed to this chronic illness.
- The client's thyroid panel shows findings that require follow-up, including high TSH and low T4.

Question 93

Type: multiple_response_select

➢ Select the two (2) issues the client is at risk of developing if the symptoms go unrecognized and untreated?

A. Thyrotoxicosis

B. Hyperthyroidism

C. Myxedema coma Correct

D. Hypothyroidism Correct

E. Graves' disease

F. Adrenal insufficiency

Explanation

- The client's laboratory values (low T4; high TSH) point to hypothyroidism. The clinical features of a flattened affect, constipation, weight gain, and pedal edema are consistent with hypothyroidism. The client could also face a myxedema coma (severely low thyroid levels) if the condition is not recognized or treated.
- Hyperthyroidism, Graves' disease (the most common form of hyperthyroidism), and thyrotoxicosis (severely high thyroid levels) are inconsistent with the client's laboratory values and symptomatology. These conditions would increase the client's metabolic rate causing weight loss, heat intolerance, increased heart rate, and agitation.
- Adrenal insufficiency is excluded because this condition would result in weight loss from fluid volume depletion related to aldosterone insufficiency. Further, the thyroid panel supports the finding of hypothyroidism.

Question 94

Type: drop_down_cloze

➢ **Complete the following sentence by choosing from the list of options**

Sentence Structure

The client is at highest risk for developing **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- adrenal insufficiency.
- **hypothyroidism.** Correct
- hyperthyroidism.
- diabetes insipidus.

Correct Answer: hypothyroidism.

Explanation

The client's laboratory data and clinical manifestations are strongly consistent with hypothyroidism.

The client is not exhibiting any manifestations of hyperthyroidism (agitation, weight loss, insomnia). Further, the client does not have any fluid volume deficit manifestations, which is a hallmark of adrenal insufficiency (the client has gained weight). Finally, this client has no polyuria, thirst, or fluid volume deficit symptoms, excluding diabetes insipidus.

Question 95

Type: matrix_multiple_choice

The nurse develops a care plan for this client and collaborates with the physician

➢ **For each potential order/prescription, click to specify whether the potential order/prescription is indicated or not indicated for the client**

Note: Each row must have one (1) response option selected

Potential Orders/Prescriptions	Indicated	Not Indicated
24-hour urine collection		Correct
Repeat thyroid panel at next appointment	Correct	
Levothyroxine	Correct	
Chest radiograph		Correct
Propylthiouracil		Correct

Explanation

- The client with hypothyroidism will require indefinite treatment with medications such as levothyroxine. The medication will require periodic monitoring via a thyroid panel to determine if any dosage adjustments need to occur.
- A 24-hour urine collection is not used to diagnose hypothyroidism. A 24-hour urine collection could be helpful in the diagnosis of adrenal disorders such as adrenal insufficiency.
- This client does have a medical history of asthma. However, this has no relevance to the client's current symptom presentation. So, a chest x-ray is not necessary.
- Propylthiouracil (PTU) would be contraindicated because this medication is used to treat hyperthyroidism. This medication would further lower the thyroid levels.

Question 96

Type: multiple_response_select

The nurse receives physician orders and reviews the discharge orders with the client

➢ **Which of the following two (2) statements by the client would indicate a correct understanding of the teaching?**

A. "I plan to take this medicine with a high-protein meal."

B. "I will need to take this medication every morning consistently." Correct

C. "I should call my doctor if I start to experience sweating and insomnia." Correct

D. "I will add more low-fiber foods to my diet."

E. "I will need to take this medication for six weeks."

F. "I can help manage my fatigue by doing all of my activites at once instead of spacing them out."

Explanation

- Hypothyroidism requires indefinite treatment (not six weeks).
- The client should be taught the manifestations of hyperthyroidism (sweating, insomnia, agitation, palpitations) if their thyroid levels get overcorrected by the prescribed levothyroxine.
- Levothyroxine should be taken consistently in the morning, at the same time, and without any other meals or medications.
- One of the hallmark symptoms of hypothyroidism is constipation and fatigue. The nurse should instruct the client to increase their fiber and water intake to promote optimal bowel regulation. To manage fatigue, the client should space out activities and encourage frequent rest periods.

Question 97

Type: highlight_text

Six weeks later, the nurse reviews the client's progress note.

➢ **Click to highlight the findings in the progress note that indicate that the client is not meeting the treatment goals.**

Progress Note Lines

The client presents six weeks following the initiation of levothyroxine.

The client reports that "she feels better but not 100%."

She indicates that she is going outdoors more often and engaging with friends.

She said she is still gaining weight and experiencing constipation. Correct

On exam, the client is alert and oriented.

She reports that her mood is "good" and has a cheerful affect.

Trace pedal edema was noted Correct

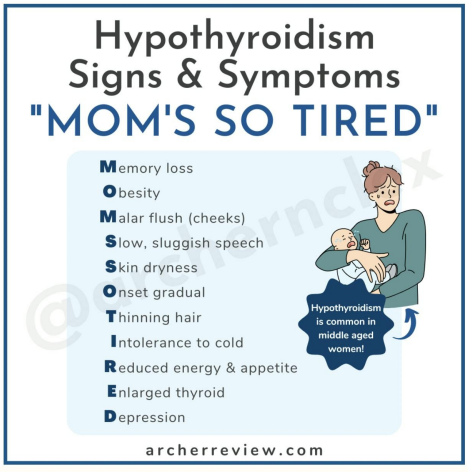
with 2+ peripheral pulses at a rate of 64/minute.

Hypoactive bowel in all quadrants sounds with abdominal distention. Correct

Explanation

- Findings that indicate that the client is not meeting the treatment goals include the client reporting weight gain, constipation, abdominal distention, and the finding of peripheral edema. All of these manifestations are evidence of persistent hypothyroidism despite the initiation of levothyroxine. A dosage increase from the physician is anticipated based on these residual symptoms.
- Positive findings in the progress note, which indicate that the client is meeting the treatment goals, include the client's social engagement, which has improved since the initial visit. The client's cheerful affect, instead of the initial flattening, is also a reassuring finding.

Additional Info



Source : Archer Review

Question 98

Type: multiple_response_all

The nurse is reviewing the client's reported symptoms and physical assessment findings.

Which findings warrant follow-up by the nurse? Select all that apply.

Answer Choices

A. Reports persistent fatigue and sluggishness Correct

B. Reports gaining approximately 12 pounds without diet changes Correct

C. Complains of sensitivity to cold temperatures Correct

D. Describes skin as rough and thick Correct

E. Reports recent hoarseness Correct

F. Denies chest pain or shortness of breath

G. Reports heavier and longer menstrual periods Correct

H. Describes facial puffiness in the mornings Correct

I. Heart rate of 56 bpm Correct

J. Blood pressure is 128/76 mmHg

Explanation

The client's report of fatigue, unexplained weight gain, sensitivity to cold, and changes in skin texture warrants follow-up, as they may indicate underlying systemic or metabolic changes affecting energy regulation and thermoregulation. Recent hoarseness and facial puffiness are additional signs that suggest possible involvement of upper airway or fluid balance. Heavier and longer menstrual periods require further evaluation to assess for hormonal or hematologic imbalances. A heart rate of 56 bpm is below the normal resting range for adults and may reflect slowed physiological processes that require further investigation.

Denial of chest pain or shortness of breath suggests there are no immediate cardiovascular or respiratory concerns requiring further action. A blood pressure reading of 128/76 mmHg is within normal limits for an adult and does not indicate a need for follow-up at this time. These findings reflect stable baseline functioning in those systems and are not associated with an acute change in condition.

Question 99

Type: drop_down_cloze

The nurse is analyzing the laboratory results with the client assessment findings.

Choose the most likely options for the information missing from the statement(s) by selecting from the lists of options provided.

Sentence Structure

The nurse suspects that the client is experiencing **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **Hypothyroidism.** Correct
- Iron Deficiency Anemia.
- Menopausal transition.
- Major Depressive Disorder.

Correct Answer: Hypothyroidism.

Explanation

The combination of low energy, weight gain, cold intolerance, hoarseness, bradycardia, and heavier menstrual periods, along with lab results showing elevated TSH and low Free T4 and Total T3, points toward a hormone deficiency pattern. These findings suggest inadequate stimulation of cellular metabolism and thermoregulation.

Although the client has a history of iron deficiency anemia, current hemoglobin is within normal limits. Menopausal transition may involve cycle changes and fatigue, but the client is premenopausal and does not report hot flashes or irregular periods. Depressive symptoms may cause low energy or concentration difficulty, but physical findings such as skin and hair changes and bradycardia are not consistent with a primary mood disorder.

Question 100

Type: Drag-Drop Cloze

The nurse is determining the priority issues associated with the client's confirmed diagnosis.

Drag from Word Choices to complete the sentence(s).

The nurse knows that the client is at risk for developing [Select] and [Select] if the condition is not managed.

Word Choices (Group 1)

- Infertility Correct
- Type 1 diabetes
- Chronic Kidney Disease
- Myxedema coma
- Gastrointestinal obstruction

Word Choices (Group 2)

- Infertility
- Type 1 diabetes
- Chronic Kidney Disease
- Myxedema coma Correct
- Gastrointestinal obstruction

Explanation

If the client's condition remains untreated, they are at risk for developing serious complications such as myxedema coma and infertility. Myxedema coma is a medical emergency that can arise from prolonged metabolic slowing and is characterized by hypothermia, decreased respiratory drive, and altered mental status. It reflects the body's inability to maintain vital functions due to extreme physiological suppression. Infertility may result from long-standing hormonal imbalance, which can disrupt the reproductive cycle and impair ovulation, particularly in clients reporting menstrual irregularities.

Other options, such as gastrointestinal obstruction, chronic kidney disease, and type 1 diabetes, are not directly associated with the client's current condition. Gastrointestinal obstruction involves mechanical issues that do not stem from systemic hormonal dysfunction. Chronic kidney disease is more often linked to hypertension or diabetes, and type 1 diabetes is an autoimmune condition affecting insulin production, unrelated to the hormonal axis involved here. These conditions require different underlying mechanisms and do not represent common complications in this scenario.

Question 101

Type: drop_down_rationale

The nurse is determining the client's plan of care.

Choose the most likely options for the information missing from the statement(s) by selecting from the lists of options provided.

Sentence Structure

The nurse knows that the primary treatment approach for the client's condition is **[Dropdown]** due to the need for **[Dropdown]**

Dropdown Options & Correct Answers

Dropdown #1

- **Pharmacological** Correct
- Surgical
- Dietary

Correct Answer: Pharmacological

Dropdown #2 Cause

- gland removal.
- **hormone replacement.** Correct
- nutritional supplementation.

Correct Answer: hormone replacement.

Explanation

The appropriate treatment approach is pharmacologic due to the need for hormone replacement. This method addresses the underlying deficiency by restoring hormone levels necessary for regulating energy, temperature, cardiovascular function, and other metabolic processes. Pharmacologic intervention is considered essential when the body can no longer produce adequate amounts of a key hormone, and replacement is required to maintain normal physiologic balance.

Surgical treatment is not indicated unless structural abnormalities such as nodules, goiter, or malignancy interfere with gland function or airway. Dietary interventions may support overall well-being, but are not sufficient to correct the root hormonal deficiency. Nutritional supplementation may assist in specific cases of micronutrient deficits, but it does not replace the need for targeted hormone therapy when a gland is no longer functioning properly.

Question 102

Type: multiple_response_select

The nurse is providing education to the client regarding the new medication ordered.

Select the 3 statements that the nurse should include in the client's education on levothyroxine.

A. "Take this medication on an empty stomach at least 30 to 60 minutes before breakfast." Correct

B. "Take this medication at bedtime with a high-fiber snack to promote absorption."

C. "If you miss a dose, take two pills the next day to stay on track."

D. "Stop taking the medication if you begin to feel jittery or anxious."

E. "Once your symptoms improve, you can reduce the dose."

F. "It may take several weeks before you start to notice improvement in your symptoms." Correct

G. "You'll need periodic blood tests to monitor your hormone levels and adjust your dosage." Correct

Explanation

Taking levothyroxine on an empty stomach helps ensure proper absorption, as food and supplements can interfere with its effectiveness. Clients should be aware that symptom improvement is gradual and may take several weeks. Regular monitoring through blood work is necessary to adjust the dosage and ensure therapeutic effectiveness without overcorrection.

Taking levothyroxine with food, particularly high-fiber meals, can reduce its absorption. Doubling up on missed doses is not recommended and can cause excessive hormone levels. Clients should never stop or adjust the medication based on how they feel without provider guidance, as inappropriate dosing can lead to serious side effects or recurrence of symptoms.

Question 103

Type: matrix_multiple_choice

The nurse is considering the indicators of the medication's efficacy.

For each parameter, click to indicate whether the nurse would expect it to increase or decrease if the medication therapy is effective.

Parameter	Increase	Decrease
Thyroid-stimulating hormone (TSH)		Correct
Temperature	Correct	
Heart rate	Correct	
Free T4	Correct	
Weight		Correct
Cold sensitivity		Correct
Energy level	Correct	

Explanation

Increase

With effective treatment, certain physiologic indicators are expected to improve as the body's metabolic rate stabilizes. An increase in circulating hormone levels reflects appropriate absorption and therapeutic dosing of the prescribed medication. As metabolism normalizes, the client's energy level typically improves, resulting in reduced fatigue and greater daily functioning. These improvements suggest that the body is responding to therapy and restoring balance to essential systems.

Decrease

Therapeutic response is also associated with a decrease in compensatory hormone signaling, as the body no longer needs to stimulate additional hormone production. Clients often experience reduced sensitivity to cold as thermoregulation improves. Weight may begin to decrease gradually as metabolic activity increases and excess fluid or fat accumulation resolves. These trends reflect positive outcomes that indicate the medication is effectively supporting normal physiological function.

Question 104

Type: multiple_response_select

➢ **Select the five (5) client findings that require follow-up.**

A. Capillary blood glucose Correct

B. Peripheral pulse findings

C. Blood pressure Correct

D. Not taking birth control

E. Skin assessment findings Correct

F. Peripheral edema Correct

G. Body mass index Correct

H. Current medication

I. Pregnancy test results

J. Visit to urgent care

Explanation

- The nurse is concerned about the client's CBG as it is showing evidence of hyperglycemia. This likely explains the client's thirst, frequent urination, and hunger.
- The client's blood pressure is elevated. Significant weight gain could be the cause of the client's elevated blood pressure.
- The skin assessment showed hair growth and striae are not within normal limits and require follow-up.
- The client having peripheral edema requires follow-up as that is not within normal limits.
- The client's BMI is categorized as obesity and requires follow-up.

- The client's peripheral pulses were 2+, which is within normal limits.
- The client not taking birth control is not concerning, and neither is the fact that the client is taking escitalopram, which is unrelated to her current symptoms.
- The client's pregnancy test was negative and did not require follow-up.
- The client's previous visit to urgent care for symptoms of cystitis does not require follow-up because the client's urinary symptoms were due to her hyperglycemia.

Question 105

Type: multiple_response_all

➢ The nurse recognizes which of the following conditions may cause a client to manifest hyperglycemia? **Select all that apply.**

Answer Choices

A. diabetes insipidus

B. adrenal insufficiency

C. pheochromocytoma Correct

D. hyperpituitarism Correct

E. pancreatitis Correct

F. syndrome of inappropriate antidiuretic hormone

G. hyperparathyroidism

Explanation

Pheochromocytoma

- Pheochromocytoma is characterized by a tumor sitting on the adrenal medulla, leading to an excessive discharge of catecholamines, causing an individual to develop hyperglycemia, headaches, and high blood pressure.

Hyperpituitarism

- Hyperpituitarism is characterized by the excessive release of growth hormones, causing hyperglycemia.

Pancreatitis

- Pancreatitis is characterized by inflammation of the pancreas, leading to the impairment of the beta-cells from secreting insulin.
- Diabetes insipidus, adrenal insufficiency, SIADH, and hyperparathyroidism are not associated with hyperglycemia.

Diabetes Insipidus

- This disorder affects water balance due to a lack of antidiuretic hormone (ADH) or renal response to ADH.
- It causes polyuria and dehydration, but not hyperglycemia.

Adrenal Insufficiency

- Also known as Addison's disease, it causes low cortisol levels.
- Cortisol helps increase blood glucose, so a deficiency may cause hypoglycemia, not hyperglycemia.

Syndrome of Inappropriate Antidiuretic Hormone (SIADH)

- Characterized by excessive ADH secretion leading to water retention and hyponatremia.
- Blood glucose levels are typically unaffected.

Hyperparathyroidism

- Involves elevated parathyroid hormone and calcium levels.
- It doesn't directly affect glucose metabolism or cause hyperglycemia.

Question 106

Type: drop_down_cloze

➢ **Complete the following sentence by choosing from the list of options.**

Sentence Structure

The client is at ****highest**** risk for developing **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- dysrhythmias.
- fluid volume overload.
- adrenal crisis
- **metabolic syndrome.** Correct

Correct Answer: metabolic syndrome.

Explanation

- The client's BMI is 32; and has truncal obesity and is showing signs of hyperglycemia. These are two manifestations coinciding with metabolic syndrome.
- The client is not showing signs of fluid volume overload. The peripheral pulses are normal, and lung sounds are clear. While the client has peripheral pedal edema, this edema is localized.
- Dysrhythmias are unlikely because the client's peripheral pulse is regular.
- Adrenal crisis is unlikely because adrenal crisis would present with hypotension, thready peripheral pulses because of fluid volume deficit.

Question 107

Type: matrix_multiple_choice

➢ **For each potential order, click to specify whether the potential order is indicated or not indicated for the client.**

Potential Orders	Indicated	Not Indicated
Serum hemoglobin A1C	Correct	
24-hour urinary cortisol levels	Correct	
Serum complete metabolic panel	Correct	
Serum clonidine suppression test		Correct
Serum complete blood count	Correct	
Administration of a prescribed corticosteroid		Correct
Referral for neurology consultation		Correct

Explanation

- The client is demonstrating manifestations associated with Cushing's disease (weight gain, hyperglycemia, facial hair, increased blood pressure, and striae)—confirmatory testing with 24-hour urinary cortisol levels and a complete serum metabolic panel is necessary. Metabolic abnormalities associated with Cushing's disease include hypernatremia, hypokalemia, and hyperglycemia.
- Serum hemoglobin A1C should be ordered to determine if the client is experiencing diabetes mellitus.
- A serum complete blood count should be ordered as it may support the diagnosis of Cushing's disease. The client's white blood cell count would be low in Cushing's disease.
- A clonidine suppression test would not be necessary for this client as this is a test used to rule out pheochromocytoma. The client is not experiencing unintentional weight loss, a hallmark manifestation of pheochromocytoma.
- The client has hyperglycemia and manifestations of Cushing's. The client should not be prescribed a corticosteroid as that would intensify the symptoms.
- The client would need an endocrinology referral, not neurology.

Question 108

Type: multiple_response_all

The nurse reviews the physician's orders.

➢ **The nurse educates the client about the ordered 24-hour urinary cortisol excretion. Which of the following information should the nurse include? Select all that apply.**

Answer Choices

A. "You will need to begin this test by discarding your first urine specimen." Correct

B. "Note the time that you started the 24-hour urine collection." Correct

C. "During the urine collection, only save specimens larger than 30 mL."

D. "Do not collect urine voided while having a bowel movement."

E. "The urine specimen should be kept on ice or refrigerated." Correct

F. "You will need to increase your daily fluid intake to 3 liters during this test."

G. "Collect and retain all urinary specimens during the 24-hour period."

Explanation

- When instructing a client on how to perform a 24-hour urinalysis collection, the client should be taught the specimen collection time. At that time, the client should urinate in the toilet. That initial void – officially marking the commencement of the test – is not saved and should be flushed. Following the discarding of this initial first sample, all urine voided by the client during the following 24-hour period must be collected and stored in the designated collection bottles provided by the laboratory (of note, the entire specimen must be refrigerated or kept on ice during the collection period).
- The amount of urine is irrelevant to a 24-hour urine collection, as the client should collect every drop of urine during the day and night in an empty collection bottle.
- If the client has a bowel movement, any urine passed with the bowel movement should be collected. The client should not collect fecal matter in the collection.
- The client does not need to alter their dietary habits during a 24-hour urine collection. Thus, advising the client to increase their fluid intake to 3 liters daily would be inappropriate.
- The nurse collecting and retaining all urine specimens is inappropriate, as a 24-hour urinalysis requires the client to begin the test by initially voiding into the toilet (i.e., the first specimen is not saved).

Question 109

Type: matrix_multiple_choice

The nurse reviews the progress notes from the follow-up visit.

➢ **For each of the statements made by the client, click to specify whether the statement indicates an understanding or requires follow-up of the discharge teaching provided on Cushing's disease.**

Note: Each row must have one (1) response option selected.

Client Statements	Effective Understanding	Requires Follow-Up
"I should start using a salt substitute to season my foods."	Correct	
"Exercise such as swimming is appropriate."	Correct	
"I should start eating snacks high in sodium and potassium."		Correct
"I should limit my caffeine consumption."	Correct	
"This condition requires me to avoid getting the seasonal influenza vaccine."		Correct
"I should notify my doctor if I start to develop constipation and muscle weakness."	Correct	

Explanation

Statements indicating an effective understanding

- "I should start using a salt substitute to season my foods." The client should avoid sodium-rich foods as this disease may cause fluid retention. The dietary sodium may cause the client to have further fluid retention. The salt substitute will also raise serum potassium levels.
- "Exercise such as swimming is appropriate." The client should stay active in an attempt to lose weight. However, the client should engage in low-impact activities. Cushing's reduces bone density, thereby raising the risk of fracture.
- "I should limit my caffeine consumption." The client should reduce their caffeine consumption because caffeine increases cortisol production. Cortisol is too high in a client with Cushing's.
- "I should notify my doctor if I start to develop constipation and muscle weakness." Cushing's may cause an individual to develop significant hypokalemia. Manifestations of hypokalemia include muscle weakness and decreased gastrointestinal motility, leading to constipation.

Statements requiring follow-up

- "I should start eating snacks high in sodium and potassium." While the client should eat foods rich in potassium, the client should avoid foods rich in sodium. Cushing's disease causes sodium retention and potassium elimination.
- "This condition requires me to avoid getting the seasonal influenza vaccine." A client with Cushing's is at increased risk for infection, so the client should stay current on vaccinations.

Question 110

Type: single_choice

The nurse is caring for a client with hypokalemia scheduled to receive the prescribed 20 mEq of intravenous (IV) potassium. Which client assessment requires notification of the primary healthcare provider (PHCP)?

A. Oliguria ✔ Correct

B. Abdominal distention

C. Muscle weakness

D. Weak peripheral pulses

Explanation

Choice A is correct. Oliguria is a contraindication to the administration of IV potassium. Oliguria is reduced urine output and can be a sign of kidney dysfunction or acute kidney injury. Parenteral potassium is highly concentrated, and this may cause life-threatening hyperkalemia if the client does not have sufficient urinary output to waste the excess potassium. The nurse must notify the physician of the oliguria so the client does not develop hyperkalemia.

Choice B is incorrect. Abdominal distention can be a symptom of various gastrointestinal issues, including complications related to electrolyte imbalances. While it is a concerning symptom, it is not directly related to hypokalemia.

Choice C is incorrect. Muscle weakness is a common symptom of hypokalemia and reflects the client's overall potassium deficiency. While it is a concerning sign, it is not an immediate indication for notifying the PHCP, as potassium supplementation is typically indicated to address this symptom.

Choice D is incorrect. Weak peripheral pulses can indicate poor circulation and may be related to various cardiovascular issues. In the context of hypokalemia, it could be a result of potassium deficiency affecting heart

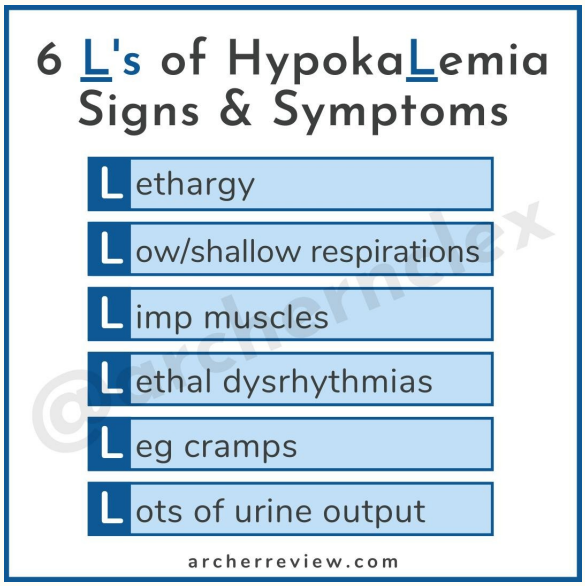
function. While it is concerning, it may not require immediate notification of the PHCP, especially if potassium supplementation is part of the treatment plan.

Additional Info

When replacing potassium intravenously:

- Ensure that the client is connected to continuous cardiac monitoring.
- IV potassium should be administered via a controlled device such as a pump.
- The IV site must be patent and assessed for patency before administration.
- Potassium should be administered at a maximum of 10 mEq/L/hr peripherally; 40 mEq/L/hr in a central line.

Source : Archer Review



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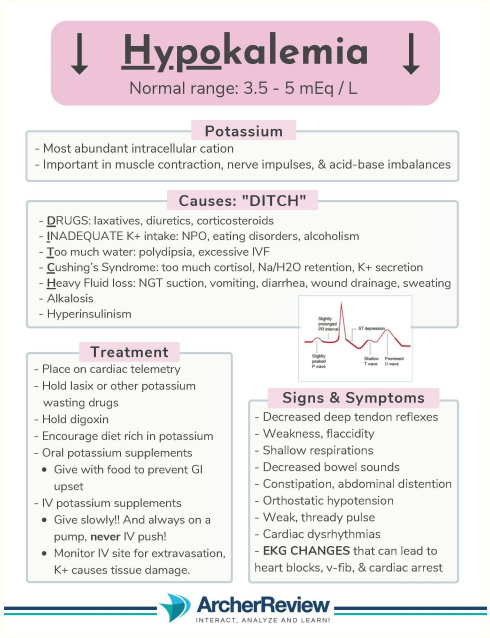

Source : Archer Review

Question 111

Type: single_choice

The nurse is caring for a client who has just returned from an intravenous urography procedure. Which intervention should the nurse take to prevent post-procedure acute kidney injury?

A. Assess the venipuncture site for redness

B. Have the client obtain their daily weight for three days after the procedure

C. Instruct the client to remain motionless

D. Encourage the client to increase their fluid intake ✔ Correct

Explanation

Choice D is correct. The contrast dye used during intravenous urography is sometimes nephrotoxic. Thus, clients should be encouraged to increase their fluid intake unless contraindicated. The recommendation is at least one liter of fluid post-procedure.

Choice A is incorrect. While the venipuncture site should always be monitored, some redness is expected and not alarming. Therefore, this is not a necessary action.

Choice B is incorrect. Having the client obtain their daily weight after this procedure is not pertinent. The focus is on preventing an acute kidney injury by having the client consume at least one liter of fluid post-procedure. This would help pass the contrast.

Choice C is incorrect. Post-procedure of an IV urography does not require the client to remain motionless or warrant any specific position.

Additional Info

✓ IV contrast agents are substances used to enhance the visibility of blood vessels, organs, and tissues during various medical imaging procedures, such as computed tomography (CT) scans, magnetic resonance imaging (MRI), and angiograms. The most common type of IV contrast used is iodine-based contrast, but there are also gadolinium-based contrasts used for MRI imaging.

✓ IV contrast agents, such as iodine-based contrast used in radiological imaging, are excreted primarily through the kidneys. Adequate hydration helps increase urine production, which, in turn, facilitates the elimination of the contrast material from the body. This can help reduce the risk of contrast-induced nephropathy (CIN), a potential complication characterized by kidney damage following contrast administration.

✓ IV contrast can cause an osmotic diuretic effect, leading to increased urine output. If the client does not receive sufficient fluids, they may become dehydrated, which can have adverse effects on overall health and kidney function.

Question 112

Type: single_choice

The nurse is providing dietary education to a client with renal failure who is receiving hemodialysis.

➢ The nurse determines that the teaching has been effective when the client selects which items from the menu?

A. Blueberries, cream of wheat, coffee ✔ Correct

B. Bacon, banana, orange juice

C. Sausage, eggs, tomato juice

D. Cured pork, grits, kiwi

Explanation

Choice A is correct. A client with renal failure receiving hemodialysis must follow dietary modifications that include controlled amounts of sodium, phosphorus, calcium, potassium, and fluids. These menu selections are low in sodium and potassium.

Choice B is incorrect. Bacon is high in sodium, phosphorus, and protein, making it a poor choice for a client with renal failure. Banana is high in potassium, which can be problematic for clients with renal failure. Orange juice is high in potassium and phosphorus, making it a poor choice.

Choice C is incorrect. Sausage is high in sodium, phosphorus, and protein, making it a poor choice for a client with renal failure. Eggs are a good source of protein, but sausage is not a good choice. Tomato juice is high in potassium and phosphorus, making it a poor choice.

Choice D is incorrect. Cured pork is high in sodium, phosphorus, and protein, making it a poor choice for a client with renal failure. Grits are a good source of carbohydrates, but cured pork is not a good choice. Kiwi is high in potassium, making it a poor choice.

Additional Info

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 113

Type: single_choice

The nurse is caring for a client who has fluid volume deficit receiving intravenous fluids.

➢ Which of the following would indicate the client is achieving the treatment goals?

A. urine output 20 mL/hr

B. BUN 15 mg/dL (5.355 mmol/) [10-20 mg/dL (3.6-7.1 mmol/L)] ✔ Correct

C. urine specific gravity 1.039 [1.005-1.030]

D. flattened jugular veins

Explanation

Choice B is correct. The client's BUN of 15 mg/dL (5.355 mmol/) [10-20 mg/dL (3.6-7.1 mmol/L)] is within the normal limited. This would indicate a therapeutic finding to the prescribed treatment of intravenous fluid. For individuals with fluid volume deficit, the BUN is usually increased.

Choice A is incorrect. A urine output of 20 mL/hr is low and indicates decreased kidney perfusion, which is not a positive sign in a client with fluid volume deficit. Adequate urine output is a sign of improving kidney function and hydration status.

Choice C is incorrect. A urine specific gravity of 1.039 is higher than the normal range (1.005-1.030) and indicates concentrated urine. While concentrated urine can be a sign of dehydration, it does not indicate that the client is achieving treatment goals. Normalizing urine specific gravity within the reference range would be a better indication of improved hydration.

Choice D is incorrect. Flattened jugular veins indicate reduced central venous pressure, which is a sign of decreased fluid volume. While this can occur in clients with fluid volume deficit, it does not necessarily indicate that the client is achieving treatment goals.

Additional Info

✓ **Clinical features of fluid volume deficit**

- Lethargy and headache
- Low-grade fever
- Flattened neck and hand veins
- Increased urine specific gravity
- Decreased urine output
- Increased BUN
- Hemoconcentration

✓ Regular monitoring of vital signs, including blood pressure, heart rate, respiratory rate, and temperature, is essential to assess the client's overall condition and response to fluid therapy.

✓ Dry, sticky mucous membranes (such as the inside of the mouth) can be a sign of dehydration. Nurses should assess these membranes for moisture as part of their evaluation.

✓ Accurate measurement of the client's fluid intake (including intravenous fluids, oral intake, and IV medications) and output (urine, vomit, diarrhea) helps assess the balance between fluid intake and losses.

Information Source

Ignatavicius, D., & Workman, M. L. (2020). *Medical-Surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier. p. 38

Question 114

Type: multiple_response_all

The nurse is teaching a group of students about renal disorders.

➢ Which statement, if made by the student, requires follow-up? **Select all that apply.**

Answer Choices

A. "Pyelonephritis causes a client to have massive amounts of proteinuria." Correct

B. "Acute kidney injury may be caused by nephrotoxic medications."

C. "Bacterial cystitis is diagnosed using a 24-hour urine collection." Correct

D. "Polycystic kidney disease may cause hematuria after a cyst rupture."

E. "Diabetic nephropathy is prevented by increasing the hemoglobin A1C." Correct

Explanation

Choice A is correct. Acute pyelonephritis is a consequence of untreated cystitis. This produces symptoms similar to cystitis in addition to manifestations of flank pain, fever, and dehydration. Massive amounts of proteinuria are a classic manifestation associated with nephrotic syndrome.

Choice C is correct. A 24-hour urine collection is not necessary to diagnose bacterial cystitis. A simple single specimen, urine analysis (UA), would be evaluated to determine if the client has cystitis.

Choice E is correct. Diabetic nephropathy can be prevented by tight glycemic control reflected in the hemoglobin A1C. The higher the A1C equates to more complications such as diabetic nephropathy. This statement is incorrect and warrants follow-up.

Choice B is incorrect. The cause of AKI may be multifactorial, including exposure to nephrotoxic medications (NSAIDs, aminoglycosides).

Choice D is incorrect. PKD is a genetic disorder causing cysts to develop on the affected kidney and may rupture, producing pain and hematuria. This would be an expected finding with PKD.

Additional Info

✓ **Pyelonephritis**

Pyelonephritis can be divided into either acute or chronic. In acute pyelonephritis, a pathogen ascends the urinary tract causing the client to experience manifestations similar to cystitis as well as fever, tachycardia, and flank pain. Treatment is aggressive antibiotics, hydration, and sometimes hospitalization, depending on its severity.

✓ **Acute Kidney Injury**

Acute kidney injury (AKI) is a condition caused by hypotension, nephrotoxic medications, or trauma. Treatment is the underlying cause and prevents complications such as chronic kidney disease progression. Nursing care involves administering prescribed intravenous fluid challenges, daily weights, and dietary measures to reduce sodium and potassium.

✓ **Bacterial Cystitis**

Bacterial cystitis is also known as a bladder infection. E. coli is the offending pathogen in this condition. Treatment is antibiotics, hydration, and avoiding bladder irritants (caffeine, alcohol).

✓ **Polycystic Kidney Disease**

Polycystic Kidney Disease is a genetic disorder manifested by fluid-filled cysts that grow on the kidneys. Findings in PKD include abdominal or flank pain, hypertension, and hematuria during cyst rupture. The only effective cure for PKD is a kidney transplant. The disease may be treated with ACE inhibitors and dietary modifications (increased sodium intake and the beginning and then decreased as the disease progresses).

✓ **Diabetic Nephropathy**

Diabetic nephropathy is a vascular complication associated with diabetes mellitus. Its cause is triggered by poor diabetes management which is evidenced by an increased hemoglobin A1C (goal is to be less than 7% for those with diabetes). Treatment is thorough education on diabetes management through lifestyle modifications. ACE inhibitors are quite effective in treating this disorder.

Question 115

Type: multiple_response_all

As a nurse, you are administering intravenous fluids to a client. Which of the following types of IV fluids would be classified as isotonic?

Select all that apply.

Answer Choices

A. Normal saline Correct

B. ½ Normal saline

C. Lactated ringers Correct

D. D10W

E. 3% NaCl

Explanation

Choices A and C are correct. Normal saline (0.9% NS) is an isotonic solution (Choice A). Lactated ringers (LR) is an isotonic solution (Choice C).

Choice B is incorrect. ½ Normal saline (.45% NS) is a hypotonic solution.

Choice D is incorrect. D10W is a hypertonic solution.

Choice E is incorrect. 3% NaCl is a hypertonic solution.

NCSBN Client Need: Topic: Physiological Integrity, **Subtopic:** Pharmacological therapies, Pharmacological Therapies

Additional Info

✓Isotonic fluids have the same osmolality as the body's own fluids, which means that they have a similar concentration of solutes, such as sodium and chloride.

✓Isotonic IV fluids are commonly used with the following conditions:

- Dehydration: Isotonic fluids are often used to rehydrate patients who are dehydrated due to vomiting, diarrhea, excessive sweating, or other causes.
- Surgery: Patients who undergo surgery may require intravenous (IV) fluids to maintain their fluid and electrolyte balance during the procedure.
- Hypovolemia: Hypovolemia is a condition with a decreased blood volume in the body, usually due to bleeding or fluid loss. Isotonic fluids can be administered to help restore the volume of blood and maintain blood pressure.

Question 116

Type: multiple_response_all

The nurse is teaching a group of students about fluids and electrolytes. It would be correct for the nurse to state that the role of calcium is to **Select all that apply.**

Answer Choices

A. promote blood clotting. Correct

B. increase bone density. Correct

C. promote healthy dentition. Correct

D. regulate fluid balance.

E. maintain neuromuscular health. Correct

Explanation

Choices A, B, C, and E are correct. Calcium has multiple roles in ensuring effective blood clotting as it is a pivotal part of the clotting cascade (choice A). Calcium is most recognized for its role in bone and enamel health as it provides density to bones minimizing the fracture risk (choices B and C). Calcium is pivotal in neuromuscular status because of its role in the myelin sheath, which insulates a nerve. Optimal calcium and vitamin D levels maintain appropriate neuromuscular health (choice E).

Choice D is incorrect. The regulation of fluid balance is through cortisol, aldosterone, and sodium. Calcium is not an essential electrolyte in fluid regulation.

Additional Info

✓ Calcium is the most abundant mineral in the body and is essential for many important functions, including bone and teeth health, muscle function, nerve transmission, blood clotting, and hormone secretion

✓ Calcium plays a role in the secretion of hormones, such as insulin, which regulate the body's metabolism and energy production.

✓ Inadequate calcium intake can lead to various health problems, including osteoporosis, muscle cramps, and heart problems. Consuming sufficient amounts of calcium through a balanced diet that includes dairy products, leafy greens, nuts, and fortified foods is important.

Question 117

Type: multiple_response_all

The nurse is caring for a client whose latest lab results show a serum calcium level of 13.2 mg/dL (3.3 mmol/L) [9-10.5 mg/dL, 2.12–2.52 mmol/L]. Which medication does the nurse expect to administer based on this lab result?

Select all that apply.

Answer Choices

A. Phosphorus Correct

B. Calcitonin Correct

C. Vitamin D

D. IV calcium gluconate

E. IV Bisphosphonates Correct

Explanation

Choices A, B, and E are correct. The normal serum calcium level is 9-10.5 mg/dL (2.12–2.52 mmol/L). This client has a high serum calcium level (hypercalcemia). Phosphorus is a medication the nurse would expect to administer to treat hypercalcemia. Phosphorus and calcium have an inverse relationship, so by increasing the serum level of phosphorus the nurse can decrease the serum level of calcium. Oral phosphate is the preferred method of administering phosphorus. If given IV, calcium phosphate forms and precipitates in the tissues. This precipitation phenomenon reduces serum calcium levels very quickly. Calcitonin is a medication the nurse would expect to administer to treat hypercalcemia. Calcitonin is a thyroid hormone that decreases the plasma calcium level by inhibiting bone resorption and lowering the serum calcium concentration. Bisphosphonates are intravenous osteoporosis drugs that can quickly lower calcium levels and are often used to treat hypercalcemia due to cancer.

Choice C is incorrect. Vitamin D should be avoided in hypercalcemia. Vitamin D enhances the absorption of calcium and can therefore increase the level of serum calcium, which we do not want to do when the client's level is already high.

Choice D is incorrect. IV calcium gluconate is given to clients that are hypocalcemic, not hypercalcemic. It can treat the tetany that occurs when a client is severely hypocalcemic. It can also be given to protect the cardiac muscle if a client has severe hyperkalemia or hypermagnesemia.

Additional Info

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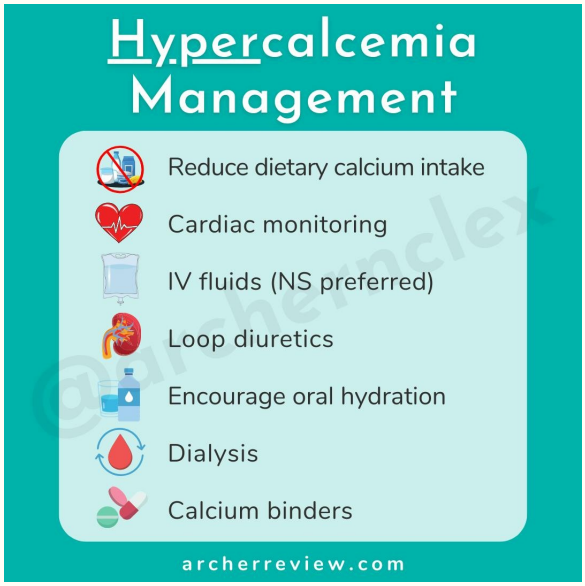

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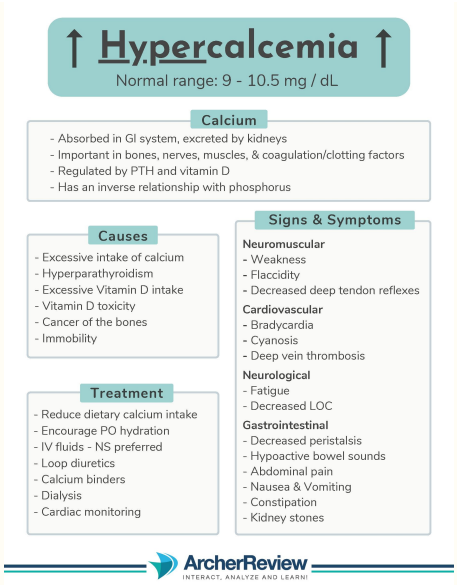

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Question 118

Type: single_choice

A client was admitted to the emergency department due to low serum calcium levels. Upon further examination, the client demonstrates carpopedal spasms and reports numbness in their lips and hands. An ECG revealed a prolonged QT interval. Based on this information, the nurse should suspect which condition?

A. Hyperthyroidism

B. Hypothyroidism

C. Hyperparathyroidism

D. Hypoparathyroidism ✔ Correct

Explanation

Choice D is correct. Although hypoparathyroidism symptoms often mirror hypocalcemia, the nurse should suspect hypoparathyroidism in this client based on the client's complaints and presentation. Hypoparathyroidism symptoms often manifest as numbness and tingling of the lips and hands, tetany, carpopedal spasms (Trousseau's sign), Chvostek's sign, and/or muscle/abdominal cramps. ECG analysis often reveals changes in the T waves and prolonged QT intervals. Due to low serum calcium levels, serum phosphorus levels are usually increased, as phosphorus and calcium have an inverse relationship in this situation.

Choice A is incorrect. In clients with hyperthyroidism, excessive thyroid hormones reduce cellular regulation by increasing metabolism in all body organs. The excessive thyroid hormones stimulate most body systems, causing symptoms including, but not limited to, palpitations, tachycardia, heat intolerance, fatigue, tremors, insomnia, thinning of scalp hair, weight loss, amenorrhea, restlessness, manic behavior, and/or goiter.

Choice B is incorrect. Clients with hypothyroidism experience decreased metabolism from low levels of thyroid hormones, resulting in a reduced metabolic rate. Symptoms in hypothyroidism clients include, but are not limited to, dyspnea, bradycardia, dysrhythmias, cold intolerance, weight gain, constipation, confusion, and/or impaired memory.

Choice C is incorrect. Hyperparathyroidism is a disorder in which parathyroid secretion of parathyroid hormone increases, resulting in hypercalcemia and hypophosphatemia. Symptoms (which may be related to the effects of excessive parathyroid hormone or the accompanying hypercalcemia) include, but are not limited to, kidney stones, gastrointestinal issues (nausea, vomiting, constipation, epigastric pain), fever, lethargy, etc. In severe cases, coma or death may occur.

Additional Info

- Hypoparathyroidism is a deficiency of parathyroid hormone often caused by an autoimmune disorder or removal of the glands during thyroidectomy.
- Hypoparathyroidism causes hypocalcemia and related symptoms of tingling in the hands or around the mouth, muscle cramps, and/or tetany (in severe cases).
- Treatment typically involves calcium and vitamin D.

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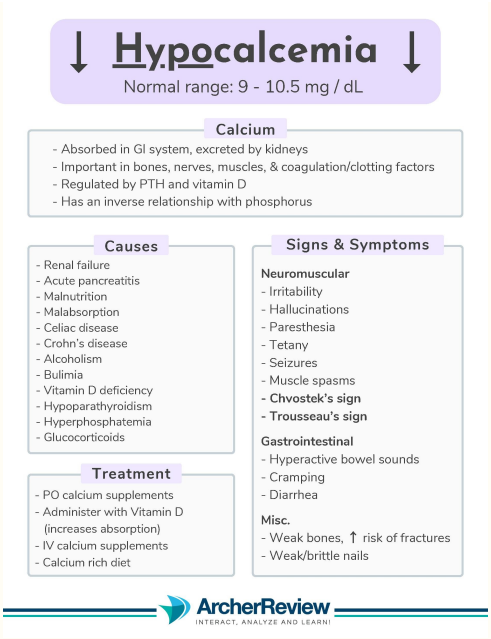

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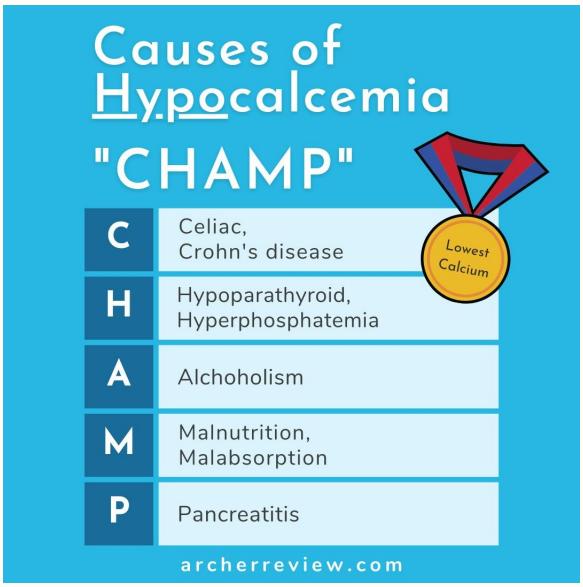

Source : Archer Review

Information Source

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* (10th ed.). Elsevier.

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Question 119

Type: single_choice

The nurse cares for a client diagnosed with end-stage renal disease who just returned from initial hemodialysis. Which of the following assessment findings is of the **highest** concern?

A. Headache and nausea ✓ Correct

B. Scant blood on the AV fistula

C. Potassium 3.7 mEq/L (mmol/L) [3.5 - 5.0 mEq/L, mmol/L]

D. Hemoglobin 8.8 g/dL [Male: 14-18 g/dL; Female: 12-16 g/dL, Female 115–155 g/L Male 125–170 g/L]

Explanation

Choice A is correct. Headache and nausea may be manifestations associated with dialysis disequilibrium syndrome (DDS). This complication is experienced by clients undergoing their first dialysis and may range from mild to severe.

Choice B is incorrect. Scant blood on the AV fistula is a benign finding. Bleeding is a complication following hemodialysis, but scant blood does not indicate such a complication.

Choice C is incorrect. The potassium level is normal [3.5 - 5.0 mEq/L, mmol/L] and does not require follow-up. Usually, in individuals with ESRD, the potassium level may become dangerously elevated.

Choice D is incorrect. Low hemoglobin is expected in end-stage renal disease (ESRD) as the kidneys cannot secrete an appropriate amount of erythropoietin, stimulating the production of red blood cells.

Additional Info

✓ DDS is usually self-limiting and is common during the first treatment.

✓ This is caused by removing urea, which causes a fluid shift that may lead to cerebral edema.

✓ The nurse should remain with the client and institute fall precautions.

✓ Notifying the primary healthcare provider (PHCP) should be done despite most DDS being self-limiting.

✓ Other complications of hemodialysis include hypotension, bleeding, angina, and cramps.

Question 120

Type: single_choice

The nurse is reviewing labs for a client with a serum potassium level of 3.3 mEq/L (mmol/L) [3.5-5 mEq/L, mmol/L].

➢ The nurse should take which **essential** action based on this laboratory result?

A. Educate the client on potassium-rich foods

B. Implement continuous telemetry monitoring ✔ Correct

C. Obtain an order for calcium gluconate

D. Assess the client's neurological status

Explanation

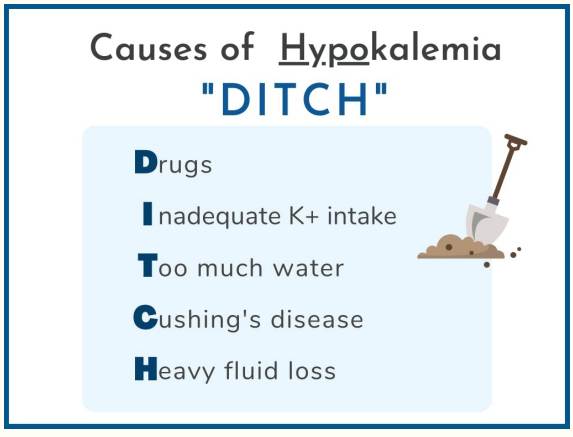
Choice B is correct. The normal range for serum potassium is between 3.5-5 mEq/L (mmol/L), so this client's level is low. Hypokalemia can lead to life-threatening cardiac arrhythmias. Of the options provided, initiating telemetry monitoring would be the highest priority to assess the client's heart function and monitor for any changes.

Choice A is incorrect. Educating the client on potassium-rich foods is an important aspect of long-term potassium management. However, in a client with a serum potassium level of 3.3 mEq/L (mmol/L), the immediate priority is addressing the potential risk of cardiac arrhythmias associated with low potassium levels.

Choice C is incorrect. Calcium gluconate is not indicated for the treatment of hypokalemia. It is primarily used to counteract the effects of hyperkalemia and protect the heart from arrhythmias in that context.

Choice D is incorrect. While neurological symptoms can occur with severe potassium imbalances, they are not typically immediately life-threatening in the context of hypokalemia. The primary concern with hypokalemia is the risk of cardiac arrhythmias. Neurological assessment should be conducted once cardiac stability has been ensured through telemetry monitoring.

Additional Info



Question 121

Type: multiple_response_all

The nurse is assessing a client who was just diagnosed with acute pyelonephritis. Which of the following findings

should the nurse expect to observe? **Select all that apply.**

Answer Choices

A. Costovertebral angle tenderness Correct

B. Jugular venous distention

C. Fever and chills Correct

D. Urinary retention

E. Dysuria Correct

Explanation

Choices A, C, and E are correct. Pyelonephritis is an ascending urinary tract infection that involves the kidney. The client exhibits the classic symptoms of cystitis (urinary frequency, dysuria, malaise) along with constitutional symptoms such as fever, chills, and costovertebral tenderness.

Choices B and D are incorrect. Jugular venous distention (JVD) is not an expected finding of pyelonephritis as this is a manifestation associated with fluid volume overload. Clients with pyelonephritis typically present with dehydration from the fever and urinary frequency. Urinary frequency is a classic manifestation.

Additional Info

Acute pyelonephritis is a complication of cystitis. The infection has spread up the urinary tract and now involves the kidney. Nursing care is like that of cystitis, which includes the administration of prescribed antibiotics, educating the client to stay hydrated, and measures to prevent a recurrence. A complication of pyelonephritis is sepsis. Thus, signs of sepsis, such as tachycardia and hypotension, should be reported to the primary healthcare provider.

Question 122

Type: single_choice

The nurse has taught a client about a scheduled intravenous (IV) urography (pyelogram).

➢ Which of the following statements by the client would indicate a correct understanding of the teaching?

A. "I should expect a temporary urinary catheter inserted during the procedure."

B. "I will take a laxative the night before to clear my bowels." ✔ Correct

C. "I must fill my bladder with water immediately before the procedure."

D. "I may experience blood in my urine for a few days after this procedure."

Explanation

Choice B is correct. An IV urography (pyelogram) is a diagnostic test used to gather urinary tract imaging that views the collecting ducts and renal pelvis and outlines the ureters, bladder, and urethra. The client must perform a bowel cleansing the night before to ensure adequate visualization of the urinary tract. If a bowel prep is not performed before this procedure, interference from bowel contents could obscure the visual assessment of the urinary tract. During this procedure, the client will empty their bladder, and then an intravenous injection of contrast medium is given, and a series of x-ray films and fluoroscopy are used to observe the passage of urine from the renal pelvis to the bladder. The use of this test has decreased because of computed tomography scans of the urinary tract.

Choice A is incorrect. A urinary catheter is not used during this procedure and would apply to a client undergoing resection of the prostate so it may be irrigated. The client is instructed to empty their bladder right before this examination so the contrast dye may be adequately visualized.

Choice C is incorrect. For an IVU, the bladder should be adequately emptied before the procedure rather than filled with water.

Choice D is incorrect. While it is common to experience some mild discomfort or urgency to urinate after an IVU due to the contrast dye, blood in the urine for a few days after the procedure is not expected. If significant bleeding were to occur, it would be a concern and should be reported to healthcare providers immediately.

Additional Info

✓ This procedure requires female clients to undergo a pregnancy test before the procedure because of the adverse effect radiation may have on the fetus

✓ The purpose of this test is to diagnose neoplasms of the urinary tract, urolithiasis, scars, and urinary strictures

✓ Laxatives may be prescribed the night before to cleanse the bowel effectively

✓ Anesthesia is not used for this procedure

✓ Contrast dye is used in this procedure, but the relationship between IV contrast dye and allergies to shellfish has been discredited

Question 123

Type: single_choice

The nurse is providing discharge instructions to a client prescribed phenazopyridine. Which of the following instructions should the nurse include?

A. The amount of urine you void will increase

B. Your urine will turn orange in color ✔ Correct

C. You may notice that your urine is malodorous

D. Concentrated urine is an expected finding

Explanation

Choice B is correct. The use of phenazopyridine produces a harmless orange (to red) color in the client's urine.

Choices A, C, and D are incorrect. Phenazopyridine use does not increase a client's urine volume. Phenazopyridine use will not result in a pungent odor of the urine. Phenazopyridine use will not result in the client's urine appearing more concentrated.

Additional Info

✓ Phenazopyridine is prescribed for the symptomatic relief of dysuria, urinary urgency, irritation, and other discomforts of the lower urinary tract caused by infection, trauma, surgery, endoscopic procedures, or the passage of sounds or catheters.

✓ Phenazopyridine only provides symptomatic relief for the dysuria.

✓ Phenazopyridine should be discontinued when symptoms are controlled.

✓ A common harmless effect of this medication is urine discoloration, which will appear red or orange.

Question 124

Type: single_choice

The nurse is assessing a client admitted with hyponatremia secondary to dehydration. Which of the following physical assessment findings would be expected?

A. Orthostatic hypotension ✔ Correct

B. Peaked T-waves on electrocardiogram (ECG)

C. Bounding peripheral pulses

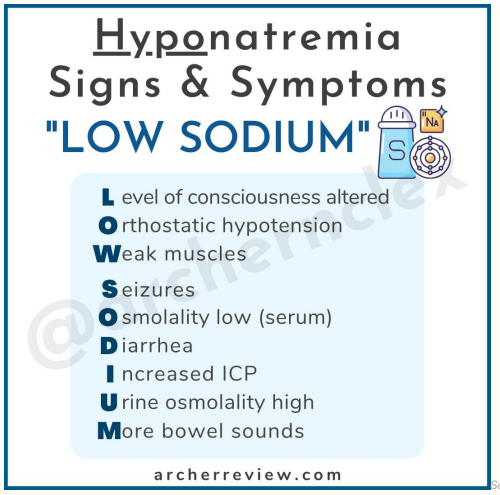
D. Polyuria

Explanation

Choice A is correct. The nurse should assess the client for the presence of orthostatic hypotension. Orthostatic hypotension is often seen in association with hyponatremia secondary to dehydration. Orthostatic or postural hypotension refers to a significant decrease in systolic blood pressure of greater than 20 mmHg or a reduction of at least 10 mmHg in diastolic pressure upon 3 to 5 minutes of standing.

Choices B, C, and D are incorrect. Peaked T-waves are associated with hyperkalemia, not hyponatremia. Bounding peripheral pulses would be a clinical finding associated with fluid volume overload. Polyuria would be a finding associated with hyperglycemia and diabetes inspidus. This is not a finding found with hyponatremia and dehydration.

Additional Info



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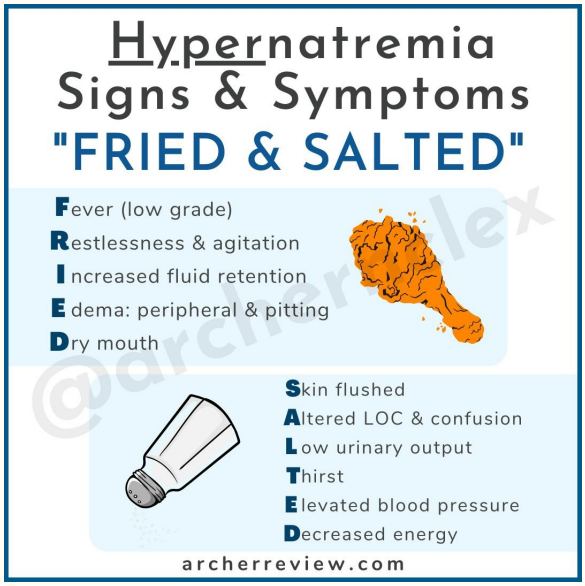

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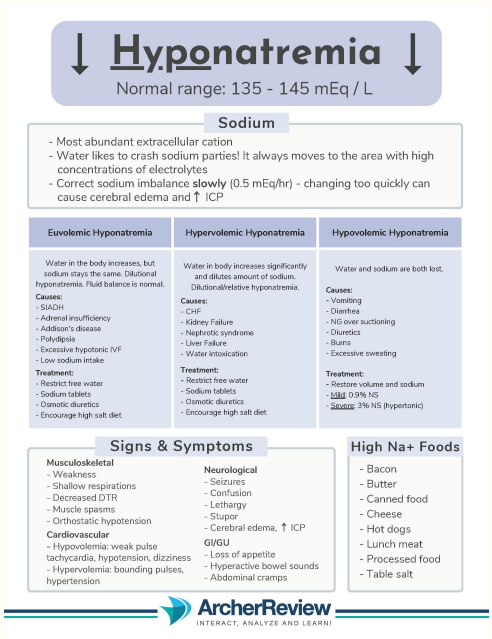


Source : Archer Review

Question 125

Type: single_choice

The nurse is assessing a client's electrocardiogram (ECG) monitoring and notices U-waves. Which electrolyte abnormality may cause this finding?

A. Hyperkalemia

B. Hypokalemia ✓ Correct

C. Hypernatremia

D. Hyponatremia

Explanation

Choice B is correct. Increased U waves identified on an ECG monitoring are traditionally associated with hypokalemia. Additional ECG manifestations of hypokalemia include ST-segment depression and flat or inverted T waves.

Choice A is incorrect. Peaked T waves are characteristic of hyperkalemia. Severe and prolonged hyperkalemia will traditionally lead to increasingly prolonged PR and QRS intervals, leading to an increased risk for cardiac arrest. Hyperkalemia should always be considered a medical emergency.

Choice C is incorrect. No ECG monitoring manifestations brought about by hypernatremia alone exist. Muscle weakness, restlessness, lethargy, or coma are manifestations of hypernatremia.

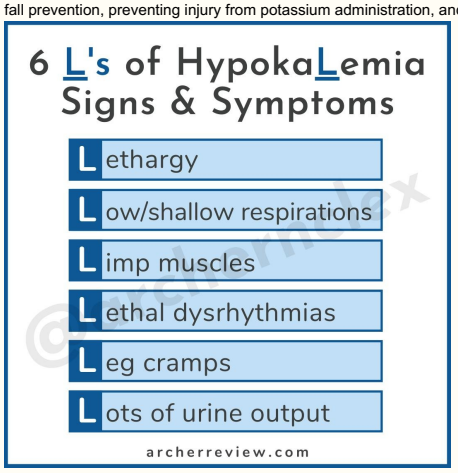
Choice D is incorrect. Disorientation, apathy, depression, depressed deep tendon reflexes, and agitation characterize hyponatremia. Hyponatremia alone does not manifest signs present in the ECG monitoring.

Additional Info

✓ Dysrhythmias can lead to death, particularly in older clients taking digoxin.

✓ Interventions for hypokalemia focus on preventing potassium loss, increasing serum potassium levels, and ensuring client safety.

✓ The priorities for nursing care of clients with hypokalemia are ensuring adequate gas exchange, client safety for fall prevention, preventing injury from potassium administration, and monitoring the client's response to therapy.



Source : Archer Review

Information Source

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* (10th ed.). Elsevier.

Question 126

Type: single_choice

The nurse is caring for a client with peritoneal dialysis. The client reports an outflow of only one-half of the dialysate solution that was dwelled. The nurse should instruct the client to do which of the following?

A. Apply heat to the abdomen.

B. Encourage the client to have a bowel movement. ✓ Correct

C. Strip the dialysis catheter.

D. Instill more dialysate solution.

Explanation

Choice B is correct. Outflow failure is suspected when the peritoneal dialysate drainage volume is less than the inflow volume**. Constipation** often suppresses dialysate outflow. Constipation is a common problem in peritoneal dialysis, and it occurs due to the consumption of prescribed **phosphate binders** as well as due to decreased intestinal motility from **chronic kidney disease** itself.

For a client with poor outflow, simple repositioning and encouraging the client to have a bowel movement are effective remedies. In as many as 50% of catheter outflow obstructions, correction of constipation resolves the problem. The client having a bowel movement allows decreased intestinal pressure, therefore resolving the outflow failure. Laxatives may be administered. At home, the client can self-administer an enema before the peritoneal dialysis procedure.

Choices A, C, and D are incorrect. Applying heat to the abdomen, stripping the dialysis catheter, and instilling more dialysate would be inappropriate recommendations.

Additional Info

Peritoneal dialysis offers many advantages, such as the ability for the client to remain at **home for the procedure, fewer dietary restrictions,** and **fewer hemodynamic complications**. The number one complication associated with peritoneal dialysis is **peritonitis**. This complication may be mitigated through an **aseptic technique** when handling the catheter.

- Other issues include failure of inflow and outflow through the catheter. The common causes of the inability to infuse the dialysate (inflow) or drain out the dialysate (outflow) include clamped or kinked catheter, catheter blockade with blood or fibrin clots, constipation, catheter migration, and airlock.
- If the cause is constipation, inducing peristalsis with a laxative or enema will help resolve the outflow problem.
- If the cause is catheter migration, instruct the client to ambulate or assume a knee-chest position. This will allow the catheter tip to move in the pelvis lower enough to be able to access the peritoneal fluid. Repositioning the client will also help if the catheter is kinked or if the peritoneal fluid is localized to a small area in the peritoneal cavity.

Question 127

Type: multiple_response_all

The nurse is assessing assigned clients. Which client has a risk for urinary retention? **Select all that apply.**

Answer Choices

A. A 78-year-old man diagnosed with an enlarged prostate. Correct

B. An 83-year-old woman on bed rest.

C. A 75-year-old woman with vaginal prolapse. Correct

D. An 89-year-old man with dementia.

E. A 73-year-old woman on antihistamines to treat allergies. Correct

F. A 90-year-old man with difficulty walking to the restroom.

Explanation

Choices A, C, and E are correct. Urinary retention occurs when urine is produced normally but is not entirely emptied from the bladder. Retention can occur because of **mechanical obstruction** of the bladder outlet (**enlarged prostate** in a man or **vaginal prolapse** in a woman). Antihistaminic medications (such as diphenhydramine) tend to have anticholinergic side effects. Urinary retention can occur from the use of drugs with **anticholinergic** side effects. The bladder muscle's (detrusor smooth muscle) primary function is to "contract" and fully empty the bladder. Detrusor smooth muscle has **muscarinic (cholinergic)** receptors that facilitate this contraction. *Anticholinergic agents impair this function and predispose to urinary retention*. Excessive urinary retention eventually results in "overflow" incontinence.

Choices B, D, and F are incorrect. All these answer options (immobility, dementia, walking difficulty) may place the clients at risk for **urinary incontinence**, not urinary retention.

Additional Info

Anticholinergic agents and **drugs with anticholinergic side effects** (antihistamines, antispasmodics, antidepressants, antipsychotics) impair bladder muscle contractile function. This causes urinary retention. This side effect has some therapeutic uses as well - for example, urinary incontinence has been treated with drugs with anticholinergic activity. Tolterodine and oxybutynin are anticholinergics that are used in the management of urinary incontinence from an overactive bladder.

Drugs causing urinary retention	
Class	**Agent**
Antihistamines	Benadryl (Diphenhydramine)
Antispasmodics	Detrol (Tolterodine)
Antidepressants	Elavil (Amitriptyline)
Calcium channel blockers	Amlodipine, Verapamil, Diltiazem
Anti-psychotics	Chlorpromazine, Haloperidol

Question 128

Type: single_choice

The nurse is caring for a client who is severely hypernatremic.

➢ The nurse should **prioritize** assessing the client's

A. cardiovascular status.

B. genitourinary status.

C. neurological status. ✔ Correct

D. gastrointestinal status.

Explanation

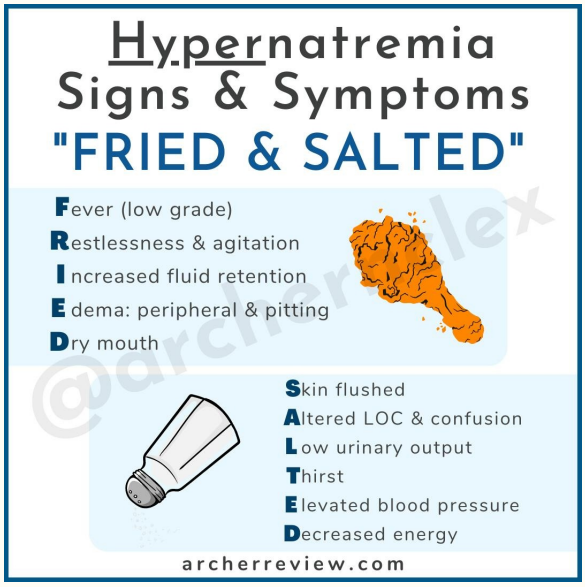
Choice C is correct. When a client is suffering from severe hypernatremia, monitoring neurological status is the nurse's priority. Neurological complications of hypernatremia range from a restless, agitated client, to a comatose state. Sodium plays a major role in the brain and nervous system, so any imbalances can cause serious neurological symptoms.

Choice A is incorrect. Monitoring cardiovascular status is always important, but it is not the priority in a client with severe hypernatremia. Sodium plays a large role in the brain and nervous system, therefore the nurse should be careful to monitor the client's neurological status very closely when there is an imbalance.

Choice B is incorrect. Monitoring genitourinary status is important, but it is not the priority in a client with severe hypernatremia. There are no major GU symptoms with hypernatremia, but the nurse knows that very serious neurological complications can occur in the hypernatremic client.

Choice D is incorrect. Monitoring gastrointestinal status is important, but it is not the priority in a client with severe hypernatremia. There are no major GI symptoms with hypernatremia, but the nurse knows that very serious neurological complications can occur in the hypernatremic client.

Additional Info



Source : Archer Review

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Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 129

Type: multiple_response_all

The nurse reviews a client's laboratory data. Which laboratory data requires follow-up? **See the image below. Select all that apply.**

Laboratory	Results		Reference Range	
Sodium	130 mEq/L	130 mmol/L	135-145 mEq/L	136–146 mmol/L
Potassium	3.7 mEq/L	3.7 mmol/L	3.5-5.0 mEq/L	3.5–5.1 mmol/L
Calcium	8.3 mg/dL	2.07 mmol/L	9.0-10.5 mg/dL	2.12–2.52 mmol/L
BUN	12 mg/dL	4.27 mmol/L	10-20 mg/dL	2.5 to 7.1 mmol/L
Creatinine	1.0 mg/dL	88.4 µmol/L	Male: 0.6-1.2 mg/dL Female: 0.5-1.1 mg/dL	Male 49–93 µmol/L Female 53-97µmol/L

Answer Choices

A. Sodium Correct

B. Potassium

C. Calcium Correct

D. BUN

E. Creatinine

Explanation

Choices A and C are correct. These laboratory values require follow-up because they are not within normal limits. The labs depict hyponatremia [less than 135 mEq/L (mmol/L)] and hypocalcemia [less than 9 mg/dL (2.12 mmol/L)]. Causes of hyponatremia include dehydration, diuretics (especially thiazides), and SIADH. Causes of hypocalcemia include hypoparathyroidism, chronic renal failure, and vitamin D deficiency.

Choice B is incorrect. These laboratory values are within normal limits and do not require follow-up by the nurse.

Choice D is incorrect. These laboratory values are within normal limits and do not require follow-up by the nurse.

Choice E is incorrect. These laboratory values are within normal limits and do not require follow-up by the nurse.

Additional Info

✓ Assess for signs and symptoms of hypocalcemia, including muscle cramps, paresthesia (tingling or numbness), and positive Chvostek's and Trousseau's signs.

✓ Monitor the client's fluid balance closely, ensuring proper hydration levels. Assess for signs of dehydration, such as dry mucous membranes, decreased skin turgor, and decreased urine output.

✓ Communicate effectively with the healthcare team, including physicians, dietitians, and pharmacists, to ensure a comprehensive approach to managing electrolyte imbalances.

Question 130

Type: multiple_response_all

The nurse is assigned to care for a client with a sodium level of 122 mEq/L (mmol/L) [135-145 mEq/L, mmol/L]. Which assessment findings does the nurse anticipate based on this lab result?

Select all that apply.

Answer Choices

A. Confusion Correct

B. Abdominal cramps Correct

C. Tall, peaked t-waves

D. Hypoactive bowel sounds

E. Nausea and vomiting Correct

Explanation

Choices A, B, and E are correct. This client's sodium level is critically low. When sodium falls below 125 mEq/L (mmol/L), it is considered severe hyponatremia. Sodium plays a key role in the brain, so low levels of this electrolyte can be devastating and produce symptoms ranging from confusion, lethargy, and stupor as well as seizures and cerebral edema. Abdominal cramps are another symptom of hyponatremia. Since water follows sodium, there are decreased levels of sodium in the blood and decreased fluid. This creates a fluid volume deficit, decreased urine output, muscle spasms, and abdominal cramping. Nausea and vomiting are common signs of hyponatremia.

Choice C is incorrect. Arrhythmias such as tall, peaked t-waves are not indicative of hyponatremia. Rather, tall, peaked t-waves are characteristic of hyperkalemia.

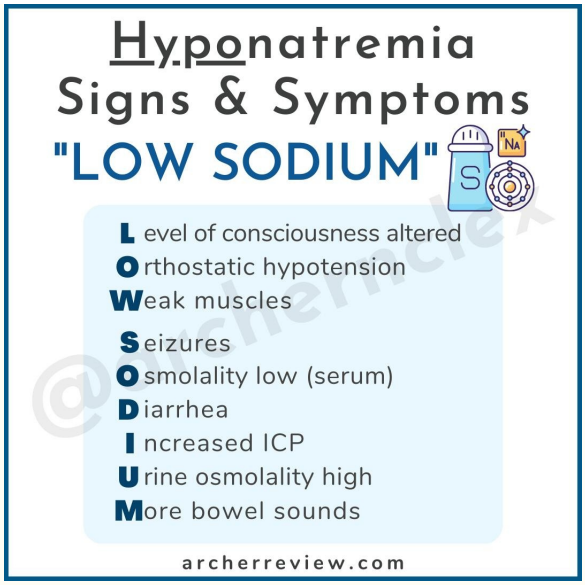
Choice D is incorrect. Hypoactive bowel sounds are not a sign of hyponatremia. Hyperactive bowel sounds would be a symptom the nurse might observe if there are decreased levels of sodium in the blood. Sodium also plays an important role in muscle cells; when levels are too low, this results in cramping, spasms, and hyperactive bowel sounds.

Additional Info

✓ **Hyponatremia** refers to a **sodium level lower than 135 mEq/L (mmol/L)**. Hyponatremia may be secondary to several causes; however, it is possible to get clues regarding the cause of hyponatremia by determining the type of hyponatremia.

✓ Sodium and water go together. Sodium tends to draw and keep water with it—the decrease in sodium relative to free water results in hyponatremia.

✓ A key concept when dealing with sodium alterations is the assessment of the client's neurological status. Severe hyponatremia may induce seizure activity and respiratory compromise.



Question 131

Type: single_choice

The client is diagnosed with acute kidney failure. Which of the following is an appropriate psychosocial problem for the nurse to include in the care plan?

A. Imbalanced nutrition: less than body requirements related to altered metabolic state and dietary restrictions.

B. Anxiety related to the disease process and uncertainty of prognosis. ✔ Correct

C. Excess fluid volume related to compromised regulatory mechanisms secondary to acute renal failure.

D. Risk for infection related to invasive procedures and an altered immune response secondary to renal failure.

Explanation

Choice B is correct. The focus of the question is the psychosocial problem. Of the options listed, anxiety is the only choice for an appropriate psychosocial issue.

Choice A is incorrect. This patient would be at risk for imbalanced nutrition due to the renal failure diagnosis, but this would not be a psychosocial problem.

Choice C is incorrect. This patient would be at risk for excess fluid volume due to the renal failure diagnosis, but this would not be a psychosocial problem.

Choice D is incorrect. This patient would be at risk for infection due to the renal failure diagnosis. However, this is not a psychosocial issue.

Question 132

Type: single_choice

The nurse is caring for a client on a medical floor. The nurse would recognize that which diagnosis increases the client's risk of developing hyperkalemia?

A. Cushing's syndrome

B. Acute renal failure ✔ Correct

C. Cystic fibrosis

D. Bulimia nervosa

Explanation

Choice B is correct. Typically, healthy kidneys excrete 80-90% of the body's potassium. When there is injury or damage to the kidneys, such as with acute renal failure, potassium excretion is impaired. Metabolic acidosis can also occur because of the decreased ability to filter acids and reabsorb bicarbonate. Hence, as hydrogen ions enter the cells, potassium is pushed out of the cells and into the extracellular fluid. If the acute renal failure is related to trauma, the damaged cells release additional potassium into the extracellular fluid. These processes all increase the body's potassium, so the client would be at risk of developing high potassium levels (hyperkalemia).

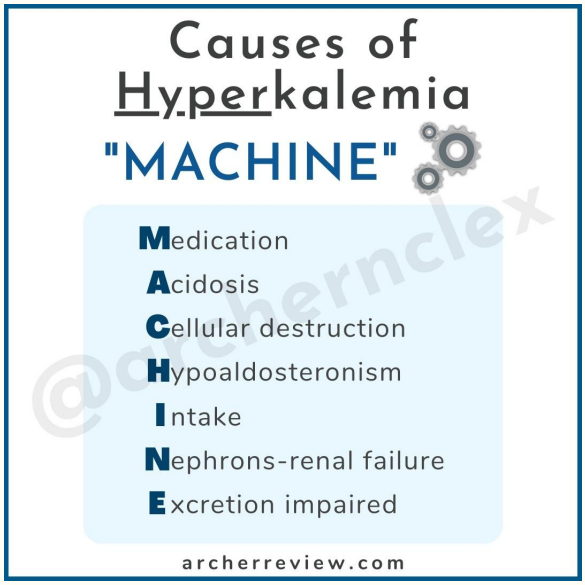
Choice A is incorrect. Cushing syndrome puts a client at risk for hypokalemia, not hyperkalemia. These clients

experience decreased potassium levels due to increased urinary losses of potassium and excess cortisol production, which interferes with the sodium/potassium pump action.

Choice C is incorrect. Cystic fibrosis is an endocrine disease that impacts the function of multiple organs. It puts clients at risk of low potassium levels (hypokalemia) due to renal potassium wasting, increased sweating, and metabolic acidosis.

Choice D is incorrect. Bulimia nervosa is an eating disorder characterized by periods of binge eating, followed by inappropriate, extreme weight control methods. Repeated vomiting, diuretic use, and/or laxative use all deplete the body's potassium stores, so this client would be at risk for hypokalemia, not hyperkalemia.

Additional Info



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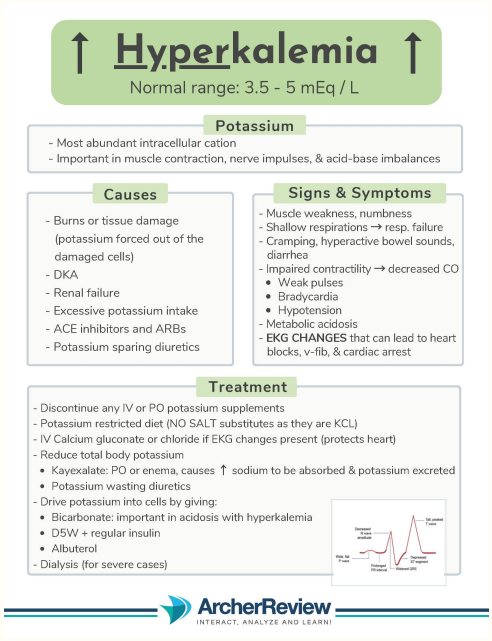

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Question 133

Type: multiple_response_all

The nurse is assessing a client who was admitted four hours ago with hypomagnesemia. Which of the following findings should the nurse recognize as a common cause of hypomagnesemia? **Select all that apply.**

Answer Choices

A. Renal failure

B. Alcoholism Correct

C. Anorexia nervosa Correct

D. Diarrhea Correct

E. Hypothyroidism

Explanation

Choices B, C, and D are correct. Alcoholism causes diuresis, which lowers serum magnesium levels. Additionally, chronic alcoholism impairs the absorption of magnesium. Anorexia nervosa is a psychiatric illness where the individual eats very few calories and causes electrolyte disturbances such as low potassium, magnesium, and sodium. All of which may be life-threatening. Diarrhea causes a depletion of all electrolytes, which would appropriately explain the low magnesium levels.

Choice A is incorrect. Renal failure can cause hypermagnesemia because the process that keeps the magnesium levels in the body at normal levels does not work properly in people with kidney dysfunction.

Choice E is incorrect. Hypothyroidism is a risk factor for hypermagnesemia because it causes magnesium reabsorption in the renal tubules.

Additional Info

✓ The normal level of magnesium is 1.5-2.5 mEq/L (0.74–1.03 mmol/L)

✓ Food sources rich in magnesium include pumpkin seeds, almonds, dark leafy vegetables, soybeans, and dried figs

✓ Causes of hypomagnesemia include alcoholism, diarrhea, and diuretics

✓ Causes of hypermagnesemia include renal failure, certain antacids, excessive intake, lithium therapy, adrenal insufficiency, and hypothyroidism

Question 134

Type: single_choice

The nurse is preparing to admit a client with chronic kidney disease and congestive heart failure.

➢ Which assessment would **most** effectively determine the client's fluid balance?

A. Daily weight ✔ Correct

B. Intake and output measurement

C. Urine specific gravity

D. Serum sodium level

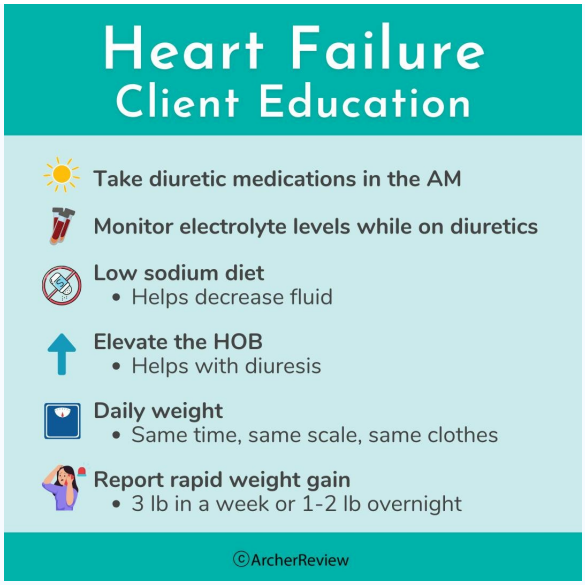
Explanation

Choice A is correct. Daily weights are considered the gold standard for monitoring fluid balance. Monitoring for changes in normal pressure is the most direct and helpful way to compare changes in fluid status and evaluate needed interventions. If performed correctly, daily weights will reveal fluid status as 1 kilogram of weight gain (or loss) = 2.2 pounds = 1 liter (1000 mL) of water.

Choice B is incorrect. Intake and output measurement provides a snapshot of fluid balance but can be misleading if there are inaccuracies in recording or if insensible losses, such as those from respiration or perspiration, are not accounted for. Additionally, in individuals with chronic kidney disease or heart failure, fluid shifts can occur without immediate changes in intake or output totals, making this method less reliable as a sole indicator.

Choice C is incorrect. Urine specific gravity can offer insights into hydration and kidney concentrating ability, but its utility diminishes in chronic kidney disease. As the kidneys lose their ability to concentrate or dilute urine effectively, specific gravity values may not accurately reflect actual fluid status. Therefore, it cannot be solely relied upon to assess overall fluid balance.

Choice D is incorrect. Serum sodium levels may reflect changes in fluid volume, particularly in states of significant dilution or concentration. However, sodium levels are influenced by various factors such as hormonal regulation, medications, and underlying conditions. This makes it an indirect and sometimes misleading indicator of fluid balance, especially in complex clinical scenarios like concurrent kidney and cardiac dysfunction.



Source : Archer Review

Additional Info

✓ When a client is hospitalized, daily weight is measured at the same time of day and on the same scale.

✓ This allows an objective comparison of subsequent weights.

✓ 1 kilogram (gained or lost) = 2.2 pounds = 1 liter (1000 mL) of water.

✓ The accuracy of weight measurement is important because healthcare providers base medical and nursing decisions (e.g., drug dosage, medications) on weight changes.

Information Source

Potter, P., Perry, A., Stockert, P., Hall, A. (012022). Fundamentals of Nursing, 11th Edition.

Question 135

Type: multiple_response_all

The nurse cares for a client with a potassium of 5.7 mEq/L (mmol/L) [3.5-5 mEq/L, mmol/L]. The nurse understands that this potassium level may be caused by **Select all that apply.**

Answer Choices

A. Cushing's disease.

B. nasogastric tube suctioning.

C. salt substitutes. Correct

D. hyperinsulinism.

E. adrenal insufficiency. Correct

Explanation

Choices C and E are correct. The client's high potassium level, 5.7 mEq/L (mmol) [3.5-5 mEq/L, mmol/L] is concerning. Salt substitutes contain potassium which makes them more palatable. Excessive intake may lead to hyperkalemia. Adrenal insufficiency causes hyperkalemia because of the insufficient amount of aldosterone, which causes potassium elimination. Less aldosterone, and less potassium elimination, equates to hyperkalemia.

Choice A is incorrect. Cushing's disease is likely to cause hypokalemia, not hyperkalemia. In this disease, the adrenal glands produce too much aldosterone. Aldosterone causes the body to excrete potassium, putting clients with Cushing's disease at risk for excessive potassium loss leading to hypokalemia.

Choice B is incorrect. The client with an NG tube to continuous suction will likely experience hypokalemia, not hyperkalemia. NG tube suction removes all of the gastric contents, which are rich in potassium. With those excessive potassium losses, the client becomes hypokalemic.

Choice D is incorrect. Hyperinsulinism is likely to experience hypokalemia, not hyperkalemia. Insulin facilitates the movement of glucose into cells. With it comes potassium, and therefore when there is too much insulin as there is in hyperinsulinism, too much potassium is moved into the cells, and the serum potassium level drops, causing hypokalemia.

Additional Info

✓ The normal potassium level is 3.5 mEq/L to 5.0 mEq/L (mmol/L).

✓ Cardiovascular changes are the most severe problems of hyperkalemia and are the most common cause of death in patients with hyperkalemia. The nurse should obtain a 12-lead electrocardiogram and establish continuous telemetry monitoring.

✓ Treatment for hyperkalemia includes regular insulin, albuterol breathing treatments, and/or sodium polystyrene.

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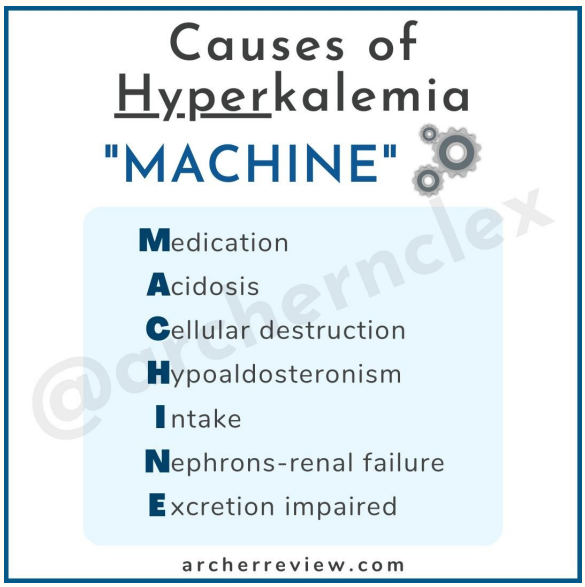

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Question 136

Type: single_choice

The nurse is caring for a client with hypernatremia. Which prescribed intravenous fluid (IVF) would be appropriate?

A. Dextrose 5% in water (D5W) ✔ Correct

B. 3% saline

C. Lactated Ringer's 5% Dextrose in Water (D5LR)

D. 0.9% saline

Explanation

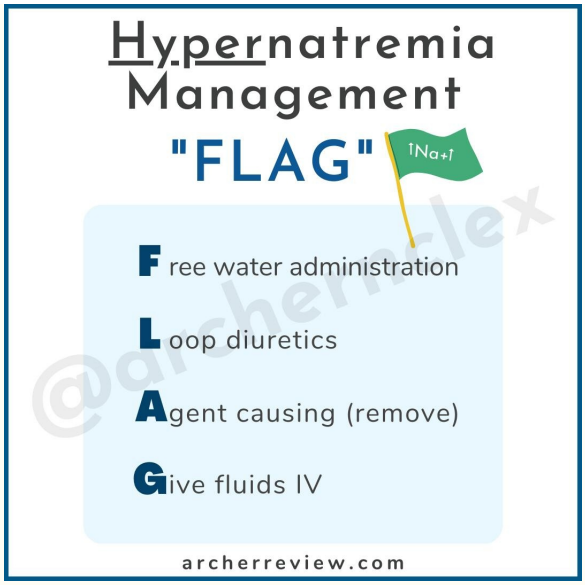
Choice A is correct. This client has hypernatremia (sodium > 145 mEq/L, mmol/L) and should avoid additional sodium-containing fluids. Dextrose 5% in water replaces water losses due to hypernatremia. It would be an appropriate maintenance fluid for this client because it contains free water with no added sodium or other electrolytes and promotes renal solute excretion.

Choice B is incorrect. 3% saline is a hypertonic fluid and should be avoided in this client because of their hypernatremic state. This would further increase the sodium. This client should avoid any additional sodium-containing fluids at this time.

Choice C is incorrect. Lactated Ringer's 5% Dextrose in Water (D5LRS) contains 130 mEq/L of sodium and would not be helpful in treating hypernatremia. This would increase the serum sodium level.

Choice D is incorrect. 0.9% saline is an isotonic solution that expands the intravascular volume and replaces extracellular fluid losses. It contains sodium and chloride, which may result in intravascular overload or hyperchloremic acidosis. This would not be an appropriate choice for a client with hypernatremia.

Additional Info



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Source : Archer Review

Question 137

Type: single_choice

The nurse is assessing a client with an acute kidney injury (AKI). Which of the following findings would support a diagnosis of AKI?

A. hypernatremia

B. metabolic alkalosis

C. oliguria ✔ Correct

D. hypokalemia

Explanation

Choice C is correct. Oliguria (urine output less than 400 mL/24 hours) is the most common initial sign of an AKI. It is usually seen within the first week of the injury.

Choice A is incorrect. When the kidneys are damaged, they are unable to retain sodium. Sodium levels would be decreased (hyponatremia), not increased.

Choice B is incorrect. Metabolic acidosis, not alkalosis, is typically seen with AKI. The kidneys cannot excrete acids and synthesize the ammonia needed to excrete hydrogen ions. Serum bicarbonate decreases, and reabsorption of bicarbonate is ineffective, resulting in acidosis.

Choice D is incorrect. Hyperkalemia, not hypokalemia, is seen with acute kidney injury. In AKI, the kidneys cannot excrete excess potassium normally. Metabolic acidosis can also develop, causing increased hydrogen ions into the cell, which forces additional potassium into the extracellular fluid.

Additional Info

✓ Acute kidney injury can be divided into prerenal, intrarenal (intrinsic), or postrenal.

✓ **Prerenal** is caused by a source outside the kidney, such as dehydration, sepsis, shock, and burns.

✓ **Intrarenal (intrinsic)** is caused by a source inside the kidney, such as allergic disorders, embolism or thrombosis of the renal vessels, and nephrotoxic agents.

✓ **Postrenal** is caused by urine flow obstruction such as a stone, strictures, or tumor.

✓ ↑ BUN, ↑ creatinine, ↓ glomerular filtration rate (GFR), and metabolic acidosis are manifestations of acute kidney injury.

✓ Treatment is the underlying cause, including removing the offending medication or toxin and maximizing renal perfusion.

✓ Severe AKI may require hemodialysis.

Question 138

Type: single_choice

The infection control nurse assesses clients at risk for a urinary tract infection (UTI).

➢ Which client is at the **greatest** risk of developing a UTI? A client with

A. a chronic indwelling urinary catheter receiving intravenous diuretics. ✔ Correct

B. diabetes mellitus who is receiving intravenous antibiotics for a wound infection.

C. obesity being treated for urge incontinence.

D. a history of frequent bladder infections.

Explanation

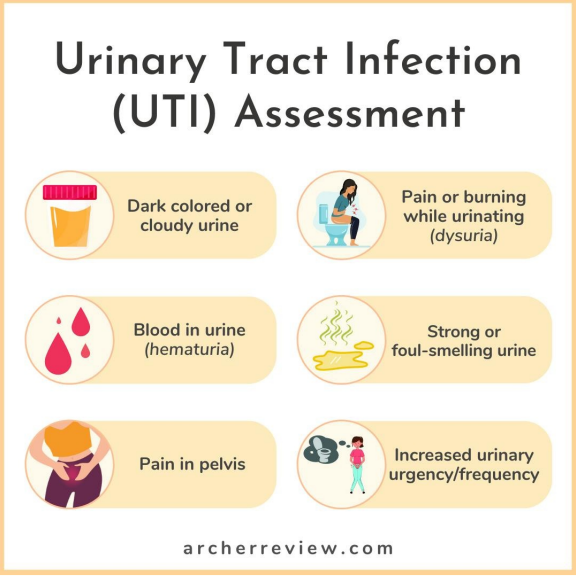
Choice A is correct. The most significant risk factor for a urinary tract infection is the presence of an indwelling urinary catheter. Bacteria may colonize the tip of the catheter within 48 hours of its placement. Thus, the nurse recognizes that having this invasive device is a key risk factor for UTI.

Choice B is incorrect. Diabetes mellitus increases the client's risk for UTI because high glucose levels increase the client's risk for fungal and bacterial infections. The client does have a mitigating factor, which is the current treatment with IV antibiotics, which will likely diminish the risk of UTI.

Choice C is incorrect. A client with obesity has a higher level of inflammation, which may temper the immune system, making the client more susceptible to a UTI. However, this client's urge incontinence does not raise the risk for UTI as this is an issue with poor compliance from the detrusor muscle.

Choice D is incorrect. This client's history of frequent bladder infections indicates a susceptibility to UTIs. However, the history of infections alone doesn't necessarily place them at the greatest risk. Other factors, such as the presence of indwelling catheters, would likely present a higher risk.

Additional Info



Information Source

Ng, M. (2022, August 8). Benign Prostatic Hyperplasia. StatPearls.com. Retrieved from https://www.statpearls.com/articlelibrary/viewarticle/18212/#:~:text=Benign%20prostatic%20hyperplasia%20%28BPH%29%20is%20a%20common%20condition,both%20th

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Question 139

Type: single_choice

The nurse is reviewing the client's laboratory data.

➢ Which current prescription should the nurse clarify with the primary healthcare provider (PHCP)? **See the exhibit for additional client information.**

A. hydrochlorothiazide ✔ Correct

B. lisinopril

C. naproxen

D. tamsulosin

Explanation

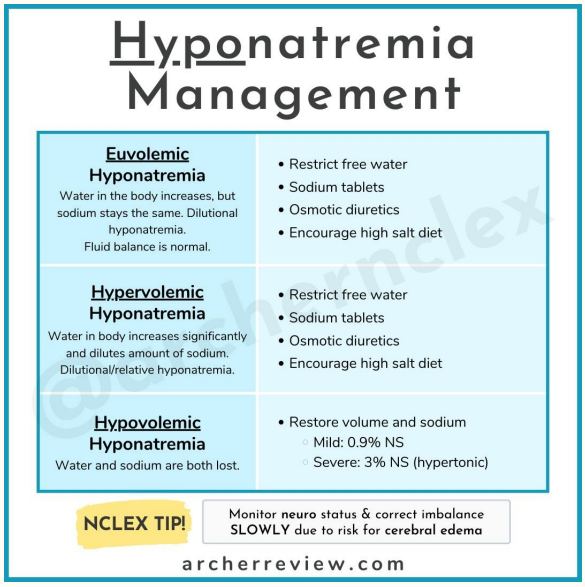
Choice A is correct. This client has hyponatremia, and having the client continue the thiazide diuretic would be detrimental as this would further reduce the sodium. This nurse should question this medication with the PHCP before administration.

Choice B is incorrect. Lisinopril is an ACE inhibitor and may adversely cause hyperkalemia. However, the client's potassium is within normal limits. Hydrochlorothiazide is known to deplete potassium and sodium levels.

Choice C is incorrect. Naproxen is an NSAID, and long-term exposure may cause nephrotoxicity. The client's creatinine is within normal limits, and the low sodium is concerning. This medication is not a concern based on the laboratory values.

Choice D is incorrect. Tamsulosin is a urinary tract dilator indicated in treating benign prostatic hyperplasia. This medication does not cause hyponatremia; the prescribed thiazide diuretic should be clarified with the PHCP.

Additional Info



Source: ArcherReview.com

Question 140

Type: single_choice

Following surgery for a prolapsed bladder, a 74-year-old female client is two days postoperative with an indwelling urinary catheter. While the nurse is making morning rounds, the client states, "I feel like peeing again!" The **most appropriate** response for the nurse is:

A. "It's just bladder spasms. Nothing to worry about."

B. "Let me look at your urine bag to ensure it's draining properly." ✔ Correct

C. "You should do Kegel exercises regularly to stop this urge to void."

D. "Is this the first time this has happened?"

Explanation

Choice B is correct. Following the client's complaint, the most appropriate response by the nurse would be to check the patency of the urinary catheter, as the most frequent reason for an urge to void while an indwelling catheter is in place is blocked tubing. The nurse would appropriately verbalize this action to the client with Choice B.

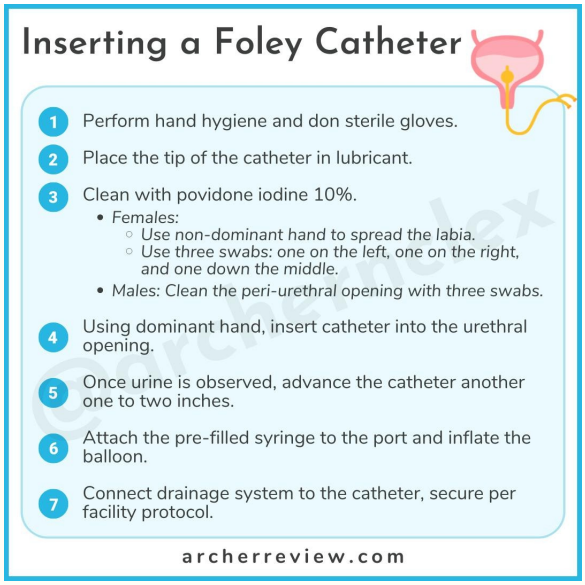
Choice A is incorrect. While bladder spasms may cause the client to feel the urge to void, the nurse would be incorrect in dismissing the client's complaint without assessing the patency of the urinary catheter, as the most frequent reason for an urge to void while an indwelling catheter is in place is blocked tubing.

Choice C is incorrect. Performing Kegel exercises while an indwelling catheter is in place will not help prevent voiding urges and could irritate the urethral sphincter.

Choice D is incorrect. While it is good for the nurse to probe whether the client has experienced this problem before, the best initial action would be to check the patency of the catheter.

Additional Info

- Encourage the client to maintain adequate oral liquid intake (as indicated), practice appropriate hand hygiene, keep the drainage bag below the level of the bladder, and avoid dependent loops or obstructions in the tubing.



Source : Archer Review

Question 141

Type: multiple_response_all

The nurse cares for a client with a serum sodium level of 152 mEq/L (mmol/L) [135-145 mEq/L, mmol/L]. Which of the following assessment findings would be expected? **Select all that apply.**

Answer Choices

A. Lethargy Correct

B. Dry mucous membranes Correct

C. Tachypnea

D. Cyanosis

E. Excessive thirst Correct

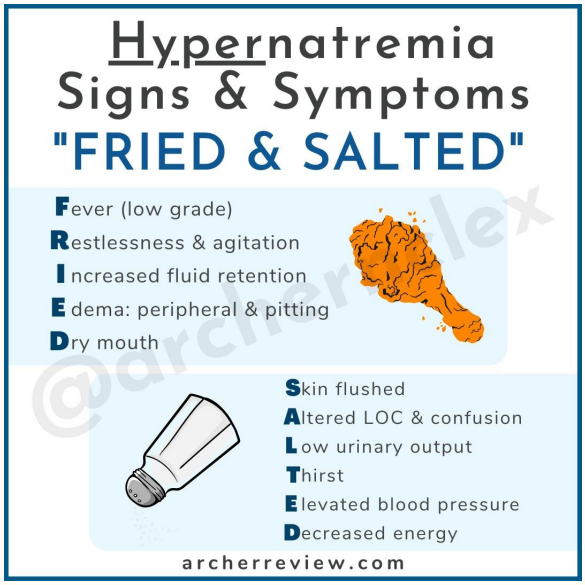
Explanation

Choices A, B, and E are correct. Sodium plays a vital role in the brain, so imbalances in the serum sodium level can cause significant neurological changes. The client who is hypernatremic, or has a sodium level greater than 145 mEq/L (mmol/L), is at risk for changes in their level of consciousness ranging from restlessness and agitation to lethargy (Choice A), stupor, and coma. A client with a high sodium level often has dry mucous membranes. Hypovolemic hypernatremia is the most common form of hypernatremia. Other causes include renal losses of free water (osmotic diuresis, post obstructive diuresis) or extrarenal losses (diarrhea, sweating, increased insensible losses). Therefore, the client is often dehydrated, and this fluid volume deficit is manifested by dry mucous membranes (Choice B) and excessive thirst (Choice E). Dry mucosa may also be secondary to the relationship sodium has with water. Water follows sodium, so where there is an increased sodium level in the extracellular space, water leaves the cells and follows the sodium into the extracellular space. This causes dry mouth and mucous membranes.

Choice C is incorrect. Tachypnea, or an increased respiratory rate, is not a symptom of hypernatremia. Sodium plays a vital role in the brain, nerves, and water balance. The significant symptoms to monitor for will be neurological, not respiratory.

Choice D is incorrect. Cyanosis, or bluish skin discoloration resulting from poor circulation or inadequate blood oxygenation, is not a symptom of hypernatremia. Sodium imbalance can cause many devastating neurological symptoms but will not result in cyanosis.

Additional Info



Source : Archer Review

Source : Archer Review

Question 142

Type: single_choice

A client experiencing an acute exacerbation of ulcerative colitis underwent diagnostic testing and was found to have elevated serum osmolality and urine specific gravity. Which of the following is related to these findings?

A. Renal insufficiency

B. Diabetes insipidus

C. Hypoaldosteronism

D. Deficient fluid volume ✔ Correct

Explanation

Choice D is correct. Ulcerative colitis is a chronic inflammatory bowel disease in which the large intestine becomes inflamed and ulcerated, leading to flare-ups of water or bloody diarrhea, abdominal cramping, and fever. During severe ulcerative colitis flare-ups, clients may experience ten or more episodes of diarrhea per day. During these events, the client loses a large volume of fluid, resulting in a deficient fluid volume. When assessing this client, one would anticipate a finding of an elevated serum osmolality and elevated urine specific gravity due to the client's deficient fluid volume status.

Choice A is incorrect. Renal insufficiency is not associated with ulcerative colitis. Serum osmolality and urine specific gravity values would be impacted based on the current severity of the client's renal insufficiency.

Choice B is incorrect. Diabetes insipidus is not associated with ulcerative colitis. Additionally, although serum osmolality levels are often elevated in diabetes insipidus clients, these clients typically display a low urine specific gravity.

Choice C is incorrect. Hypoaldosteronism is not associated with ulcerative colitis or subsequent findings.

Additional Info

✓ The hallmark symptoms of ulcerative colitis are intermittent episodes of abdominal cramping and watery, bloody diarrhea.

✓ Ulcerative colitis clients experiencing a severe exacerbation require prompt hospitalization.

✓ Intravenous fluids and blood transfusions are given as needed for dehydration and anemia.

✓ About one-third of clients with extensive ulcerative colitis ultimately require surgery.

✓ Normal serum osmolality levels should range from 275 to 295 mOsm/kg. An elevated serum osmolarity level means the blood is more concentrated than normal and often indicates a fluid volume deficit.

✓ The normal range for urine specific gravity is 1.005 to 1.030. A urine specific gravity above 1.020 indicates concentrated urine and can indicate a fluid volume deficit, similar to an elevated urine osmolarity.

Question 143

Type: Bowtie

The nurse is reviewing the client's assessment data to prepare the client's care plan.

➢ Complete the diagram by dragging from the choices below to specify what condition the client is most likely experiencing, two (2) actions the nurse should take to address that condition, and two (2) parameters the nurse should monitor to assess the client's progress.

Actions to Take

Slot 1

- Prepare the client for peritoneal dialysis.
- Request a prescription for sodium chloride (normal saline) 500 mL bolus.
- Obtain an order to discontinue the lisinopril.
- Obtain a prescription for a continuous infusion of regular insulin.
- Request a prescription for a diuretic. Correct

Slot 2

- Prepare the client for peritoneal dialysis.
- Request a prescription for sodium chloride (normal saline) 500 mL bolus.
- Obtain an order to discontinue the lisinopril. Correct
- Obtain a prescription for a continuous infusion of regular insulin.
- Request a prescription for a diuretic.

Potential Conditions

Slot 1

- Nephrotic syndrome
- Hyperglycemia hyperosmolar syndrome
- Acute kidney injury Correct
- Chronic kidney disease

Parameters to Monitor

Slot 1

- Peripheral pulses
- Capillary blood glucose
- Serum potassium Correct
- Temperature
- Lung sounds

Slot 2

- Peripheral pulses
- Capillary blood glucose
- Serum potassium
- Temperature
- Lung sounds Correct

Explanation

Potential Conditions

- The client is experiencing acute kidney injury.
- This is supported by the sudden decreased urine output (only 250 mL over 24 hours — very low), elevated serum creatinine (2.5 mg/dL) and BUN (36 mg/dL), hyperkalemia (K+ 5.2), and swelling, bibasilar crackles (signs of fluid overload).
- Recent fatigue and decreased output suggest an *acute* change rather than a chronic, long-standing process like CKD.
- The client has proteinuria, but it's *mild*. Nephrotic syndrome usually causes *massive* proteinuria, severe hypoalbuminemia, and often significant edema, more extreme than this case.
- The blood glucose is only 121 mg/dL — *way too low* for HHS (which usually has glucose >600 mg/dL).
- The client does have chronic conditions (diabetes, HTN) that risk CKD, but the sudden drop in urine output and recent onset of symptoms point more to an acute problem, not a gradual decline.

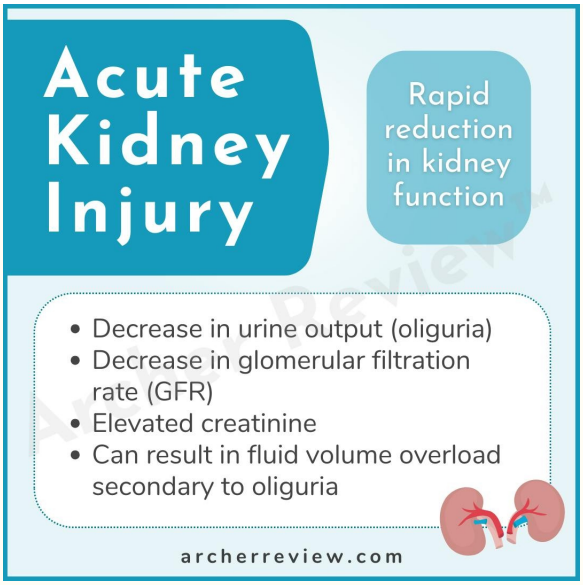
Actions to Take

- The client's hyperkalemia requires an order to stop the lisinopril. ACE-I's can cause hyperkalemia. While nephroprotective, they should not be used if the creatinine is elevated.
- The client is experiencing fluid volume overload, and the nurse should request a prescription for a diuretic.
- Dialysis might eventually be needed if AKI gets worse, but hemodialysis is used more acutely, not peritoneal dialysis.
- A fluid bolus would be detrimental to this client as they are in a state of fluid overload.
- Insulin infusion is used for hyperglycemic emergencies. This client's glucose level is mildly elevated, and not clinical hyperglycemia.

Parameters to Monitor

- The client is experiencing pulmonary congestion, and monitoring the client's lung sounds is key.
- The client has hyperkalemia, and the nurse needs to monitor the client's serum potassium level. If the nurse obtains an order for a loop diuretic (such as bumetanide), the client's potassium level may decrease.
- The client's temperature is within normal limits.
- The client's capillary blood glucose, while elevated, is not the priority concern for this client.

Additional Info



Source : Archer Review

Question 144

Type: multiple_response_all

➢ Which of the following assessment findings from the triage note require immediate follow-up? **Select all that apply.**

Answer Choices

A. blood pressure Correct

B. temperature Correct

C. pulse and respirations Correct

D. pulse oximetry

E. lung sounds

F. neurological assessment findings Correct

G. thready peripheral pulses Correct

Explanation

- The findings concerning this client in the triage note include blood pressure, temperature, pulse, respiratory rate, thready peripheral pulses, lethargy & confusion.
- These are all findings supporting that the client is dehydrated (low blood pressure and tachycardia) caused by his high core temperature.
- These vital signs are all indicative of heat stroke. Heat stroke is concerning when the temperature exceeds 104°F (40°C).
- The client's oxygen saturation is within normal limits.

Question 145

Type: matrix_multiple_response

➢ **For each client finding below, click to specify if the finding is consistent with the disease process of heat exhaustion or heat stroke. Each finding may support more than 1 disease process.**

Note: Each column must have at least 1 response option selected.

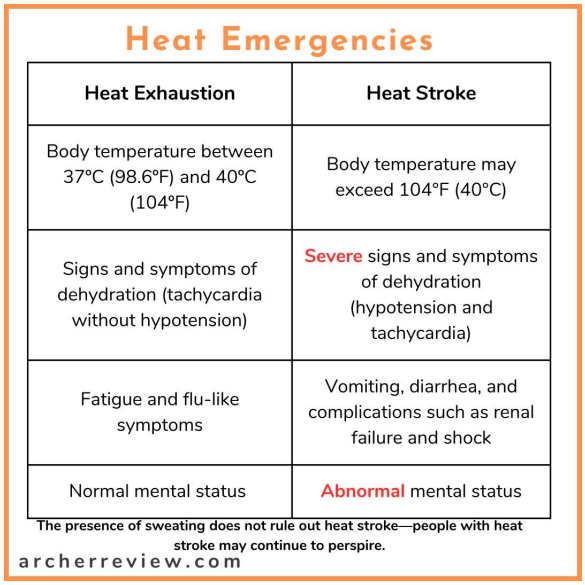
Client Findings	Heat Exhaustion	Heat Stroke
Temperature 105° F (40.5° C)		✔
Confusion		✔
Perspiration	✔	✔
Tachycardia	✔	✔

Signs of dehydration	✔	✔
Hypotension		✔

Explanation

- Sweating (perspiration) can be present with heat stroke and heat exhaustion. This is a misnomer and an ineffective way to differentiate between the two conditions.
- In heat stroke, the body temperature exceeds 104°F (40°C). In heat exhaustion, the body temperature is between 37°C (98.6°F) and 40°C (104°F).
- Neurological deficits such as confusion are present with heat stroke and not heat exhaustion. In heat exhaustion, it is common for the client to feel fatigued but not confused.
- Tachycardia is present in both. When the client has hypotension and tachycardia (manifestations of shock), this is associated with heat stroke.
- Signs and symptoms of dehydration are present in both conditions.

Additional Info



Question 146

Type: drop_down_cloze

➢ **Complete the following sentence by choosing from the list of options.**

Sentence Structure

The client is at ****highest**** risk for developing **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- stroke.
- **multiple organ dysfunction.** Correct
- a myocardial infarction.
- respiratory acidosis.

Correct Answer: multiple organ dysfunction.

Explanation

- The client is experiencing heat stroke. This is a medical emergency because it causes a plethora of complications, including cardiac arrest and multiple organ damage.
- The client is at the **highest** risk for developing multiple organ damage (liver and kidney) based on the client's current clinical disposition of hyperthermia, tachycardia, altered mental status, and low blood pressure. This is causing the client to have decreased perfusion, resulting in end-organ damage.
- Respiratory acidosis is unlikely because the client is experiencing tachypnea, which puts the client at risk for respiratory alkalosis. Acid-based derangements associated with heat stroke include respiratory alkalosis and metabolic acidosis.

Question 147

Type: matrix_multiple_choice

The nurse obtains laboratory results

➢ **For each possible intervention, click to specify if the intervention is essential or contraindicated.**

Note: Each row must have 1 response option selected.

Intervention	Indicated	Not Indicated
Seizure precautions	Correct	
Request a prescription for dextrose 5% in water (D5W)		Correct
Measure axillary temperature frequently		Correct
Apply a cooling blanket	Correct	
Encourage the client to consume cool liquids		Correct
Establish continuous cardiac monitoring	Correct	
Request a prescription for an antipyretic medication		Correct
Insert an indwelling urinary drainage catheter	Correct	
Remove the client's clothing	Correct	
Request an order for a serum troponin level	Correct	

Explanation

The client's laboratory values are highly concerning because they show acute kidney injury (elevated creatinine), dehydration (very low sodium; high BUN), hypokalemia, and mild hypoglycemia. The client's confusion is most likely the result of critical hyponatremia.

Interventions that are indicated

- The nurse should intervene by implementing seizure precautions. The significant hyponatremia puts the client at risk of developing a seizure.
- The nurse should remove the client's clothing and apply a cooling blanket. This is appropriate to lower the client's dangerously high body temperature.
- The client has hypokalemia, and establishing continuous cardiac monitoring is essential.
- The nurse should insert an indwelling urinary drainage catheter to determine if the client responds to the fluid resuscitation.
- The nurse should request an order to obtain a serum troponin level. This level will assist in determining if the client sustained myocardial damage from the heat stroke.

Interventions that are not indicated

- The nurse should monitor the client's temperature every 15 minutes, which should be obtained rectally to ensure accuracy. Axillary temperature assessment is not recommended.
- Obtaining a prescription for D5W would be contraindicated as the water will lower the sodium further. The client has mild hypoglycemia, but infusing D5W would raise the glucose and lower the critically low sodium. The IV fluid for heat stroke is 0.9% sodium chloride (normal saline).
- The nurse should not offer cool liquids as his assessment showed him confused and lethargic. This could cause aspiration.
- Antipyretic medications (such as NSAIDs and acetaminophen) do not help with environmental emergencies such as heat stroke.

Question 148

Type: highlight_text

The nurse has received orders from the physician.

➢ **Click to highlight the orders that the nurse should consider a priority.**

Progress Note Lines

• Perform admission medication reconciliation and admit the client to the intensive care unit

br

• Remove the client's clothing Correct

br

• Start a large-bore peripheral vascular access device Correct

br

• 0.9% sodium chloride (normal saline) 1000 mL, IV, once Correct

br

• Obtain medical records from the client's outpatient primary healthcare provider

br

• Insert temperature-sensing indwelling urinary catheter Correct

br

• Apply a cooling blanket to the client Correct

Explanation

- The nurse must prioritize cooling the client to reduce their core temperature.
- The nurse should immediately remove the client's clothing to begin cooling measures.
- The nurse should prioritize starting a peripheral vascular access device to collect labs and start intravenous fluids.
- The nurse should prioritize inserting a urinary catheter to measure the urinary output to determine the efficacy of the fluid rescitation. This is also important because the catheter has a temperature sensor which will measure the client's core temperature.
- The nurse should also prioritize cooling the client with a cooling blanket.
- The nurse must prioritize the client's physical needs and it is a low priority to obtain medical records and performing medication reconciliation.

Question 149

Type: multiple_response_select

The nurse implements the physician's orders and updates the nurses' notes.

➢ **Which two (2) findings in the nurses' note would require immediate follow-up and reported to the physician?**

A. Rectal temperature

B. Generalized shivering Correct

C. Urine output Correct

D. Assessment of the peripheral pulses

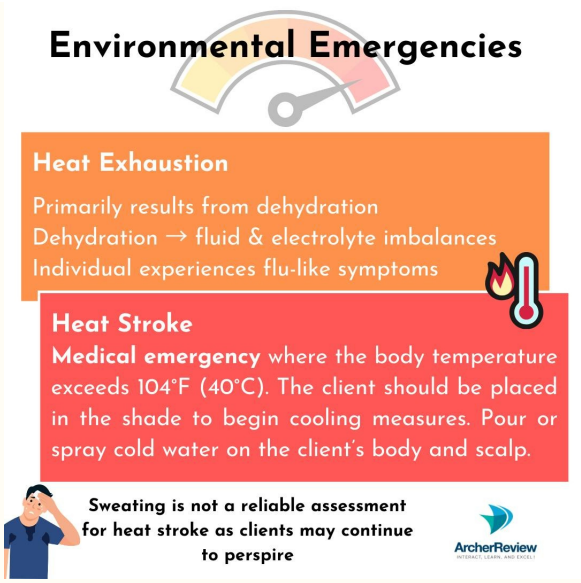
E. Client reports of thirst

Explanation

- Shivering may occasionally occur when cooling the client, but it should be reported promptly as it increases oxygen demand. Shivering may also increase the client's temperature, which would be detrimental. A treatment for shivering is prescribed diazepam or lorazepam.
- The other finding that should be reported includes the client's inability to produce urine despite receiving intravenous fluids. This should be reported to the provider in anticipation of being prescribed additional intravenous fluids.
- The rectal temperature decreased from the initial assessment to 105° F (40.5° C), and their neurological status improved. These are reassuring findings.
- The peripheral pulses still being thready is not a change and ties into the fluid volume deficit that the client is experiencing. This signifies more fluids are needed. Therefore, this assessment has not changed and does not require immediate follow-up.
- The client being thirsty is an expected finding and does not require follow-up as they are dehydrated.

Heat stroke is a potentially catastrophic emergency. This results from the body's inability to employ cooling measures and results in a high core temperature. Consequently, this causes significant electrolyte disturbances. The nurse should maintain a patent airway, remove the client from the hot environment, contact emergency services, remove their clothing, and cool the client passively until more aggressive measures may be implemented.

Additional Info



Question 150

Type: single_choice

The nurse has obtained a physician's order to obtain a clean catch urine specimen from a client. The nurse should instruct the client to obtain the urine sample

A. from the first stream of urine from the bladder.

B. midstream from the bladder. ✔ Correct

C. from the final stream of urine from the bladder.

D. by emptying the entire volume of urine in the specimen cup.

Explanation

Choice B is correct. The preferred method of urine specimen collection for this client is known as a clean catch midstream urine sample. When clients are ambulatory and competent, this is most often a self-obtained specimen in a private bathroom. If the urine is not collected in a sterile or clean catch manner, the urine sample may be contaminated by bacteria originating from the skin or genital region and not from the urinary tract. This is often described by the clinical laboratory as mixed growth bacteria. A contaminated sample may lead to a false-positive urine culture result. The likelihood of mixed growth bacteria contamination is decreased by instructing the client to collect the specimen from the midstream portion of the client's void.

Choice A is incorrect. Collecting a urine specimen that includes the first stream of urine increases the likelihood of mixed growth bacterial contamination due to bacteria originating from the skin or genital region and should therefore be avoided.

Choice C is incorrect. Collecting a urine specimen that includes the final stream of urine increases the likelihood of mixed growth bacterial contamination due to bacteria originating from the skin or genital region and should therefore be avoided.

Choice D is incorrect. Based on this client's presenting symptoms and the type of testing ordered by the health care provider (HCP), collecting the entire volume of the client's void is not indicated.

Additional Info

✓ A midstream clean catch urine sample is the recommended method to obtain a urinalysis and/or urine culture to confirm a diagnosis of urinary tract infection in symptomatic adults.

✓ In addition to the midstream collection instruction, clients must also be instructed on the proper method of cleansing the genitalia before voiding.

✓ Clients must provide a minimum urine volume for the test(s).

✓ Menstruating females are often required to undergo a straight catheterization to obtain specimen collection.

✓ Typically, the urinalysis will result rather quickly.

✓ Detailed urine culture results typically take 48 to 72 hours, so broad-spectrum antibiotics for urinary tract infections are

often initially prescribed.

Source: Archer Review

Question 151

Type: multiple_response_all

The nurse is teaching a class on acid-base imbalances. It would be correct for the nurse to identify which of the following would cause respiratory acidosis? **Select all that apply.**

Answer Choices

A. Aspirin overdose

B. Pneumothorax Correct

C. Opioid overdose Correct

D. Anxiety

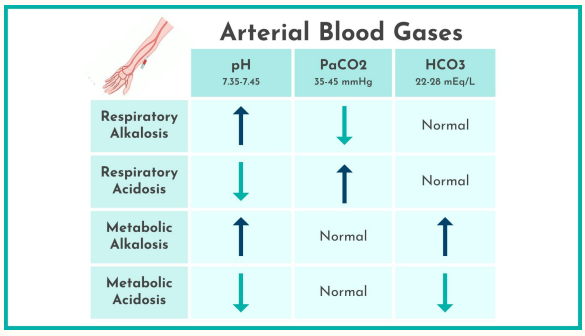
E. Renal disease

Explanation

Choices B and C are correct. Respiratory acidosis is caused by the inability to expel carbon dioxide through airway obstruction or decreased ventilation. A pneumothorax causes shallow breathing, which causes the retention of CO_2 (an acid). Opioids are central nervous system depressants. When the client is exposed to toxic levels, the effect causes hypoventilation and the retention of CO_2.

Choices A, D, and E are incorrect. An aspirin overdose stimulates causes metabolic acidosis because excessive ingestion leads to an increase in the hydrogen ion concentration. Renal disease also causes metabolic acidosis because the kidneys are unable to recycle bicarbonate. Anxiety causes a client to increase their ventilations and potentially trigger hyperventilation. Hyperventilation would cause the client to exhale a significant amount of CO_2, leaving them in a respiratory alkalotic state.

Additional Info



Question 152

Type: single_choice

The nurse is reviewing the assessment data for a client with acute glomerulonephritis (AGN). Which of the following would be an expected finding?

A. Ketonuria

B. Hematuria ✔ Correct

C. Polyuria

D. Glycosuria

Explanation

Choice B is correct. Clinical features of acute glomerulonephritis (AGN) include proteinuria, hematuria, periorbital edema, weight gain, high blood pressure, and decreased glomerular filtration rate (GFR).

Choices A, C, and D are incorrect. Individuals with glomerulonephritis would have oliguria and not polyuria. This is explained because of the massive inflammation occurring in the glomerulus. Glycosuria and ketonuria are not features of this disease; instead, these may be expected in a client with uncontrolled blood glucose.

Additional Info

✓ AGN is a severe condition secondary to many infectious processes, such as streptococcal infections, mononucleosis, and hepatitis.

✓ Clinical features of AGN include oliguria, fatigue (from the uremia), fluid retention, proteinuria, hematuria, and elevation in blood pressure.

✓ Nursing care aims to prevent the most common complication, **fluid volume overload.**

✓ The client may have dietary restrictions for fluid, sodium, and potassium.

✓ The nurse should monitor the client's intake, output, weight, and blood pressure.

Question 153

Type: multiple_response_all

The nurse is working with a client who has been diagnosed with hypervolemia. Which of the following conditions can cause hypervolemia?

Select all that apply.

Answer Choices

A. Heart failure Correct

B. Renal failure Correct

C. Type 1 Diabetes Mellitus

D. Third degree burns

E. Hormonal imbalances Correct

Explanation

Choices A, B and E are correct. Heart failure can cause hypervolemia. When the heart is not pumping effectively, there is decreased cardiac output. This means less perfusion to all of the body's organs, including the kidneys. When the kidneys don't get enough blood, the urinary output will decrease; instead of the body getting rid of fluid in the urine, the volume will stay in circulation and cause hypervolemia (Choice A). Renal failure can cause hypervolemia. If the kidneys are failing, they are not effectively making urine. If the body is not excreting fluid in the urine, that fluid is staying in the vascular space and causes hypervolemia (Choice B). Hormonal imbalances, such as those caused by excessive production of cortisol or aldosterone, can lead to an increase in fluid retention and hypervolemia (Choice E).

Choices C and D are incorrect. Type 1 diabetes mellitus (Choice C) would not cause hypervolemia. In a well-controlled diabetic, there should be no fluid imbalance. However, if the diabetic is not well controlled and is hyperglycemic, they will be polyuric. This is because the increased amount of glucose in the vascular space will induce diuresis. Polyuria leads to decreased volume in the vascular area, hypovolemia, the opposite of hypervolemia. Third-degree burns can cause hypovolemia (Choice D), not hypervolemia. This is due to the large amount of fluid that leaves the vascular space and goes out into the interstitial space after a burn.

NCSBN Client Need: Topic: Physiological Integrity, **Subtopic:** Physiological adaptation, Fluid & Electrolytes

Additional Info

Some contributing factors in the development of hypervolemia can be the following:

✓Heart failure: When the heart is unable to pump blood effectively, fluid can build up in the lungs and other parts of the body.

✓Kidney disease: The kidneys are responsible for removing excess fluid from the body. When they are not functioning properly, fluid can accumulate.

✓Liver disease: Liver disease can lead to a decrease in albumin production, which can result in fluid accumulation.

✓Excessive fluid intake: Receiving excessive IV fluids can lead to hypervolemia.

✓Hormonal imbalances: Hormones such as aldosterone can affect fluid balance in the body.

✓Medications: Certain medications, such as corticosteroids and nonsteroidal anti-inflammatory drugs (NSAIDs), can lead to fluid retention.

Question 154

Type: single_choice

The nurse is reviewing the laboratory results of a client with renal failure. Which laboratory data requires **immediate** follow-up?

A. Blood urea nitrogen 50 mg/dL [10-20 mg/dL]

B. Serum potassium 6 mEq/L (mmol/L) [3.5-5.0 mEq/L] ✔ Correct

C. Arterial blood pH 7.30 [7.35-7.45]

D. Hemoglobin 10.3 g/dL [F: 12-16 g/dL; M: 14-18 g/dL]

Explanation

Choice B is correct. Renal failure can cause a significant imbalance in lab values. Although the lab results listed are abnormal, the elevated potassium level is a life-threatening finding because it may cause lethal cardiac dysrhythmias.

Choice A is incorrect. Elevated renal function tests (BUN and Creatinine) are expected in an individual with acute renal failure. This is not as concerning compared to the dangerously high potassium levels.

Choice C is incorrect. A pH of 7.30 is acidosis and is expected for an individual with acute renal failure. This is because of the kidney's inability to recirculate bicarbonate, which can help neutralize the acidic pH. This is not a priority compared to the critically high potassium level.

Choice D is incorrect. Anemia with renal failure is expected because of the kidney's inability to secrete erythropoietin. Erythropoietin is a substance used to stimulate the production of red blood cells. The hemoglobin is low. However, it is the dangerously high potassium that is highly concerning.

Additional Info

✓ The kidneys play a crucial role in maintaining potassium balance in the body, and when they are not functioning properly, potassium levels can become dangerously high.

✓ Elevated potassium levels can disrupt the electrical activity of the heart, leading to arrhythmias. Severe arrhythmias can be life-threatening and may result in cardiac arrest.

✓ In severe cases of hyperkalemia, when other interventions are not effective or when the patient has compromised kidney function, hemodialysis may be necessary to remove excess potassium from the body.

✓ Regular monitoring of the patient's vital signs, cardiac rhythm, and potassium levels is essential.

✓ Keep a close eye on the patient for symptoms of muscle weakness, tingling, numbness, nausea, vomiting, and abdominal pain. Document and report any changes in symptoms to the healthcare team.

Question 155

Type: multiple_response_all

The nurse understands that which of the following are complications of acute tubular necrosis (ATN)?

Select all that apply.

Answer Choices

A. Metabolic acidosis Correct

B. High thyroxine levels

C. Hyponatremia Correct

D. Decreased parathyroid levels

E. Electrolyte imbalances Correct

Explanation

Choice A is correct. The kidneys cannot excrete excess hydrogen ions or reabsorb bicarbonate with ATN. Due to the inability to excrete the excess acid (hydrogen ions) paired with the inability to hang on to the needed base (bicarbonate), acidosis ensues. This is due to the malfunction of the kidneys, not the lungs, so it is classified as metabolic acidosis.

Choice C is correct. ATN can cause hyponatremia. Due to lower urinary output, there is hypervolemia. With fluid retention and high volume remaining in the blood vessels, the amount of sodium in the body is diluted. This is called relative dilutional hyponatremia.

Choice E is correct. The kidneys play a crucial role in regulating the levels of electrolytes such as sodium, potassium, and calcium in the body. ATN can disrupt this process, leading to imbalances that can cause a range of symptoms, including muscle weakness, confusion, and heart rhythm abnormalities.

Choice B is incorrect. ATN is associated with low thyroxine levels, not high. Thyroid hormones increase renal blood flow and glomerular filtration rate (GFR). In ATN, there is often lower renal blood flow and a lower GR. Therefore, ATN is often associated with low thyroid levels.

Choice D is incorrect. ATN can cause increased parathyroid levels. This is considered a secondary hyperparathyroidism. Secondary hyperparathyroidism occurs when the parathyroid glands release too much parathyroid hormone (PTH), causing a high blood level of PTH. This occurs in ATN because when the kidneys are damaged, they cannot make active vitamin D. Vitamin D is required for the absorption of calcium, and calcium levels are therefore low in patients with ATN. One of the primary functions of PTH is the release of calcium from the bones,

into the bloodstream, when blood calcium levels are low. The body recognizes the lower blood calcium level, that has been caused by the ATN, and then secrects more PTH to try to correct the issue. This is when ATN can cause increase PTH levels.

Additional Info

✓Acute tubular necrosis (ATN) is a medical condition that occurs when there is damage to the tubular cells of the kidneys.

✓The tubules are responsible for filtering waste and excess fluids from the blood and excreting them as urine.

✓ATN can disrupt this process, leading to a buildup of waste products and fluid in the body, which can cause a range of symptoms.

✓ATN is most commonly caused by a lack of oxygen or blood flow to the kidneys, which can occur in conditions such as severe infections, heart failure, or trauma.

✓Other causes of ATN can include exposure to certain medications or toxins, such as antibiotics or heavy metals, or certain medical procedures, such as surgery or imaging tests that require the use of contrast dyes.

Question 156

Type: multiple_response_all

The nurse reviews the lab values of a client and notes a serum sodium level of 125 mEq/L (mmol/L) [Reference range: 135–145 mEq/L (mmol/L)].

➢ Which conditions does the nurse recognize as potential causes of this laboratory abnormality? **Select all that apply.**

Answer Choices

A. syndrome of inappropriate antidiuretic hormone (SIADH) Correct

B. diabetes Insipidus

C. addison's disease (adrenal insufficiency) Correct

D. psychogenic polydipsia Correct

E. salt water drowning

Explanation

Choice A is correct. The normal sodium level is 135-145 mEq/L (mmol/L). This client's sodium level is hyponatremic and lower than the normal range. SIADH is a condition that can lead to hyponatremia. In SIADH, there is too much ADH. ADH causes water retention, and therefore too much water is retained. Due to the volume, so much water is retained in the vascular space that the amount of sodium present is relatively less than before. This is relative hyponatremia.

Choice C is correct. Addison's disease (adrenal insufficiency) can lead to hyponatremia. In Addison's disease, there is decreased aldosterone secretion. Aldosterone functions to facilitate sodium reabsorption in the collecting ducts of the kidney. So, with less aldosterone, there is less sodium reabsorption, leading to less sodium (hyponatremia).

Choice D is correct. Psychogenic polydipsia is a condition that can lead to hyponatremia. In this condition, the client cannot stop drinking water. They drink so much water that they dilute their blood volume with free water. This large increase in free water causes relative hyponatremia.

Choice B is incorrect. Diabetes Insipidus (DI) can lead to hypernatremia, not hyponatremia. In DI, there is not enough secretion of ADH. ADH causes water retention. The body excretes massive amounts of clear urine, removing vast amounts of fluid. The blood volume becomes very small, and the amount of sodium left in the blood is relatively large compared to before - thus creating relative hypernatremia.

Choice E is incorrect. Saltwater drowning will increase the amount of sodium because of the consumption of the hypertonic fluid.

Additional Info

Source : Archer Review

Hyponatremia refers to a **sodium level lower than 135 mEq/L (mmol/L)**. Hyponatremia may be secondary to several causes; however, it is possible to get clues regarding the cause of hyponatremia by determining the type of hyponatremia. Sodium and water go together. Sodium tends to draw and keep water with it—the decrease in sodium relative to free water results in hyponatremia.

A key nursing priority for the management of hyponatremia is assessing and monitoring the client's neuromuscular status as they are at risk for orthostatic hypotension and seizures.

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Question 157

Type: multiple_response_all

The nurse is caring for a client with a sodium level of 130 mEq/L (mmol/L) [135-145 mEq/L, mmol/L]. Which of the following medications may cause this abnormality?

Select all that apply.

Answer Choices

A. Spironolactone Correct

B. Hydrochlorothiazide Correct

C. Prednisone

D. Sodium polystyrene

E. Tolvaptan

Explanation

Choices A and B are correct. Spironolactone, a potassium-sparing diuretic, retains potassium but causes the loss of water and sodium. By blocking aldosterone, it leads to increased potassium levels while depleting sodium and water, potentially contributing to hyponatremia. Hydrochlorothiazide, a thiazide diuretic, increases urine production, leading to sodium and water loss. While it raises serum calcium levels, it depletes other electrolytes, including sodium. Use can contribute to hyponatremia due to the loss of sodium through increased urine output.

Choice C is incorrect. Prednisone, a corticosteroid, causes an increase in aldosterone, leading to sodium and water retention. While it may affect electrolyte balance, it does not directly cause hyponatremia.

Choice D is incorrect. Sodium polystyrene, used for hyperkalemia, exchanges sodium ions for potassium ions in the intestines, lowering potassium levels. While it lowers potassium, it does not directly affect sodium levels and is not a primary cause of hyponatremia.

Choice E is incorrect. Tolvaptan, used to treat the syndrome of inappropriate antidiuretic hormone (SIADH), depletes water but does not directly deplete sodium. While it can lead to changes in water balance, it does not cause significant sodium loss, making it incorrect in the context of low sodium levels.

Additional Info

✓ Hyponatremia is sodium less than 135 mEq/L (mmol/L).

✓ The cause of hyponatremia is multifactorial and may include diuretics, lithium, alcoholism, and certain forms of dehydration.

✓ For severe hyponatremia, the nurse should institute seizure precautions.

Source : Archer Review

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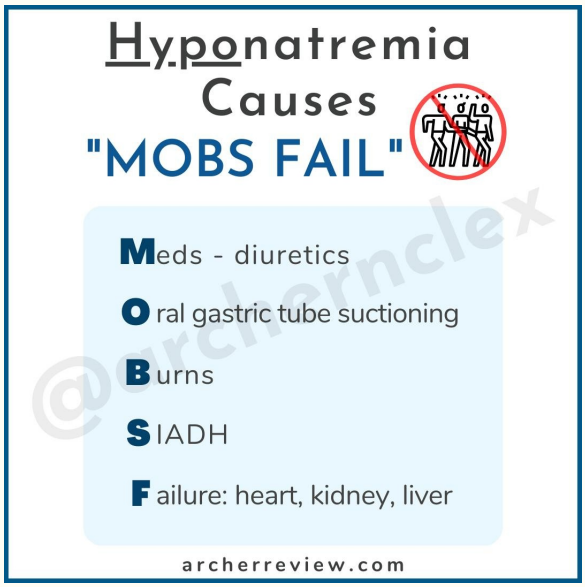

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Question 158

Type: single_choice

The nurse is reviewing the assignment for the shift and will be caring for the following clients. Which client is at risk for hypokalemia? A client with

A. hyperemesis gravidarum. ✔ Correct

B. end-stage renal failure.

C. diabetic ketoacidosis.

D. third-degree burns.

Explanation

Choice A is correct. Hyperemesis gravidarum is a pregnancy complication characterized by severe nausea, vomiting, weight loss, and possibly dehydration. The intense vomiting is why this condition puts the patient at risk for **hypokalemia**. The hypokalemia associated with hyperemesis gravidarum is related to the **metabolic alkalosis** the client experiences due to the vomiting.

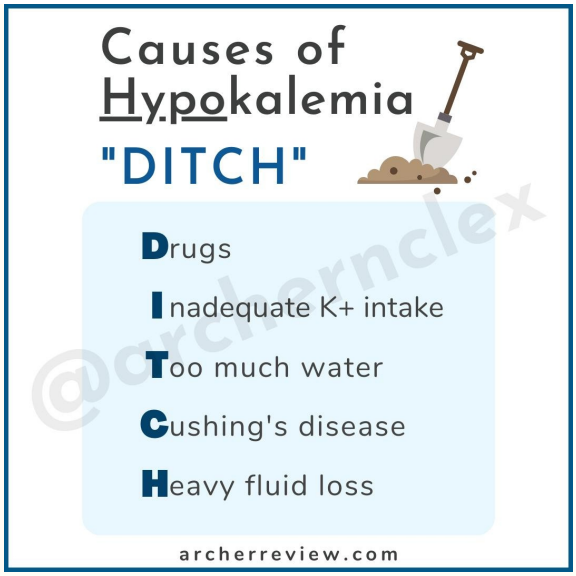
Choice B is incorrect. A client with renal failure will be at risk for hyperkalemia, not hypokalemia. The kidneys will be unable to excrete potassium as they usually do, and there will be a build-up of potassium in the blood leading to hyperkalemia.

Choice C is incorrect. A client in diabetic ketoacidosis (DKA) will be at risk for hyperkalemia, not hypokalemia. When a client is in diabetic ketoacidosis, glucose cannot be transported into cells due to the lack of insulin. The body resorts to breaking down fat cells for energy, producing ketones, and driving blood pH down. Due to the blood's acidity and high glucose content, fluid and potassium are forced out of the cells and into the blood, causing hyperkalemia. If the client were experiencing alkalosis, they would be at risk for hypokalemia.

Choice D is incorrect. Burns destroy tissue and lyse cells, causing large amounts of intracellular potassium to be released into the vascular space, causing **hyperkalemia**. A client with third-degree burns will be at risk for hyperkalemia, not hypokalemia.

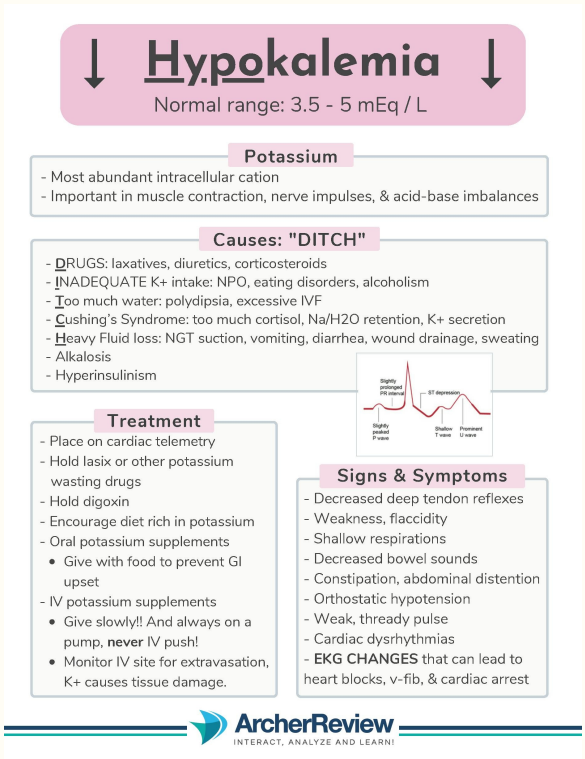
Additional Info

Memory trick for hypokalemia causes:



Source : Archer Review

Hypokalemia - cheat sheet



Source : Source: Archer Review

Information Source

Lough, L.U.K.S. M. (2022). Critical Care Nursing (9th ed.). Elsevier Health Sciences (US).

Question 159

Type: multiple_response_all

The nurse reviews the nursing note, vital signs, assessment, and medical history

➢ Which clinical data is **most** concerning to the nurse? **Select all that apply**.

Answer Choices

A. A/V fistula assessment

B. Oxygen saturation

C. Pulse

D. Blood pressure Correct

E. Neurological assessment Correct

F. Temperature

G. Anuria

Explanation

- The client's blood pressure demonstrates hypotension and is concerning because he is symptomatic based on the neurological assessment and the reports of dizziness. Hypotension is a common complication following hemodialysis because of many factors, such as too much fluid being removed, leading to a reduction in blood volume, and the temperature of dialysate being warm, leading to vasodilation.
- The client's neurological status (dizziness) requires follow-up because this is an unexpected finding after dialysis. The dizziness is likely related to the hypotension or could be related to dialysis disequilibrium syndrome.
- Considering the client's medical history of COPD, the client's oxygen saturation is acceptable. The client having scant, dry blood on the dressing is not concerning.
- Considering this client has end-stage renal disease, it is normal to assess for anuria.
- The fistula has a positive bruit and thrill, and the dressing is dry with a scant amount of blood—this indicates normal post-dialysis findings.
- The client has a medical history of atrial fibrillation, which causes an irregular pulse.
- The client's temperature is within normal limits and not concerning.

Question 160

Type: drop_down_cloze

The nurse reviews the clinical data.

The nurse prepares to implement the orders from day 2.

➢ **Complete the following sentences by choosing from the list of options.**

Sentence Structure

Prior to the nurse administering the prescribed IV potassium, the nurse should **[Dropdown]** br The nurse should also **[Dropdown]** br The nurse should infuse the IV potassium over **[Dropdown]** br During the infusion, if the client should report pain at the vascular access device, the nurse should **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- **ensure the client has adequate urine output.** Correct
- verify that the client has a 20-gauge peripheral vascular access device.
- obtain y-type tubing with an in-line filter.
- perform the Allen test on the extremity with the vascular access device.

Correct Answer: ensure the client has adequate urine output.

Dropdown #2

- implement seizure precautions.
- **initiate continuous cardiac monitoring.** Correct
- administer the potassium with food to minimize gastric irritation.
- insert an indwelling urinary catheter.

Correct Answer: initiate continuous cardiac monitoring.

Dropdown #3

- 2 hours.
- **4 hours.** Correct
- 6 hours.
- 3 hours.

Correct Answer: 4 hours.

Dropdown #4

- **stop the infusion.** Correct
- apply a warm compress to the vascular access device.
- stop the infusion and flush the IV tubing with saline.
- position the extremity with the vascular access device in a dependent position.

Correct Answer: stop the infusion.

Explanation

- The client is receiving nasogastric tube suctioning, placing them in a metabolic alkalotic state. Metabolic alkalosis lowers serum potassium levels.
- When administering intravenous potassium via a peripheral vascular access device, the nurse should ensure that the client has a patent IV and has adequate urinary output (at least 30 mL/hr for adults). This is necessary to avoid hyperkalemia.
- A specific IV (20 gauge) gauge is not necessary for peripheral potassium infusions. A 20-gauge is required when administering packed-red blood cells. The vascular access needs to be patent.
- The Allen test is performed before an arterial blood gas is obtained to ensure adequate perfusion in the extremity. This is not relevant to potassium replacement.

- Continuous cardiac monitoring should be initiated. This safety measure should be taken when a client has potassium alterations and receives IV potassium replacement.
- Seizure precautions are implemented for severe hyponatremia. An indwelling urinary catheter should not be inserted. Food should be administered when replacing potassium by mouth (PO) to minimize gastric irritation. This is not necessary for this client because they are prescribed IV potassium replacement.

- Peripheral IV potassium is administered at 10 mEq/hr. The client was ordered 40 mEq. Thus, the nurse will administer the infusion over four hours.
- Potassium can be administered via a central line at a maximum of 40 mEq/hr.

- Potassium IV is a vesicant and can irritate the veins. The IV should be patent prior to infusion. If pain should occur, the nurse should stop the infusion and flush the vascular access device (not the tubing) to ensure patency. If pain persists and the vascular access device is patent, the nurse should obtain an order to reduce the infusion rate.
- Flushing the tubing should not be performed because the potassium in the tubing would be pushed into the client, which could be lethal.
- The nurse should not apply a warm compress to the vascular access device. This is the treatment for extravasation.
- Elevating the extremity (not putting it in a dependent position) would be necessary if infiltration should occur.

Additional Info

✓ When replacing potassium intravenously:

- Ensure that the client is connected to continuous cardiac monitoring.
- IV potassium should be administered via a controlled device such as a pump.
- The IV site must be patent and assessed for patency before administration.
- Potassium should be administered at a maximum of 10 mEq/L/hr peripherally; 40 mEq/L/hr in a central line.

Question 161

Type: single_choice

A nurse on a medical-surgical unit cares for a client who has just undergone a procedure for a Kock pouch as a treatment for bladder cancer. The **initial** nursing interventions for this client would include:

A. Monitoring urine output, checking for indications of ostomy pouch leaks, and noting the size, shape, and color of the stoma. ✔ Correct

B. Speaking to the client's family and updating them regarding the client's status.

C. Educating the client about stoma care and skincare.

D. Irrigating the catheters as needed.

Explanation

Choice A is correct. Typically, upon completing a Kock pouch procedure, clients will have one or more wound drains, a plastic Medena catheter in the stoma, and a separate (temporary) urinary catheter to drain urine from the client's bladder. Postoperatively, the nurse will monitor the urine output, assess for indications of ostomy pouch leaks, and document the characteristics of the client's stoma. The nurse should closely monitor the client's urine output and inform the health care provider (HCP) if the combined urinary output volume is less than 30 mL/hour (or less than the specified range indicated by the HCP or facility policy). The nurse should regularly check the client's stoma and gauze dressing to ensure the pouch catheter is draining freely while concurrently assessing for indications of ostomy pouch leaks. Noting the characteristics of the stoma provides baseline information regarding the stoma's appearance. A stoma site is usually hyperemic (red or pink) following the procedure. Any changes in the stoma site's color from this initial appearance may indicate an impairment of the arterial blood supply (ischemia). If cyanosis is noted, the nurse must notify the HCP immediately, as a cyanotic stoma is a medical emergency that, if not addressed, can lead to necrosis.

Choice B is incorrect. Updating members of the client's support system regarding the client's condition is typically the health care provider's (HCP) role.

Choice C is incorrect. Educating a client about stoma care and skincare is not the **initial** intervention for a client who has "just undergone" a procedure for a Kock pouch. For this type of client teaching to be most effective, the information should be repeatedly presented to the client, ideally during each nursing/client interaction, with an assessment of the client's skills occurring prior to discharge.

Choice D is incorrect. Kock's pouch clients typically have a plastic Medena catheter present in the stoma following their procedure. If irrigation is required and there are specific orders from the health care provider (HCP), irrigation can be performed with intermittent catheterization. Irrigation is performed to ensure patency and should always be performed using a sterile technique. Unnecessary irrigation increases the risk of a urinary tract infection.

Additional Info

- In clients with a Kock pouch, the pouch, valves, and outlet are made from the end of the small intestine (terminal ileum).
- These clients do not have a traditional external ostomy pouch.
- In order to empty this pouch, a catheter is inserted through an entrance (i.e., stoma) on the client's abdominal wall.
- Due to undergoing this procedure, the client will no longer experience a sensation of bladder fullness, as sensory nerves are no longer attached. As a result, the client will need to learn new cues to void, such as designated times or noticing a feeling of neobladder pressure.

Information Source

American Cancer Society. (2019, October 16). Types of urostomies and pouching systems. American Cancer Society. https://www.cancer.org/cancer/managing-cancer/treatment-types/surgery/ostomies/urostomy/types.html

Crawshaw, A., Williams, J., & Woodhouse, F. (2018, September). Living with a Kock pouch. Ileostomy and Internal Pouch Association. https://iasupport.org/wp-content/uploads/2020/11/KockPouch.pdf

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). Medical-Surgical nursing: Concepts for interprofessional collaborative care (10th ed.). Elsevier.

Question 162

Type: multiple_response_all

The nurse is caring for a client with a phosphorus level of 5.3 mg/dL (1.71 mmol/L) [normal range: 3.0–4.5 mg/dL (0.97–1.45 mmol/L)].

➢ The nurse identifies which of the following as possible causes of this condition? **Select all that apply.**

Answer Choices

A. tumor lysis syndrome Correct

B. hypoparathyroidism Correct

C. hypercalcemia

D. renal failure Correct

E. anorexia

Explanation

Choice A is correct. Tumor lysis syndrome (TLS) occurs when cancer cells break down rapidly (e.g., after chemotherapy), releasing large amounts of intracellular phosphorus, potassium, and nucleic acids into the bloodstream. This overwhelms the kidneys' ability to excrete phosphorus, leading to hyperphosphatemia.

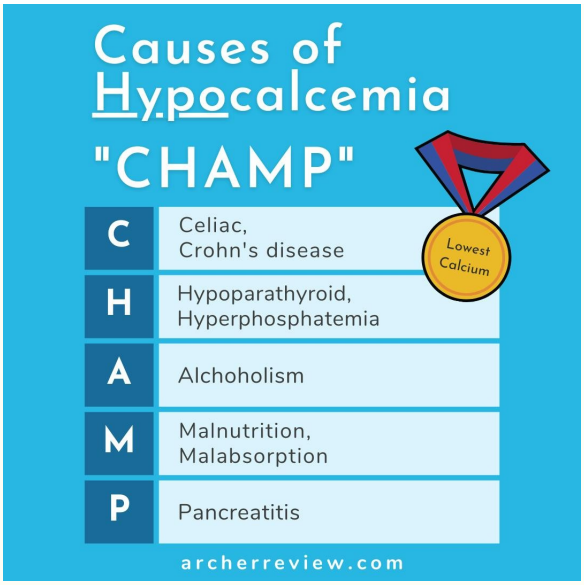
Choice B is correct. The parathyroid hormone (PTH) regulates calcium and phosphorus levels. PTH promotes phosphorus excretion by the kidneys. In hypoparathyroidism, PTH levels are low, leading to decreased phosphorus excretion and thus, elevated phosphorus levels.

Choice D is correct. The kidneys are responsible for excreting excess phosphorus. In renal failure, the kidneys cannot efficiently excrete phosphorus, causing it to accumulate in the blood and leading to hyperphosphatemia.

Choice C is incorrect. Calcium and phosphorus have an inverse relationship due to the effects of PTH. Hypercalcemia (high calcium) stimulates PTH release, which increases phosphorus excretion by the kidneys, leading to low phosphorus levels (hypophosphatemia) rather than hyperphosphatemia.

Choice E is incorrect. Malnutrition and anorexia often lead to low phosphorus levels (hypophosphatemia) due to inadequate dietary intake, decreased intestinal absorption, and possible muscle wasting.

Additional Info



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Question 163

Type: single_choice

The nurse performs a physical assessment on a client and observes the client demonstrate palmar flexion while obtaining the blood pressure.

➢ The nurse should take which action?

A. Obtain the blood pressure on the client's calf

B. Request an order for a magnesium level ✔ Correct

C. Assess the client's orthostatic blood pressure

D. Obtain capillary blood glucose (CBG)

Explanation

Choice B is correct. Palmar flexion in response to BP cuff inflation (positive Trousseau's sign) is associated with hypocalcemia **and** hypomagnesemia, impairing calcium regulation and contributing to neuromuscular excitability. Magnesium levels should be checked because low magnesium can cause or worsen hypocalcemia by suppressing parathyroid hormone.

Choice A is incorrect. The presence of palmar flexion is not related to inaccurate BP measurement in the arm. Instead, it indicates a potential electrolyte imbalance, not a cuff placement issue.

Choice C is incorrect. Orthostatic blood pressure measurements are performed to evaluate volume depletion or autonomic dysfunction (e.g., in cases of dizziness or syncope), not neuromuscular irritability.

There is no indication from the scenario that the individual is symptomatic in this way.

Choice D is incorrect. CBG testing is essential in cases of altered mental status, symptoms of hypoglycemia/hyperglycemia, or diabetes monitoring. However, palmar flexion or carpopedal spasm is not related to glucose levels.

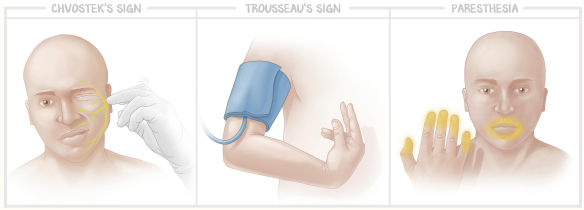
Source : Archer Review

Additional Info

✓ Chvostek Sign may be elicited by tapping on the face just below and in front of the ear to trigger facial twitching of one side of the mouth, nose, and cheek

✓ Trousseau's Sign may be elicited by placing a blood pressure cuff around the arm, inflating the cuff to greater than the client's systolic pressure, and keeping the cuff inflated for 1 to 4 minutes

✓ Severely low levels of magnesium or calcium may cause the presence of these signs



Source : Archer Review

Information Source

Ignatavicius, D., Heimgartner, N., Rebar, C. (2023). Medical-Surgical Nursing, 11th Edition. p. 268.

Question 164

Type: single_choice

The nurse is educating a client about a transurethral resection of the prostate (TURP). Which of the following statements should the nurse make to the client regarding this surgery?

A. "This surgery will remove your entire prostate."

B. "You will have a nasogastric tube (NGT) left in place following this surgery."

C. "You will need to complete a bowel prep the night before this surgery."

D. "A urinary catheter will remain in place following this procedure." ✓ Correct

Explanation

Choice D is correct. This client should expect to have an indwelling urinary catheter placed during this procedure. The nurse should discuss this intervention with the client before the procedure and explain that the pressure of the catheter and balloon typically results in a constant urge to void. The urinary catheter left in place is a large lumen, allowing the bladder to be irrigated to prevent the formation of blood clots from the surgery.

Choices A, B, and C are incorrect. A TURP involves the removal of only the enlarged portion of the prostate. Removal of the entire prostate would be performed in an open prostatectomy. An NGT is not used in this surgery. Finally, this surgery does not require the client to undergo a bowel prep. This would be relevant information prior to a colonoscopy.

Additional Info

✓ A TURP is a procedure indicated for benign prostatic hypertrophy or prostate cancer

✓ This procedure may cause the client to have sexual dysfunction, some of which may be permanent

✓ After the procedure, the large lumen urinary catheter is placed and connected to a continuous bladder irrigation solution

✓ The most significant complication 24 hours following this procedure is hemorrhage

Question 165

Type: single_choice

The nurse is teaching a client who is scheduled for a 24-hour urine collection.

➢ The nurse should plan to

A. discard the second urine specimen and then start the collection.

B. discard the first and last urinary specimens.

C. discard the first urine specimen. ✔ Correct

D. collect and retain all urinary specimens.

Explanation

Choice C is correct. When instructing a client on how to perform a 24-hour urinalysis collection, the client should be taught the specimen collection time. At that time, the client should urinate in the toilet. That initial void – officially marking the commencement of the test – is not saved and should be flushed. Following the discarding of this initial first sample, all urine voided by the client during the following 24-hour period must be collected and stored in the designated collection bottles provided by the laboratory (of note, the entire specimen must be refrigerated or kept on ice during the collection period).

Choice A is incorrect. Discarding the second urine specimen is not appropriate. At the start of the 24-hour urine collection, the client should void, and the initial specimen should be discarded.

Choice B is incorrect. Discarding the first and last urinary specimens is inappropriate. At the start of the 24-hour urine collection, the client should void, and the initial specimen should be discarded.

Choice D is incorrect. The nurse collecting and retaining all urine specimens is inappropriate, as a 24-hour urinalysis requires the client to begin the test by initially voiding into the toilet (i.e., the first specimen is not saved).

Additional Info

✓ A 24-hour urinalysis is a timed urine collection used to assess kidney function.

✓ More specifically, the test is often to perform a metabolic evaluation of urinary stone disease, proteinuria evaluation, estimating renal function via creatinine clearance, and/or to assess residual renal function in end-stage renal disease clients via urea and creatinine clearance.

✓ For this test, clients are provided one to two 24-hour urinalysis collection bottles to store the collected urine specimen throughout the testing period.

✓ The collected specimen will need to be refrigerated or kept on ice for the 24-hour testing period.

✓ No urine should be discarded during the collection period.

Question 166

Type: matrix_multiple_choice

The nurse reviews the concept of urinary incontinence, its causes, and symptoms with the student nurse.

➢ **Click to specify if the causes or symptoms are consistent with the disease process of stress incontinence, overflow incontinence, or urge incontinence.**

Note: Each column must have at least one (1) response option selected.

Causes or clinical manifestations	Stress Incontinence	Overflow Incontinence	Urge Incontinence
Urine loss with physical exertion, cough, sneeze, or exercise	Correct		
Palpable bladder during assessment		Correct	
Caused by neurologic disorders, such as multiple sclerosis or spinal cord damage		Correct	
Caused by vaginal prolapse from vaginal birth or aging	Correct		
Caused by bladder irritants, such as artificial sweeteners, caffeine, alcohol			Correct

Caused by constipation		Correct	
Loss of large amounts of urine with each occurrence			Correct

Explanation

The client in this scenario is demonstrating manifestations of stress incontinence. The client's previous vaginal deliveries are likely the cause of this type of incontinence. Additionally, the client has a low post-void residual, which is common with stress incontinence.

Stress incontinence

- Stress incontinence can be caused by the weakening of the bladder and neck related to childbirth.
- This causes the inability to tighten the urethra sufficiently to overcome the increased detrusor pressure, leading to urine leakage.
- This leakage can be caused by physical exertion, coughing, and sneezing.
- The post-void residual is usually less than 50 mL. Voiding habits are usually normal.

Overflow incontinence

- Overflow incontinence is characterized by underactivity of the detrusor muscle or bladder outlet obstruction.
- Anticholinergic medications, constipation, benign prostatic hypertrophy, and some neurologic disorders, such as multiple sclerosis or spinal cord damage, may cause this incontinence.
- A large post-void residual, bladder distention, constant dribbling of urine, and a sense of incomplete emptying of the bladder are manifestations associated with overflow incontinence.

Urge incontinence

- Urge incontinence is an involuntary loss of urine associated with a strong desire to urinate.
- The causes of this incontinence include idiopathic, neurologic disorders, such as stroke, Benign prostatic hypertrophy, and bladder inflammation. Bladder irritants, such as artificial sweeteners, caffeine, alcohol, citric intake, drugs, and nicotine, may cause this incontinence.
- Manifestations of urge incontinence include an abrupt and strong urge to void (urinary urgency), increased urinary frequency, nocturia, and a loss of large amounts of urine with each occurrence.

Question 167

Type: multiple_response_all

The nurse is caring for a client with nephrotic syndrome. Which of the following assessment findings would be expected? **Select all that apply.**

Answer Choices

A. Proteinuria Correct

B. Hypoalbuminemia Correct

C. Edema Correct

D. Hyperglycemia

E. Jaundice

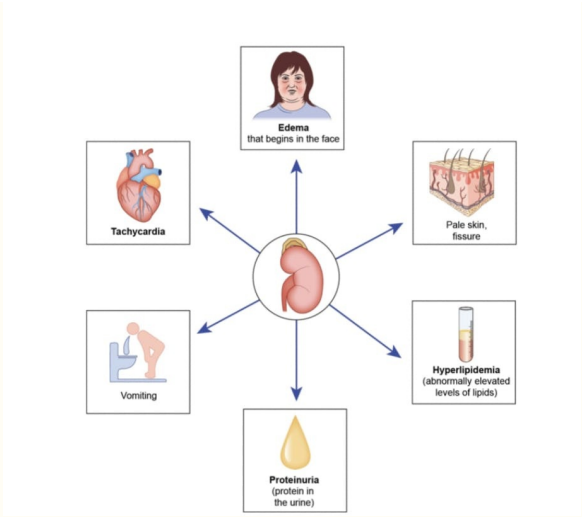
Explanation

Choices A, B, and C are correct. Nephrotic syndrome is a kidney disorder. There is renal glomerular damage, which leads to massive **proteinuria.** Proteinuria is the increased amount of protein in the urine due to protein loss from the bloodstream. Because protein from the bloodstream is being lost in the urine, there is decreased protein in the bloodstream. This can be referred to as hypoproteinemia**,** or **hypoalbuminemia,** as albumin is the type of protein lost in the bloodstream. This hypoalbuminemia causes decreased oncotic pressure in the vasculature, causing profound **edema. Proteinuria** is the first classic manifestation of nephrotic syndrome (Choice A). **Hypoalbuminemia** is the second classic manifestation of nephrotic syndrome (Choice B). **Edema** is the third classic manifestation of nephrotic syndrome (Choice C).

Choice D is incorrect. Hyperglycemia (blood glucose > 250 mg/dL, > 13.875 mmol/L) [70-110 mg/dL, 4.0–11.0 mmol/L] is not a feature of nephrotic syndrome, as this would be found in conditions such as pheochromocytoma or Cushing's syndrome.

Choice E is incorrect. Jaundice would indicate potential dysfunction of the liver and is unrelated to nephrotic syndrome.

Additional Info



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Question 168

Type: single_choice

The nurse is caring for a 68-year-old individual in the emergency department who had been on the bathroom floor for about 10 hours after a fall. While performing straight catheterization, the nurse notes that the urine output reaches 800 mL and continues to flow heavily. What action should the nurse take, and what is the rationale for this action?

A. Drain the client's bladder entirely and place a small amount in a urine specimen cup. This client needs a urine sample to check for rhabdomyolysis.

B. Continue draining the bladder fully, then place a Foley catheter to monitor for sufficient urine output.

C. Stop draining the client's bladder because the client is at risk for developing bladder spasms. ✓ Correct

D. Stop draining the client's bladder to prevent the risk of urinary tract infection (UTI) and notify the primary healthcare provider (PHCP) for further instructions.

Explanation

Choice C is correct. This option is the most cautious approach, acknowledging the potential harm associated with rapid and complete bladder drainage. Stopping the drainage aims to prevent the development of bladder spasms, which is a valid concern given the situation and the risk of over-distension.

Choice A is incorrect. While obtaining a urine sample is important, it's important to consider the potential risk of bladder spasms when draining a large volume rapidly. This option prioritizes obtaining the sample but does not address the risk of complications associated with rapid drainage.

Choice B is incorrect. Stopping the drainage aims to prevent the development of bladder spasms. An indwelling urinary catheter should be carefully weighed against the immediate concern of potential complications associated with rapid and complete bladder drainage, such as the risk of bladder spasms. The placement of an indwelling catheter would continue to drain the bladder.

Choice D is incorrect. Preventing UTI, while important, is not the reason the draining of the bladder should be stopped in this specific scenario.

Additional Info

✓ Rapid drainage of a full bladder can lead to sudden stretching of the bladder wall. This stretching can activate nerve receptors in the bladder, triggering spasms as a response to the abrupt change.

✓ Rhabdomyolysis is more accurately diagnosed through laboratory tests, including serum creatine kinase levels. While obtaining a urine sample may provide some information, relying solely on urine may not be the best practice for determining the presence of rhabdomyolysis.

✓ Prolonged immobility on the bathroom floor may lead to dehydration and electrolyte imbalances. The nurse should monitor the client's fluid intake, assess for signs of dehydration, and consider fluid replacement as needed.

Question 169

Type: multiple_response_all

A client with chronic kidney disease (CKD) is receiving hemodialysis treatment. Which of the following nursing interventions should be implemented for this client? **Select all that apply.**

Answer Choices

A. Monitor the client's blood pressure before, during, and after hemodialysis. Correct

B. Administer erythropoietin (EPO) as prescribed to stimulate red blood cell production. Correct

C. Restrict protein intake to minimize uremic symptoms.

D. Assess the client's access site for signs of infection or thrombosis. Correct

E. Administer phosphate binders as prescribed to control serum phosphate levels. Correct

F. Encourage the client to consume a high-potassium diet to prevent electrolyte imbalances.

Explanation

Choices A, B, D, and E are correct. Hypertension is a common complication of CKD. Regular monitoring of blood pressure is essential to detect and manage any fluctuations effectively. CKD can lead to anemia due to decreased erythropoietin production. EPO may be administered to stimulate red blood cell production and manage anemia in clients with CKD. Clients undergoing hemodialysis require an access site, such as an arteriovenous fistula or graft. Regular assessment of the access site is necessary to detect any signs of infection, thrombosis, or compromised blood flow. Impaired kidney function leads to increased serum phosphate levels. Phosphate binders are prescribed to prevent the absorption of dietary phosphate, thus controlling serum phosphate levels.

Choice C is incorrect While protein restriction is often necessary in advanced CKD, during hemodialysis, protein intake is typically increased to compensate for losses during hemodialysis. Dialysis removes protein waste from the blood, so a low-protein diet is no longer needed.

Choice F is incorrect. Clients with CKD often experience hyperkalemia due to impaired kidney function. Consuming a high-potassium diet can exacerbate this imbalance and is contraindicated.

Additional Info

✓ CKD is a significant global health concern, affecting millions of people worldwide. According to the World Health Organization (WHO), an estimated 10% of the adult population worldwide has CKD.

✓ Monitor fluid intake and output closely to prevent fluid overload or dehydration. Educate the client about the importance of adhering to fluid restrictions between dialysis sessions.

✓ When caring for a client with chronic kidney disease (CKD), there are several important nursing considerations to keep in mind, including but not limited to:

- Fluid and Electrolyte Balance
- Medication Management
- Nutrition and Diet

✓ CKD clients may experience electrolyte imbalances, such as hyperkalemia or hypocalcemia. Regularly assess and monitor electrolyte levels, and inform the healthcare team promptly if any imbalances are detected.

✓ Hypertension is common in CKD clients. Monitor blood pressure regularly and collaborate with the healthcare team to adjust antihypertensive medications as needed.

Information Source

CKD diet: How much protein is the right amount?. National Kidney Foundation. (2023, July 5). https://www.kidney.org/atoz/content/ckd-diet-how-much-protein-right-amount#:~:text=On%20Dialysis%3A%20Increase%20Protein,diet%20is%20no%20longer%20needed.

Workman, D.I.M. L. ([2021]). Medical-Surgical Nursing (10th ed.)

Question 170

Type: multiple_response_all

The nurse is providing education to a group of nursing students regarding the causes of hypercalcemia. Which of the following information should be included? **Select all that apply.**

Answer Choices

A. hypoparathyroidism.

B. thiazide diuretics. Correct

C. malignancy. Correct

D. end-stage kidney disease.

E. crohn's disease.

Explanation

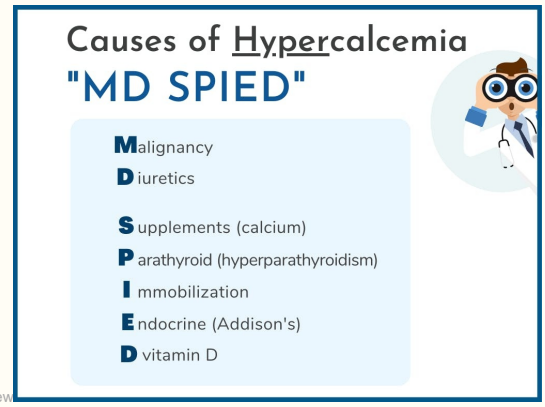
Choices B and C are correct. Thiazide diuretics cause calcium retention, making their administration a potential cause of hypercalcemia. Malignancy, especially malignancies with metastasis involving the bones, may induce hypercalcemia from the breakdown of the bone. This causes the calcium to transition into the bloodstream.

Choice A is incorrect. Hyperparathyroidism can cause hypercalcemia, not hypoparathyroidism. There is too much parathyroid hormone (PTH) when a client has hyperparathyroidism. PTH functions to pull calcium stores from the bones and put it into the serum, increasing the serum calcium. It is usually released when serum calcium is low and the client needs more.

Choice D is incorrect. End-stage kidney disease commonly causes hypocalcemia because of the body's inability to recycle vitamin D and have it absorb the calcium. Additionally, high phosphorus levels drive down calcium levels (inverse relationship).

Choice E is incorrect. Crohn's disease may cause malabsorption of vitamins and minerals, and a clinical feature of Crohn's disease is hypocalcemia.

Additional Info



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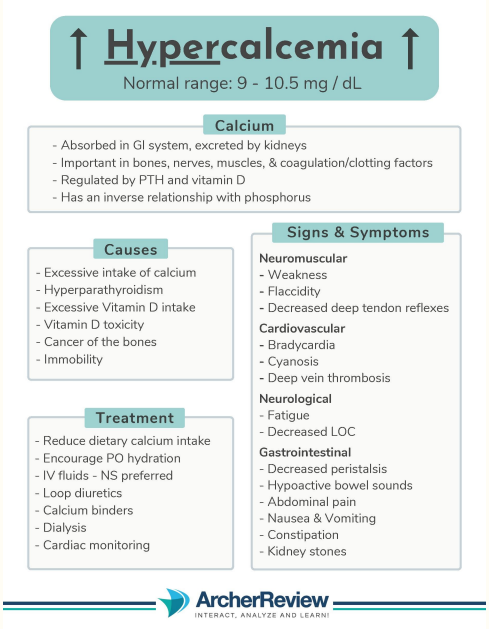


Source : Archer Review

The normal serum calcium level is 9-10.5 mg/dL (2.12–2.52 mmol/L). The causes of hypercalcemia include:

- Excessive oral intake of calcium or calcium supplements
- Excessive oral intake of vitamin D
- Use of thiazide diuretics
- Hyperparathyroidism
- Malignancy
- Hyperthyroidism
- Immobility
- Dehydration (not true hypercalcemia, but from hemoconcentration)

Question 171

Type: single_choice

When assessing for dehydration, the nurse should observe for which of the following?

A. Headache and increased urinary output

B. Weight gain and edema

C. Hypertension and decreased urinary output

D. Hypotension, headache, and dry mucous membranes ✔ Correct

Explanation

Choice D is correct. When there is an excessive loss of fluid within the body, dehydration can occur. Dehydration may be caused by acute illness or a chronic disease process. Common symptoms include dry mucous membranes, dark urine, decreased urinary output, confusion, low blood pressure, muscle cramps, and constipation.

Choice A is incorrect. Urinary output is decreased with dehydration.

Choice B is incorrect. Weight gain and edema are not signs of dehydration. However, weight loss and poor skin turgor are signs of dehydration.

Choice C is incorrect. Patients experiencing dehydration will exhibit hypotension, not hypertension.

NCSBN Client Need Topic: Physiological Integrity, **Subtopic:** Pharmacological Interventions

Question 172

Type: single_choice

The nurse is caring for a client with urge incontinence. Which of the following actions would be appropriate for the nurse to take?

A. Administer prophylactic antibiotics.

B. Teach the client intermittent self-catheterization.

C. Have the client void on a timed schedule. ✔ Correct

D. Provide caffeinated beverages with meals.

Explanation

Choice C is correct. Urge incontinence is also known as overactive bladder (OAB). The essential manifestation of this incontinence is the involuntary loss of urine associated with a strong desire to urinate. Thus, it would be appropriate for a client to void on a **timed schedule. Timed voiding** enables an individual to gradually increase the amount of urine they may hold without an abrupt urge to go to the bathroom. The goal is also to prolong the time interval between urinating - up to a minimum of three or more hours.

Choices A, B, and D are incorrect. Prophylactic antibiotics are not indicated for OAB (Choice A). Instead, it is an intervention indicated for an individual at substantial risk for cystitis secondary to an invasive procedure. Teaching intermittent self-catheterization is an intervention for a client with a flaccid or spastic bladder (Choice B). Intermittent self-catheterization is also indicated in clients with chronic urinary retention, not OAB. Bladder irritants such as caffeine and alcohol should be avoided because this triggers more urgency to void (Choice D).

Additional Info

Overactive bladder (OAB) / Urge incontinence is the involuntary loss of urine associated with a strong desire to urinate and the inability to suppress the signal from the bladder muscle to the brain that it is time to urinate. This may be idiopathic or caused by neurologic disorders, such as stroke, benign prostatic hypertrophy, or bladder inflammation or infection.

The treatment for this incontinence involves

- Bladder training
- Pelvis muscle therapy
- Weight reduction
- Avoiding bladder irritants, such as caffeine and alcohol
- Smoking cessation
- Medications: anticholinergics, tricyclic antidepressants with anticholinergic and alpha-adrenergic agonist activity, beta-adrenergic agonists, and onabotulinumtoxinA
- Electrical stimulation device

Question 173

Type: single_choice

The nurse is assessing a client receiving peritoneal dialysis. Which laboratory result should **immediately** be reported to the primary healthcare provider (PHCP)?

A. WBC 19,000 mm3 [5,000-10,000 mm3] ✔ Correct

B. Hemoglobin 9 g/dL [Male: 14–18 g/dL (140–180 g/L) Female: 12–16 g/dL (120–160 g/L)]

C. Calcium 8.6 mg/dL [9.0-10.5 mg/dL]

D. Serum pH 7.33 [7.35-7.45]

Explanation

Choice A is correct. Leucocytosis (predominantly neutrophilic) suggests infection in a client on peritoneal dialysis**.** The most significant complication with peritoneal dialysis is **peritonitis**. During peritoneal dialysis, the peritoneum is used as the dialyzing membrane, and the dialysate is infused through a catheter tunneled into the peritoneum. Maintaining a sterile technique is essential during peritoneal dialysis. Infection of the peritoneum (peritonitis) may occur due to contamination by touch during exchanges (by pathogenic skin bacteria) or due to an exit-site catheter infection. Peritonitis symptoms include fever, abdominal rigidity, purulent effluent, and nausea/vomiting. **Cloudy outflow** (into the drainage bag) is one of the earliest signs of peritonitis associated with peritoneal dialysis.

Choices B, C, and D are incorrect. A client with chronic kidney disease will have anemia, hypocalcemia, and metabolic acidosis. These are all expected findings and do not need to be reported to the PHCP.

- The anemia is related to the kidney's inability to secrete erythropoietin (EPO).
- Hypocalcemia is linked to the failure of the kidneys to recycle vitamin D.
- Finally, acidosis is consistent because of the kidney's inability to regulate sodium bicarbonate.

Additional Info

✓ When caring for a client performing peritoneal dialysis, it is essential to reinforce measures to reduce the risk of infection.

✓ These measures should include meticulous hand hygiene, sterile dressing at the catheter insertion site, and appropriate cleaning of the site with antibacterial soap and water.

✓ One of the earliest signs of peritonitis in a client receiving peritoneal dialysis is cloudy outflow.

Question 174

Type: multiple_response_all

The nurse is assessing a client with suspected renal calculi.

➢ Which of the following findings would support a diagnosis of renal calculi? **Select all that apply.**

Answer Choices

A. hematuria Correct

B. nausea and vomiting Correct

C. hypotension

D. dysuria Correct

E. increased urinary frequency Correct

Explanation

Choices A, B, D, and E are correct. A diagnosis of renal calculi (kidney stones) describes the presence of uric acid, calcium, cystine, or struvite crystals in the urine that form painful stones within the urinary tract. Typical signs/symptoms of renal calculi include hematuria (blood in urine), renal colic (unilateral pain spasms in the flank), and severe radiating pain, which can cause nausea/vomiting, sweating, and elevated blood pressure. Additionally, clients may experience dysuria and increased urinary frequency.

Choice C is incorrect. Hypotension would not be an expected symptom of renal calculi. The client would likely experience increased blood pressure due to severe pain.

Additional Info

✓ Urolithiasis is the presence of calculi (stones) in the urinary tract.

✓ Stones often do not cause symptoms until they pass into the lower urinary tract, where they can cause excruciating pain.

✓ Nephrolithiasis is the formation of stones in the kidney; the formation of stones in the ureter is ureterolithiasis.

✓ The most common condition associated with stone formation is dehydration.

✓ The priority treatment is pain control by administering prescribed anti-inflammatories such as ketorolac or naproxen.

✓ Depending on the size of the stone, surgical intervention may be necessary via cystoscopy or lithotripsy.

Question 175

Type: single_choice

The nurse is caring for a client in the medical-surgical unit.

➢ The nurse is reviewing the client's laboratory data and should take which action. **Click to view the exhibit for additional client information.**

A. Review the client's current medications ✔ Correct

B. Plan to initiate daily fluid restrictions

C. Clarify the prescribed chest radiograph (x-ray)

D. Insert an indwelling urinary catheter to monitor urinary output

Explanation

Choice A is correct. The elevated **serum creatinine** level suggests that the kidneys may not function effectively. Since the kidneys play a vital role in metabolizing and excreting medications, impaired renal function can lead to the accumulation of drugs in the body, increasing the risk for **toxicity**. Some medications — such as NSAIDs, ACE inhibitors, ARBs, aminoglycoside antibiotics, and certain antivirals — are **nephrotoxic** or require **renal dosing adjustments**. Reviewing the client's medication list helps the nurse identify any nephrotoxic agents and notify the provider if adjustments are necessary.

Choice B is incorrect. Fluid restriction is typically indicated in situations like **fluid volume overload**, **hyponatremia**, or **heart/kidney failure with edema or pulmonary congestion**. The client's sodium is within normal limits excluding fluid volume overload or deficit.

Choice C is incorrect. A chest x-ray is fine with this creatinine level since it does not involve contrast dye. The procedures that involve contrast dye should be questioned.

Choice D is incorrect. Inserting a urinary catheter is invasive and premature; thus, it would not be indicated unless the client is experiencing a shock where urinary output measurement is essential.

Additional Info

✓ Serum creatinine is produced when muscle and other proteins are broken down. Because protein breakdown is usually constant, the serum creatinine level is a good indicator of kidney function. No common pathologic condition other than kidney disease increases the serum creatinine level.

✓ Several substances may insult the kidneys, thus, raising the creatinine. These substances and medications include -

- Metformin
- Aminoglycosides
- IV Contrast
- Sulfonamides
- NSAIDs
- Heavy metals

✓ Creatinine is different from creatine kinase (CK), an enzyme found in muscles and other tissues. While both are involved in muscle metabolism, they serve different functions. Creatinine is a waste product, while creatine kinase is an enzyme involved in cellular energy production. Elevated levels of CK can indicate muscle damage or injury, whereas high levels of serum creatinine are associated with impaired kidney function.

Question 176

Type: multiple_response_all

Which nursing assessment findings are consistent with hypocalcemia? **Select all that apply.**

Answer Choices

A. Chvostek's sign Correct

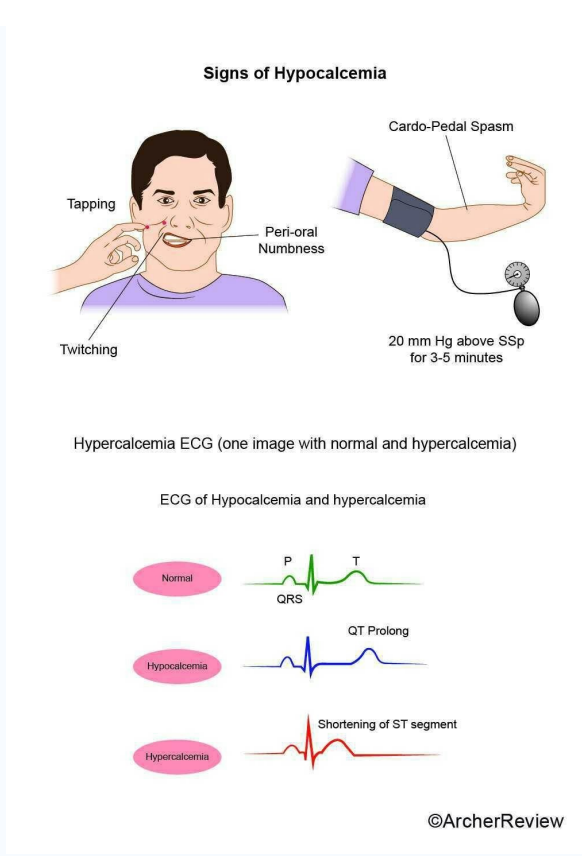
B. Grey-Turner's sign

C. Homan's sign

D. Trousseau's sign Correct

E. Numbness and tingling of the fingers and toes Correct

Explanation



Source : ArcherReview

Choices A, D and E are correct. Chvostek's sign is an indication of hypocalcemia. This sign is positive if the patient's upper lip **twitches** upon tapping over a branch of the facial nerve on the same side (**Choice A**). **Trousseau's** sign is also an indication of hypocalcemia. Trousseau's is positive if a **carpopedal spasm is observed upon** inflating a blood pressure cuff past the systolic blood pressure (**Choice D**). Other signs and symptoms of hypocalcemia may include muscle cramps, numbness and tingling in the fingers and toes, tetany, seizures, and cardiac arrhythmias (Choice E).

Choice B is incorrect. Grey-Turner's sign indicates abdominal pathology, not hypocalcemia. Grey-Turner's sign refers to ecchymosis/ bruising around the flanks and takes about 24–48 hours to develop after the inciting event. The causes of Grey-Turner's sign include retroperitoneal hemorrhage and severe acute pancreatitis.

Choice C is incorrect. Homan's sign indicates a deep vein thrombosis (DVT), not hypocalcemia. Homan's sign is positive when there is deep calf pain and tenderness while extending the leg straight and dorsiflexing the foot. The sign is obsolete now and not used because it is unreliable in predicting a DVT.

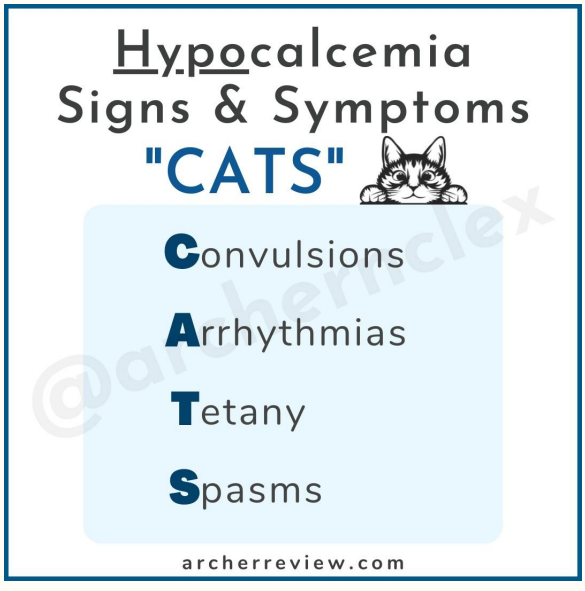
NCSBN Client Need Topic: Physiological Integrity, **Subtopic:** Physiological Adaptation, Endocrine

Additional Info

✓Severe hypocalcemia can be life-threatening and may cause cardiac arrhythmias, respiratory failure, or seizures.

✓The underlying causes of hypocalcemia can vary and may include vitamin D deficiency, kidney failure, hypoparathyroidism, certain medications, malnutrition, or other medical conditions.

✓Treatment for hypocalcemia will depend on the underlying cause but may include supplements of calcium and vitamin D, medications to increase calcium levels or treatment of any underlying medical conditions.



Question 177

Type: single_choice

The nurse is preparing a client for a renal ultrasound.

➢ Which of the following statements accurately describes the purpose of this procedure?

A. It measures the concentration of potassium and sodium in the blood.

B. It evaluates the function of the kidneys in producing red blood cells.

C. It evaluates the size, shape, and location of the kidneys, as well as blood flow to the kidneys. ✔ Correct

D. It detects abnormal levels of urea in the bloodstream.

Explanation

Choice C is correct. A kidney ultrasound is a noninvasive diagnostic exam used to evaluate the size, shape, and location of the kidneys, as well as blood flow to the kidneys. This imaging modality is particularly useful in detecting abnormalities such as cysts, tumors, obstructions, or other structural anomalies within or around the kidneys.

Choice A is incorrect. A kidney ultrasound does not directly measure electrolyte levels. Instead, it primarily evaluates the structural aspects of the kidneys and blood flow to the kidneys.

Choice B is incorrect. While the kidneys play a role in producing erythropoietin, a kidney ultrasound does not directly evaluate the function of the kidneys in producing red blood cells.

Choice D is incorrect. Urea is a waste product that is removed from the blood by the kidneys, a kidney ultrasound does not directly detect urea levels in the bloodstream.

Additional Info

✓ Renal ultrasound is one of the most commonly performed imaging modalities for evaluating renal anatomy and function. It is estimated that millions of renal ultrasound examinations are conducted annually worldwide.

✓ It may be applicable for the nurse to ensure clients are comfortable during the ultrasound procedure by providing appropriate positioning and support.

✓ Renal ultrasound has a high diagnostic accuracy for detecting renal abnormalities, such as hydronephrosis, renal cysts, tumors, and renal artery stenosis. Studies have reported sensitivity and specificity values exceeding 90% for various renal pathologies.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 178

Type: single_choice

The nurse is placing a client with chronic kidney disease on a cardiac monitor. What is the reason for this action?

A. Clients with chronic kidney disease are prone to hypertension

B. Hyperkalemia may result in dysrhythmias ✔ Correct

C. Cardiac monitoring is necessary to evaluate the need for hemodialysis

D. Clients with chronic kidney disease may experience false episodes of asystole

Explanation

B is correct. Clients with chronic kidney disease (CKD) often retain electrolytes, such as potassium, leading to imbalances. Hyperkalemia, or high serum potassium levels, is a common issue in CKD and can result in serious cardiac dysrhythmias. Monitoring the heart rhythm helps detect these potentially life-threatening conditions early.

A is incorrect. While clients with chronic kidney disease may experience hypertension, a cardiac monitor does not specifically evaluate for hypertension. Blood pressure is monitored using a sphygmomanometer, not a cardiac monitor.

C is incorrect. Cardiac monitoring can detect dysrhythmias that may indicate electrolyte imbalances or other issues, but it is not the primary method used to evaluate the need for hemodialysis. The decision for hemodialysis is typically based on a combination of lab results, symptoms, and overall clinical assessment.

D is incorrect. False episodes of asystole (absence of cardiac electrical activity) are not typically a concern associated with chronic kidney disease. The primary concern is the potential for real, not false, cardiac dysrhythmias due to electrolyte imbalances, especially hyperkalemia.

Question 179

Type: single_choice

The nurse is reviewing the concept of acute kidney injury (AKI) with a student nurse. Which of the following would be correct as a cause of prerenal AKI?

A. nephrotoxicity

B. bladder cancer

C. contrast media

D. hypovolemia ✔ Correct

Explanation

Choice D is correct. Hypovolemia is a common prerenal cause of acute kidney injury (AKI). Prerenal reasons are those factors that are external to the kidney. Hypovolemia causes a decrease in blood flow to the organs. Hypovolemia can lead to intrarenal kidney disease. Other prerenal causes of AKI include sepsis, shock, and burns.

Choices A and C are incorrect. Intrarenal causes of AKI are those that cause direct damage to the kidneys, such as medications (nephrotoxicity) and contrast media injection. The most common cause of intrarenal AKI is acute tubular necrosis (ATN).

Choice B is incorrect. Postrenal causes of AKI involve obstruction of urine flow out of the kidneys. Although not a common cause of AKI, the postrenal causes can often be resolved by removing the blockage. Bladder cancer and prostatic hyperplasia are common postrenal causes of AKI.

Additional Info

✓ Acute kidney injury can be divided into prerenal, intrarenal (intrinsic), or postrenal.

✓ **Prerenal** is caused by a source outside the kidney, such as dehydration, sepsis, shock, and burns.

✓ **Intrarenal (intrinsic)** is caused by a source inside the kidney, such as allergic disorders, embolism or thrombosis of the renal vessels, and nephrotoxic agents.

✓ **Postrenal** is caused by urine flow obstruction such as a stone, strictures, or tumor.

Question 180

Type: single_choice

The nurse is precepting a new graduate who will be caring for a client with bacterial cystitis.

➢ Which of the following statements by the new graduate requires follow-up?

A. “The client should be counseled to increase their fluid intake.”

B. “A 24-hour urine sample will be needed to confirm the diagnosis.” ✔ Correct

C. “Risk factors include frequent intercourse and douching.”

D. “Cranberry concentrate may be used to prevent future infections.”

Explanation

Choice B is correct. This statement is false and requires follow-up. Bacterial cystitis may be diagnosed based on urine analysis. A simple, clean-catch midstream urine sample is sufficient for diagnosing bacterial cystitis. A 24-hour urine is utilized for diagnosing conditions such as pheochromocytoma and abnormal protein quantification in multiple myeloma – not bacterial cystitis.

Choice A is incorrect. Teaching points for a client diagnosed with bacterial cystitis should include increasing their fluid intake of non-caffeinated and non-alcoholic beverages. Increased hydration promotes increased urination and natural flushing of the bacteria.

Choice C is incorrect. The client should be advised of the risk factors of bacterial cystitis, such as douching, frequent intercourse, inappropriate perianal hygiene, and invasive devices such as indwelling catheters.

Choice D is incorrect. Cranberry concentrate has shown efficacy in preventing recurrent bacterial cystitis in some clients. While cranberry helps protect against recurrent urinary tract infections (UTI), there is no clear evidence to support its use in treating an active UTI episode. Therefore, educate the clients that cranberry can be used for UTI prevention, not UTI treatment.

Additional Info

✓ Cystitis refers to inflammation of the bladder. When bacteria cause inflammation, it is called bacterial cystitis.

✓ Acute bacterial cystitis can easily be recognized by demonstrating pyuria in the urinalysis. In the absence of pyuria, the presence of bacteria alone does not mean an active infection and could merely represent colonization.

✓ Ideally, a clean-catch, midstream sample of the first urine of the day is the best specimen. However, this is not always feasible, and there is no clear evidence that it is more accurate than the specimen collected during clinical evaluation. Therefore, a clean catch and midstream urine sample is sufficient.

✓ The nurse should educate the client regarding the specimen collection - the initial portion of the urine stream should be discarded since the urethral area contaminants may potentially contaminate it.

✓ The subsequent midstream sample should be collected in a sterile container.

✓ A client with bacterial cystitis will be prescribed an antibiotic, to which the nurse should educate the client on adherence.

✓ Commonly used antibiotics for treating uncomplicated UTIs include trimethoprim/sulfamethoxazole, nitrofurantoin, and ciprofloxacin.

✓ Recurrent bacterial cystitis may require reinforcement of teaching, such as hygiene measures and adequate fluid intake.

✓ Cranberry products are beneficial in preventing recurrences but not for treating active infections.

Source : Archer Review

Question 181

Type: multiple_response_all

The nurse is performing a continuing education program about fluid and electrolytes.

➢ It would be appropriate for the nurse to reinforce that which intravenous (IV) solution is hypertonic? **Select all that apply.**

Answer Choices

A. 3% saline Correct

B. Dextrose 10% in water (D10W) Correct

C. 5% Dextrose with 0.45% Sodium Chloride Correct

D. Lactated Ringers (LR)

E. 0.45% Sodium Chloride (0.45% NaCl)

Explanation

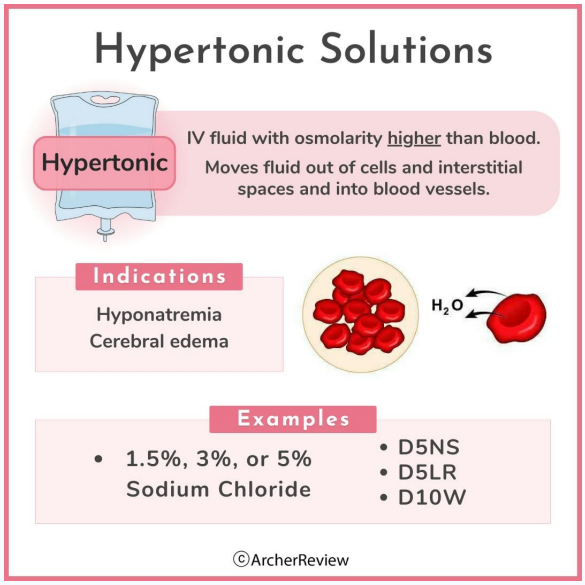
Choice A is correct. 3% saline is a hypertonic solution.

Choice B is correct. D10W (dextrose 10% in water) is a hypertonic solution.

Choice C is correct. D5W with 0.45% NaCl (5% dextrose with 0.45% sodium chloride *combined*) is a hypertonic solution.

Choice D is incorrect. Lactated Ringers (LR) is an isotonic solution.

Choice E is incorrect. 0.45% sodium chloride (0.45% NaCl) is a hypotonic solution.



Source : Archer Review

Additional Info

✓ Isotonic solutions are utilized for fluid resuscitation for hemorrhaging and sepsis, severe vomiting, diarrhea, GI suctioning losses, wound drainage, mild hyponatremia, or blood transfusions (0.9% saline only)

✓ Isotonic solutions include 0.9% saline and lactated ringers (LR)

✓ Hypotonic solutions are utilized for intracellular dehydration and hypernatremia

✓ Hypotonic solutions include:

- 0.45% Sodium Chloride (0.45% NaCl)
- 5% Dextrose in Water (D5W) - D5W may be referred to as both isotonic and hypotonic based on the context. *Please note that D5W enters the body as **isotonic** and quickly becomes hypotonic as the liver rapidly metabolizes glucose.* Thus, D5W is a hypotonic solution ***inside the body.***

✓ Hypertonic solutions are utilized for severe hyponatremia and cerebral edema. They should always be given via an intravenous pump

✓ Hypertonic solutions include 5% Dextrose in 0.9% Normal Saline, 3% saline, 5% Dextrose and 0.45% Sodium Chloride, and total parenteral nutrition (TPN)

Information Source

https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/017607s123lbl.pdf

Question 182

Type: single_choice

The nurse is caring for a client with a kidney injury with a serum potassium level of 6.1 mEq/L (mmol/L) [3.5-5 mEq/L, mmol/L]. Which of the following actions is a **priority**?

A. Obtain a prescription for a diuretic to increase urine output

B. Check the client's sodium level

C. Place the client on a cardiac monitor ✓ Correct

D. Encourage oral fluid intake

Explanation

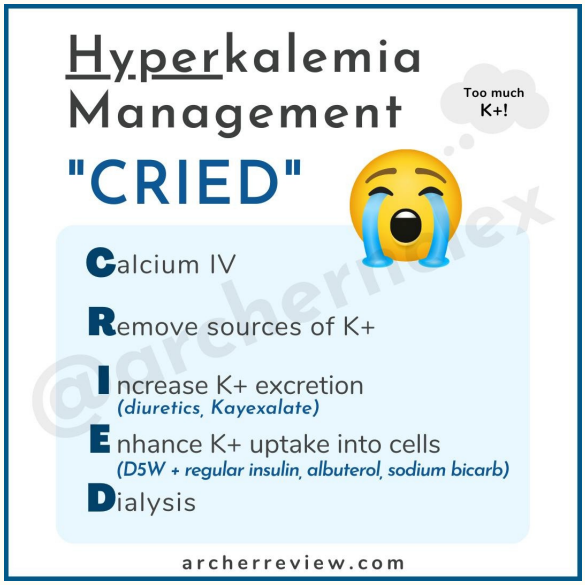
Choice C is correct. A serum potassium level of 6.1 mEq/L (mmol/L) is high. A normal serum potassium level is between 3.5 and 5.0 mEq/L (mmol/L). High serum potassium levels can lead to serious cardiac complications, such as arrhythmias and cardiac arrest. Placing the client on a cardiac monitor is a priority action because it allows continuous monitoring of the heart's rhythm.

Choice A is incorrect. Administering a diuretic to increase urine output might be a common intervention for some types of kidney issues, but it is not the priority action in the case of hyperkalemia. Diuretics should be used cautiously and under medical supervision, considering the client's overall health status and kidney function. Additionally, in acute cases of hyperkalemia, more immediate interventions such as calcium administration or dialysis might be necessary to lower potassium levels rapidly and prevent cardiac complications. Monitoring the client's cardiac status is crucial and therefore the priority action in this scenario.

Choice B is incorrect. While it's important to assess electrolyte imbalances comprehensively, in this scenario, potassium levels are already high, posing an immediate risk. Sodium levels do not directly address the urgency of the situation.

Choice D is incorrect. While maintaining hydration is important, hyperkalemia needs to be addressed promptly to prevent cardiac complications. Additionally, simply encouraging increased fluid intake may not be enough to lower potassium levels significantly.

Additional Info



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Question 183

Type: multiple_response_all

The nurse is teaching a client with hypercalcemia appropriate dietary measures. Which food selections by the client would require follow-up by the nurse?

Select all that apply.

Answer Choices

A. broccoli Correct

B. 2% milk Correct

C. whole wheat pasta

D. bananas

E. seafood Correct

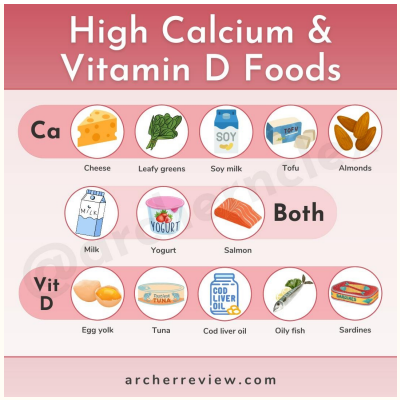
Explanation

Choices A, B, and E are correct.

- **Choices A and B.** Hypercalcemia can occur in various conditions such as primary hyperparathyroidism, malignancies, milk-alkali syndrome, medications, vitamin D toxicity, and sarcoidosis. Symptomatic hypercalcemia can lead to constipation, psychosis, polyuria, and dehydration. Clients with hypercalcemia should take some dietary precautions to reduce calcium intake. Broccoli is rich in calcium and should therefore be avoided in clients with hypercalcemia. Milk is rich in calcium and should therefore, be avoided in clients with hypercalcemia.
- **Choice E.** Vitamin D is one substance that, along with parathyroid hormones, regulates a person's calcium levels. Several kinds of seafood are rich in Vitamin D and should be avoided if hypercalcemia is a concern.

Choices C and D are incorrect. Whole wheat pasta is not a calcium-rich food**.** Bananas are particularly high in potassium, not calcium. The nurse does not need to instruct the client with hypercalcemia to avoid whole wheat pasta or bananas.

Additional Info



Source : Archer Review

Question 184

Type: single_choice

The nurse preceptor is orienting a newly hired nurse caring for a client with advanced polycystic kidney disease (PKD). Which of the following actions by the newly hired nurse would require follow-up by the nurse preceptor?

A. Requesting a prescription for ketorolac to help relieve the client's pain. ✔ Correct

B. Instructing the client on how to use guided imagery as a comfort strategy.

C. Applying dry heat to the client's abdomen or flank for pain relief.

D. Provides the client with foods high in fiber and low in salt.

Explanation

Choice A is correct. For a client with advanced PKD, NSAIDs should be avoided. NSAIDs cause decreased renal blood flow and would be unhelpful (if not detrimental) in PKD management. If the newly hired nurse requests a prescription of ketorolac, an NSAID, this would require follow-up because it would be inappropriate.

Choices B, C, and D are incorrect. These actions are appropriate and do not require follow-up. Pain control can be achieved for a client with PKD by applying dry heat to the abdomen or flank. Guided imagery is also a complimentary therapy that may be utilized. Constipation and pain are a concern with PKD, and the nurse providing food high in fiber would help mitigate constipation. In advanced PKD, the client should maintain a low sodium diet (2 grams/day). This contrasts with early in the disease process when the client loses sodium. However, the item states that this client has advanced PKD.

Additional Info

A client with polycystic kidney disease, the client should be educated on the following points -

• Measure and record your blood pressure daily.

• Take your temperature if you suspect you have a fever. If a fever is present, notify your provider.

• Weigh yourself every day at the same time of day and with the same amount of clothing; notify your primary health care provider if you have a sudden weight gain.

• Limit your salt intake to help control your blood pressure once hyperfiltration is no longer a symptom of your disease (once chronic kidney disease [CKD] is present).

• Notify your provider if your urine smells foul or has a new occurrence of blood in it.

• Notify your provider if you have a headache that does not go away or if you have visual disturbances because these are symptoms of a stroke or bleeding in the brain.

• Monitor bowel movements to prevent constipation.

Question 185

Type: single_choice

Intravenous therapies often consist of electrolyte replacement therapies. Select the electrolyte that is accurately paired with one of its functions.

A. Sodium: The control and management of circulating blood volume. ✔ Correct

B. Bicarbonate: The regulation of extracellular fluid.

C. Chloride: The regulation of plasma protein.

D. Calcium: The metabolism of fats, carbohydrates, and proteins.

Explanation

Choice A is correct. In addition to other functions, sodium controls and manages circulating blood volume, it maintains circulating blood volume, and it also is necessary for the transmission of nerve impulses.

Choice B is incorrect. Bicarbonate regulates the body's acid-base balance and not the regulation of extracellular fluid.

Choice C is incorrect. Chloride does not regulate plasma protein. Instead, it regulates acid-base balance and extracellular fluid balance.

Choice D is incorrect. Calcium does not play a role in the metabolism of fats, carbohydrates, and proteins; however, calcium does play a role in blood clotting, the formation of teeth and bones, nerve impulse transmission, and controlling muscular contractions.

Question 186

Type: multiple_response_all

The nurse is caring for an assigned client. Which prescription requires clarification with the primary healthcare provider (PHCP) based on the laboratory data? **See the image below. Select all that apply.**

Laboratory	Results		Reference Range	
BUN	31 mg/dL	11.07 mmol/L	10-20 mg/dL	2.5 to 7.1 mmol/L
Creatinine	2.4 mg/dL	212.16 µmol/L	Male: 0.6-1.2 mg/dL Female: 0.5-1.1 mg/dL	Female 22–75 µmol/L Male 49–93 µmol/L

Answer Choices

A. furosemide Correct

B. vancomycin Correct

C. ibuprofen Correct

D. citalopram

E. enalapril Correct

Explanation

Choices A, B, C, and E are correct. Furosemide, vancomycin, ibuprofen, and enalapril are all medications that may lead to nephrotoxicity. The concern is that this client's BUN and creatinine are elevated, suggesting an acute kidney injury. If a client has increased creatinine, a thorough review of the medications should be conducted to avoid worsening the acute kidney injury. Furosemide is a loop diuretic and sulfa based. Sulfa is hard on the kidneys and would be avoided in situations like this, where the client's creatinine is elevated. Vancomycin is a glycopeptide and is implicated in causing acute kidney injury. NSAIDs, like ibuprofen, should also be avoided because they decrease renal blood flow. Enalapril is an ACE inhibitor, and while they are nephroprotective, it should not be used if the client has current renal insufficiency.

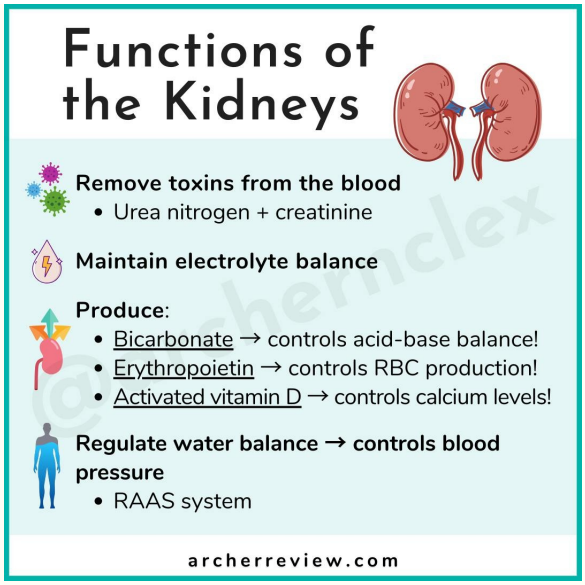
Choice D is incorrect. Citalopram is an antidepressant that does not cause nephrotoxicity. Based on the laboratory data, this medication should be okay for the client.

Additional Info

✓ Elevations of creatinine usually are caused by nephrotoxic medications such as an NSAID (ibuprofen), antibiotic (vancomycin), ACE inhibitors (lisinopril), and sulfa-based drugs.

✓ Nurses should closely monitor the client's fluid intake and output to ensure they are adequately hydrated. Fluid balance is crucial in managing renal function.

✓ Clients with compromised kidney function are at higher risk of urinary tract infections. Implement measures to prevent infections, such as maintaining good personal hygiene and using sterile techniques for catheterization if necessary.



Source : Archer Review

Question 187

Type: single_choice

The nurse is caring for a client who has polycystic kidney disease (PKD).

➢ Which of the following would indicate the client is achieving treatment goals?

A. Blood Pressure 128/63 mmHg ✓ Correct

B. Creatinine 2.3 mg/dL [0.6-1.2 mg/dL (53-106 mmol/L)]

C. Proteinuria 2+

D. Sodium 132 mEq/L [135-145 mEq/L (mmol/L)]

Explanation

Choice A is correct. Treatment goals for a patient with Polycystic Kidney Disease (PKD) include maintaining normotension, the glomerular filtration rate (GFR), and preventing sodium wasting, which is evidence of a decline in renal function. Hypertension is a cardinal finding in PKD, and if a client is achieving the treatment goals, they will maintain regulated blood pressure.

Choice B is incorrect. An elevated creatinine indicates that kidney function is declining. This suggests a worsening of the condition.

Choice C is incorrect. Proteinuria indicates damage to the glomerulus and worsening renal function.

Choice D is incorrect. Hyponatremia indicates sodium loss in the urine, suggesting worsening renal functioning. This is evidence that the client is not meeting the treatment goals.

Additional Info

✓ Polycystic Kidney Disease is a genetic disorder manifested by fluid-filled cysts that grow on the kidneys.

✓ Additional findings in PKD include:

• Abdominal or flank pain

• Hypertension

• Nocturia

• Frequent urinary tract infections

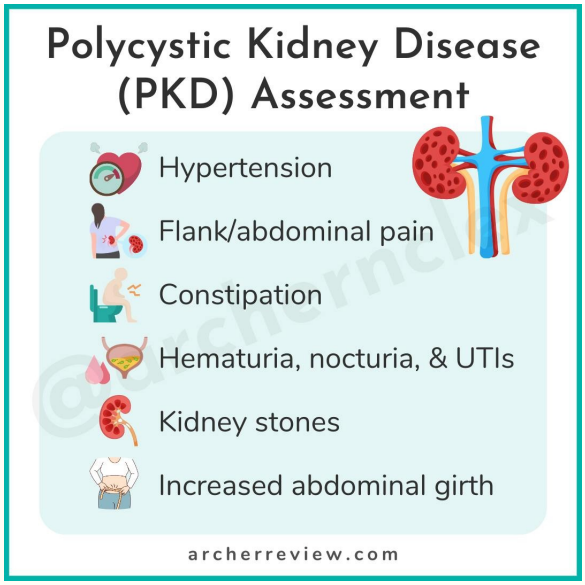
• Increased abdominal girth

• Constipation

• Hematuria (bloody urine)

• Sodium wasting and inability to concentrate urine in the early stage

• Progression to kidney failure with anuria



Source : Archer Review

Question 188

Type: Drag-Drop Cloze

➢ **Drag words from the choices below to fill in the blank in the following sentence**

The client is demonstrating signs and symptoms of [Select]

Word Choices (Group 1)

- urinary catheter obstruction
- hyponatremia
- shock Correct
- urinary tract infection

Explanation

- Following a TURP procedure, clients should be monitored quite closely for hypovolemic shock, likely to occur within the first twenty-four hours post-operatively.
- An early manifestation of shock is tachycardia and restlessness.
- The client's vital signs show tachycardia (pulse was 110) and low blood pressure (not hypotensive yet).
- The ketchup-like output supports the shock finding with medium to large clots. This type of output is concerning.
- Urinary catheter obstruction is not likely because the client's intake and output are appropriate and show a 425 mL difference. A negative variance would be concerning for retention.
- Hyponatremia may occur caused by the overexposure of the fluids. This is not likely to happen in the first six hours of the post-operative period. This would also manifest in the client having an altered level of consciousness (this client is alert and oriented in the scenario).
- Infection is not likely to occur six hours post-procedure. A three-way indwelling catheter is invasive and may increase the risk of infection. The vital signs currently do not reflect any signs of infection.

Additional Info

Following a TURP procedure, the nurse should execute the following actions

1. Assess the client for hypovolemic shock. This is concerning if the client starts to have ketchup-like output and large clots.
2. Keep the urinary catheter patent, and at times, it may be taped to the client to apply traction. This assists in maximizing the outflow of the irrigation.
3. Keep an accurate record of the intake and output. The output should exceed the intake. If this is not the case, this could mean that the catheter is not patent.
4. Provide antispasmodics and pain medication, as prescribed.
5. Monitor the client for signs of urinary tract infection.
6. The lumen of the catheter is quite large, and the client reporting that they need to pee is an expected finding.

Question 189

Type: single_choice

The nurse is teaching a group of students a potential cause of metabolic alkalosis. It would indicate a correct understanding if a student stated which condition could cause this acid-base imbalance?

A. Hyperventilation

B. Urinary retention

C. Opioid toxicity

D. Excessive vomiting ✔ Correct

Explanation

Choice D is correct. Metabolic alkalosis is a disturbance in the body's acid-base balance characterized by an elevated blood pH and bicarbonate (HCO_3^-) concentration. Excessive vomiting is a common cause of metabolic alkalosis because it results in the loss of stomach acid (hydrochloric acid, HCl) through repeated vomiting. When stomach acid is lost, the body retains bicarbonate ions, which can lead to an increase in blood pH and the development of metabolic alkalosis.

Choice A is incorrect. Hyperventilation causes excessive elimination of carbon dioxide (CO_2) through the lungs, resulting in decreased carbonic acid (H_2CO_3) levels in the blood and an increase in blood pH. This leads to respiratory alkalosis, not metabolic alkalosis.

Choice B is incorrect. Urinary retention would not lead to any specific acid-base derangement.

Choice C is incorrect. Opioid toxicity would likely cause a decrease in respiration, which would lead to respiratory acidosis because of the accumulation of CO_2.

Additional Info

✓ Monitor the client's fluid and electrolyte status closely. Excessive vomiting can lead to dehydration and electrolyte imbalances, particularly the loss of potassium (hypokalemia). Administer intravenous fluids and electrolyte replacement as prescribed by the healthcare provider.

✓ Be alert for signs of cardiac arrhythmias, as severe hypokalemia can affect cardiac function. Continuous cardiac monitoring may be necessary, particularly if potassium levels are critically low.

✓ Administer medications as ordered to address the underlying cause of vomiting or to alleviate nausea. Antiemetics may be prescribed to prevent further vomiting.

Question 190

Type: multiple_response_all

Which of the following signs and symptoms may lead the nurse to suspect hypovolemia?

Select all that apply.

Answer Choices

A. Decreased skin turgor Correct

B. Increased urine output

C. Dry mucous membranes Correct

D. Weight gain

E. Low blood pressure Correct

Explanation

Choices A, C, and E are correct. A decrease in skin turgor may indicate hypovolemia or a fluid volume deficit. Healthy skin turgor is a rapid recoil; it is most commonly checked on the back of the hand. When the skin is pinched up, it recoils to its normal position very quickly. If it recoils slowly, then it is a sign that the surface is dehydrated and is a good indicator of a fluid volume deficit (Choice A). Dry mucous membranes are an indication of hypovolemia. When the body has a fluid volume deficit or is dehydrated, the mucous membranes are one of the first places to dry out. This is an excellent assessment to monitor for fluid status; if the mucous membranes appear well hydrated, the patient is probably not dehydrated (Choice C). Low blood pressure is an initial symptom of hypovolemia because hypovolemia leads to a decrease in the volume of blood plasma in the body. (Choice E)

Choices B and D are incorrect. Decreased urine output, not increased, would be indicative of hypovolemia. When the body is in a fluid volume deficit, the kidneys will try to retain water to correct the imbalance and will make less urine. If there is an increase in urine output, it is more likely that the patient is hypervolemic (Choice B). Weight loss, not gain, would be an indication of hypovolemia. If the body has a fluid volume deficit, there would be a decrease in fluid all over the body, which would lead to an acute reduction in patient weight. Any sudden weight gain would indicate hypervolemia or fluid volume excess (Choice D).

NCSBN Client Need: Topic: Physiological Integrity, **Subtopic:** Physiological adaptation, Fluid & Electrolytes

Additional Info

✓In addition to assessing for signs and symptoms of hypovolemia, the nurse should also obtain a thorough medical history and perform a physical examination to identify any potential causes of fluid loss, such as vomiting, diarrhea, or bleeding.

✓Diagnostic tests that may be used to confirm hypovolemia include blood tests (e.g., complete blood count, electrolyte panel), and urinalysis.

✓Treatment for hypovolemia typically involves replacing fluids and electrolytes with IV fluids, such as isotonic saline or lactated Ringer's solution.

✓Nursing interventions for hypovolemia include monitoring vital signs, intake and output, and fluid and electrolyte balance; administering IV fluids and medications as ordered; and providing supportive care, such as positioning and skin care.

Question 191

Type: single_choice

The nurse reviews a client's laboratory results and notes the potassium level is 5.6 mEq/L (mmol/L) [3.5-5 mEq/L, mmol/L].

➢ Which change to the cardiac rhythm would be expected?

A. Tall, peaked T waves ✓ Correct

B. ST segment elevation

C. Peaked P waves

D. Noticeable U waves

Explanation

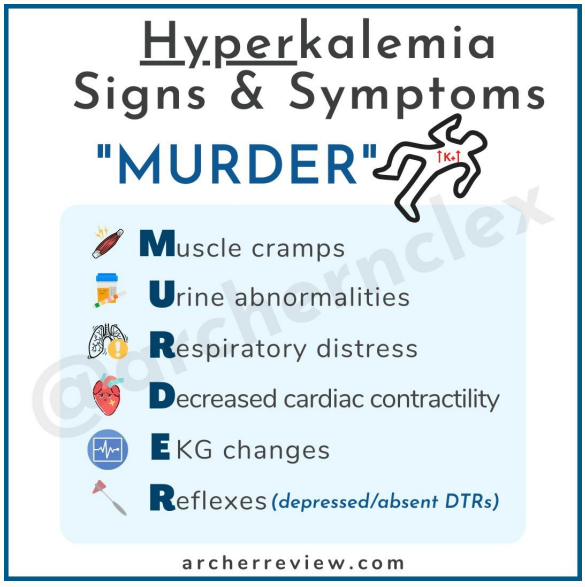
Choice A is correct. A potassium level over 5.0 mEq/L (mmol/L) [3.5-5 mEq/L, mmol/L] indicates hyperkalemia and is known for causing alterations to the cardiac rhythm. Tall peaked T waves with a shortened QT interval are usually the first findings. ECG changes do not always correlate with the severity of the potassium alterations.

Choice B is incorrect. ST segment elevation is not a typical ECG change seen in hyperkalemia. ST segment changes, particularly elevation, are more commonly associated with conditions like myocardial infarction.

Choice C is incorrect. Peaked P waves are mostly seen in conditions of high right atrial pressure or atrial dilation, such as in conditions like pulmonary hypertension. Elevated atrial pressure can cause the P-waves to become tall and peak on the ECG. Hyperkalemia primarily affects ventricular repolarization, leading to T wave changes, rather than P wave alterations.

Choice D is incorrect. Noticeable U waves are not a typical ECG finding in hyperkalemia. U waves are small deflections seen after the T wave and are associated with conditions like hypokalemia.

Additional Info



Source : Archer Review

Source : Archer Review

Information Source

Ignatavicius, D., & Workman, M. L. (2020). *Medical-Surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier. p. 255

Question 192

Type: single_choice

A client with benign prostatic hyperplasia (BPH) is post-operative following transurethral resection of the prostate (TURP) and is now receiving continuous bladder irrigation. Upon assessment, the nurse notes that the output from the urinary catheter has stopped.

➢ Which nursing intervention is **most** appropriate?

A. Reinsert a new catheter

B. Increase the infusion rate of the irrigation

C. Attempt to dislodge a clot ✔ Correct

D. Contact the health care provider (HCP)

Explanation

Choice C is correct. Following a transurethral resection of the prostate (TURP), clients often receive continuous bladder irrigation (CBI) to prevent clot retention, bladder spasms, and post-operative hemorrhage. If the continuous infusion or drainage of the sterile fluid ceases, the nurse should inspect the CBI set for the presence of a clot. If a clot is present, the most appropriate intervention would be for the nurse to attempt to dislodge any existing clot by gently aspiration the lump or irrigation through the out-port with the goal of allowing the continuous bladder irrigation to resume. Following this intervention, the nurse should document all relevant details of the intervention, including, but not limited to, a description of the clot removed.

Choice A is incorrect. Although the insertion of a new catheter may be needed in the future, this is not the most appropriate intervention at this point. In a post-operative transurethral resection of the prostate (TURP) client, nursing interventions should initially focus on the least invasive interventions when possible. The nurse should use caution in inserting catheters in post-operative TURP clients, as these clients may continue to have internal swelling present from the surgery and/or the insertion of a catheter may damage the internal post-operative tissues. Therefore, if a new catheter is needed, the nurse should refer to the health care provider's (HCP) orders or speak with the HCP directly.

Choice B is incorrect. Once the nurse has noticed the drainage from the continuous bladder irrigation has stopped, increasing the infusion rate of the irrigation may lead to bladder distention and related pain. Therefore, increasing the rate of the irrigation infusion is incorrect.

Choice D is incorrect. A situation where a nurse notices that the drainage from a client's continuous bladder irrigation has stopped is not typically considered an emergent situation that requires immediate notification of the health care provider (HCP). In this situation, the nurse should only contact the HCP after exhausting any appropriate independent nursing interventions (i.e., attempting to dislodge a clot, repositioning the drainage bag, etc.).

Additional Info

✓ During continuous bladder irrigation (CBI), sterile fluid is continuously administered into the bladder via a triple-lumen urinary catheter or a "3-way catheter" and allowed to drain.

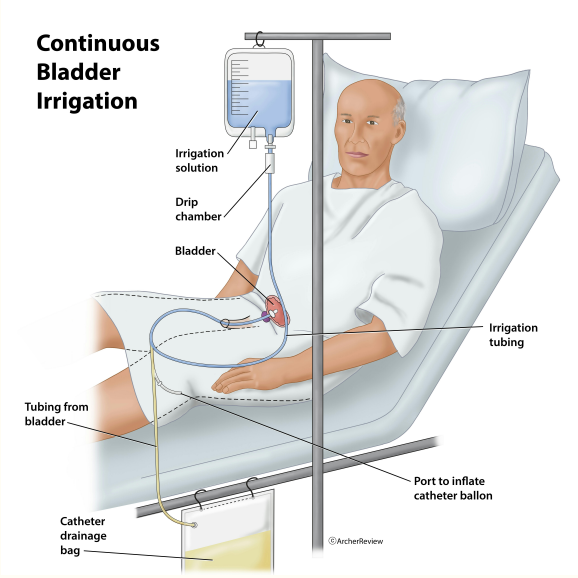
✓ CBI is associated with a high risk of infection as it involves opening the CBI system and manipulating the catheter.

✓ Although CBI is not a true sterile procedure, sterile products help prevent the introduction of a pathogen during manipulation.

✓ Post-operative TURP clients must be informed that bright red urine is initially anticipated, and the redness should gradually decrease.

✓ Instruct the client to watch for changes in the color of the urine and notify the nurse if redness increases.

✓ Encourage the client to maintain adequate oral liquid intake as indicated, practice appropriate hand hygiene, keep the drainage bag below the level of the bladder, and avoid dependent loops or obstructions in the tubing.



Source : Archer Review

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 193

Type: drop_down_rationale

➢ **Complete the sentence below by choosing from the list of options**

Sentence Structure

Based on the client's **[Dropdown]** and **[Dropdown]** this client is at highest risk for **[Dropdown]**

Dropdown Options & Correct Answers

Dropdown #1

- lung sounds
- urine characteristics
- **vital signs** Correct

Correct Answer: vital signs

Dropdown #2

- pain level
- **dosage increase of diuretic** Correct
- lung sounds

Correct Answer: dosage increase of diuretic

Dropdown #3 Cause

- urinary infection.
- **fluid volume deficit.** Correct
- fluid volume overload.

Correct Answer: fluid volume deficit.

Explanation

This client is experiencing **a fluid volume deficit** based on the client's **vital signs** (tachycardia, increased temperature) and **dosage increase of the prescribed diuretic**. The diuretic caused the client to increase their urinary output, thereby causing dehydration. Findings to further support that the client is dehydrated are lethargy, 1+ peripheral pulses (thready), dry skin, and disorientation commonly seen in older adults with fluid volume deficit.

The client does not have fluid volume overload because the blood pressure is not increased, nor does the client have 3+ peripheral pulses (bounding). Urinary infection is also unlikely because the urine is clear and free of odor and particulates, commonly seen in urinary infections.

Additional Info

✓ Furosemide is a loop diuretic for managing hypertension and congestive heart failure

✓ This medication causes the wasting of sodium, potassium, calcium, and magnesium

✓ Before administering furosemide, the nurse should assess these electrolytes and the client's blood pressure

✓ Older adults are more sensitive to the adverse effects of diuretics because an older adult has a weakened thirst reflex which makes dehydration more likely

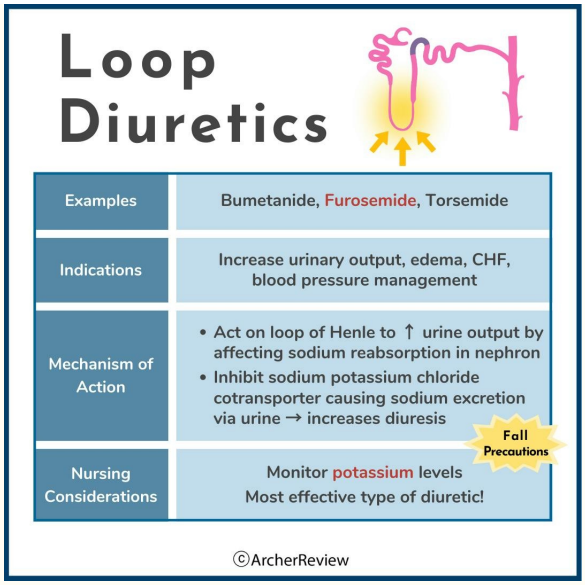
✓ Manifestations of fluid volume deficit include flattened neck veins, dry and flaky skin, increased body temperature, decreased urine output, increased urine specific gravity, increase in pulse, and a decrease in blood pressure

✓ For the client experiencing fluid volume deficit, the nurse should implement fall precautions because the client has a risk for orthostatic hypotension

✓ Treatment of fluid volume deficit depends on its severity

✓ The nurse should encourage unsweetened and non-caffeinated fluids

✓ Fruit is a good suggestion because it is dense in water and naturally sweetened



Source : Archer Review

Question 194

Type: single_choice

The nurse cares for a client who sustained full-thickness thermal burns to 30% of their total body surface area (TBSA). Which of the following **initial** laboratory values would be expected?

A. Potassium 5.6 mEq/L (mmol) [3.5-5 mEq/L] ✔ Correct

B. Hematocrit 30% (0.30 L/L) [Male: 42-52% Female: 37-47%, 0.38–0.50 L/L]

C. BUN 14 mg/dL (5.0004 mmol/L)[10-20 mg/dL, 2.1–8.0 mmol/L]

D. Glucose 89 mg/dL (4.94 mmol/L) [70-110 mg/dL, 4.0–11.0 mmol/L]

Explanation

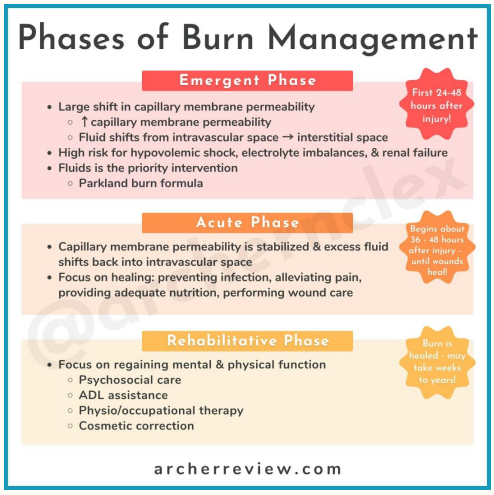
Choice A is correct. Hyperkalemia is an expected finding for a client with a significant burn (any full-thickness burn > 10% TBSA). This results from significant cellular damage, which allows intracellular potassium to leak.

Choice B is incorrect. Hematocrit measures the percentage of red blood cells in the total blood volume. In burn injuries, especially severe ones, there might be hemoconcentration, leading to an increase in hematocrit. A level of 30% (0.30 L/L) is low for both males and females, so this value would not be expected in a client with burns. Hemoconcentration may occur because of the loss of fluid volume.

Choice C is incorrect. Blood Urea Nitrogen (BUN) measures kidney function and can be influenced by various factors, including dehydration. In the initial stages of burns, especially when there is significant fluid loss, BUN levels might be elevated. However, a BUN level of 14 mg/dL (5.0004 mmol/L) falls within the normal range of 10-20 mg/dL [2.1–8.0 mmol/L] and is not significantly elevated.

Choice D is incorrect. Blood glucose levels can vary in response to stress, including burns. However, a glucose level of 89 mg/dL (4.94 mmol/L) is within the normal range of 70-110 mg/dL [4.0–11.0 mmol/L] and would not be unexpected in this scenario.

Additional Info



Source : Archer Review

✓ Following a major thermal burn, the nurse should **immediately:**

- Assess airway patency
- Administer supplemental oxygen, as indicated
- Keep the client NPO
- Initiate IV line and telemetry monitoring
- Provide prescribed fluid resuscitation
- Keep the burns covered with sterile dressings

Question 195

Type: multiple_response_all

The nurse is caring for a client with incontinence-associated dermatitis. The nurse should take which action? **Select all that apply.**

Answer Choices

A. Cleanse the affected area with isopropyl alcohol

B. Apply zinc oxide to the affected area Correct

C. Use an incontinence pad instead of a brief Correct

D. Applying an extra incontinence brief to encapsulate the moisture

E. Apply a transparent dressing to the affected area

Explanation

Choices B and C are correct. The nurse should immediately cleanse the area after urine and bowel incontinence with a solution that has a pH between 4.0 and 6.8. The solution should not have any alcohol or fragrances that could irritate the dermatitis. Zinc oxide should be applied once the affected area is cleansed because of its moisture-repelling effects. Incontinence pads are recommended over a brief because they allow aeration of the site and prevent encapsulating moisture against the client's skin.

Choices A, D, and E are incorrect. Isopropyl alcohol is irritating to the skin and causes excessive drying. Products that should be applied should not contain alcohol, chemical color, lotion, or perfume/fragrance. Incontinence pads are recommended over a brief. If a brief is used, it should be used as a last resort because it traps moisture, contributing to breakdown and the development of fungal infections. If briefs have to be used, they should be used short-term and changed as soon as possible following urine or fecal incontinence. Transparent dressings are not helpful because they trap moisture directly in the skin and prevent aeration of the skin.

Additional Info

To prevent dermatitis associated with urinary incontinence, the nurse should -

✓ Minimize (if not eliminate) the use of incontinence briefs.

✓ Incontinence pads are preferred over briefs.

✓ Cleansing the perineal area with a solution free of perfumes, dyes, and alcohol is recommended.

✓ The area should be pat dry, and zinc oxide should be applied to wick away any moisture.

✓ A disposable wash basin for skin cleaning should be used to reduce cross-infection.

Question 196

Type: multiple_response_all

The supervising nurse watches a newly hired nurse take care of a client who is at risk of developing a pressure ulcer.

➢ Which of the following interventions by the newly hired nurse requires follow-up?

Select all that apply.

Answer Choices

A. Applies zinc oxide to the client's perineal skin.

B. Provides a donut pillow while the client is sitting in the chair. Correct

C. Maintain the head of the client's bed at 90 degrees. Correct

D. Encourages the client to consume foods rich in carbohydrates. Correct

E. Uses a pillow to float the client's heels.

Explanation

Choice B is correct. If the newly hired nurse provides a donut pillow while the client sits in the chair, this will require follow-up because this pillow creates pressure and damages capillary beds. A donut pillow also reduces blood flow to the area. A regular pillow or foam type of device is recommended.

Choice C is correct. Maintaining the client's position at 90 degrees would require follow-up because this contributes to the client sliding, creating shearing. It is recommended that they be kept at 30 degrees (if not medically contraindicated).

Choice D is correct. A carbohydrate-rich diet is unhelpful to a client at risk for a pressure ulcer. A diet high in protein is recommended to maintain skin integrity and mitigate edema.

Choice A is incorrect. Applying zinc oxide to the client's skin is recommended. This product is a common ingredient in topical creams because it repels moisture.

Choice E is incorrect. Floating the client's heels is essential as it helps offload and evenly distribute pressure. This can be done using a device comprised of foam or a pillow.

Additional Info

Recommended interventions for a client at risk of developing a pressure ulcer include the following:

✓ Utilize standardized assessments to evaluate a client's risk for a pressure ulcer.

✓ Ensure that nutritional goals are being met by providing adequate fluid and protein in the diet.

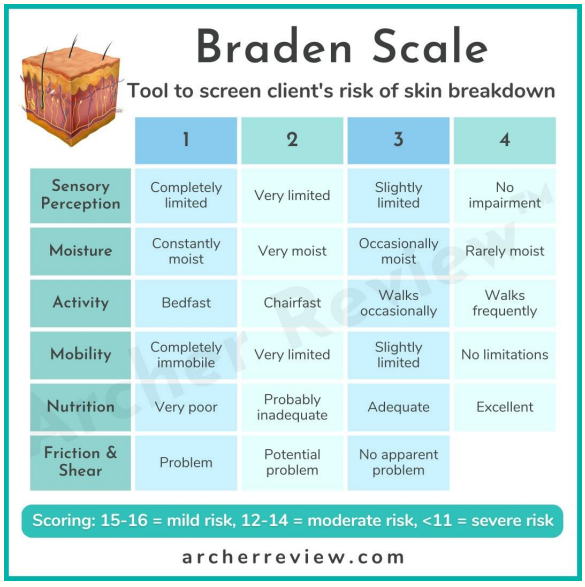
✓ Keep the head of the bed at 30 degrees or less to prevent shearing.

✓ Offload bony prominences using foam or pillows. Reposition the client at least every two hours.

✓ Do not use any products comprised of plastic and avoid using donut pillows.

✓ Moisturize the skin with products containing zinc oxide.

✓ Do not massage reddened areas.



Source : Archer Review

Information Source

Ignatavicius, D., Heimgartner, N., Rebar, C. (092023). Medical-Surgical Nursing, 11th Edition. p. 444

Question 197

Type: matrix_multiple_response

➢ For each assessment finding below, click to specify if the finding is consistent with an arterial, venous, or diabetic ulcer. Each finding may support more than one (1) disease process

Note: Each column must have at least one (1) response option selected

assessment findings	arterial ulcer	venous ulcer	diabetic ulcer
swelling in affected extremity		✔	
pedal peripheral pulse 2+		✔	✔
swelling relieved with compression hose		✔	
denies leg pain during ambulation		✔	✔

shallow wound bed		✔	
medical history of hypertension and diabetes mellitus	✔		✔
worsened with hot compress	✔	✔	✔

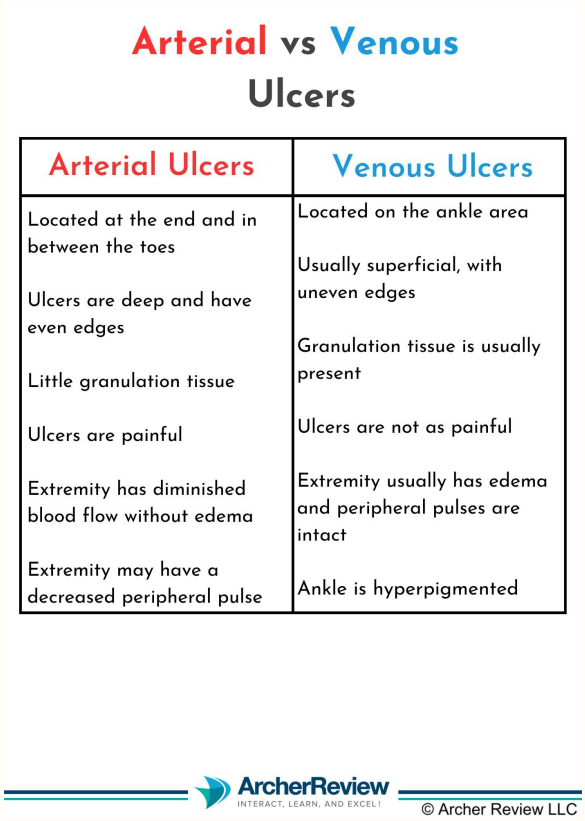
Explanation

- Based on the client's manifestations of a superficial wound on the ankle with granulation tissue, surrounding edema, intact peripheral pulses, and no pain with walking, this client likely has a venous stasis ulcer.
- Peripheral pulses are not affected in venous ulcers because the blood flow can reach the distal tissue, and the blood not sufficiently returning to the heart is the issue.
- Venous stasis ulcers classically form in the malleolar region of the ankle and are surrounded by hyperpigmented skin that is dry and flaky.
- Venous ulcers are usually caused by previous venous thromboembolism, inflammation, obesity, stroke, and varicose veins.
- Compression hose is an essential part of treating a venous stasis ulcer or varicosities because it assists with returning the blood flow back to the heart. This, combined with prescribed pentoxifylline (vasodilator and anti-inflammatory), is the recommended treatment plan.
- While this client has risk factors for a diabetic and arterial ulcer(s), the client's wound has granulation tissue (a sign of healing) and swelling not found in an arterial and diabetic ulcer.
- Specific clinical features of an arterial and diabetic foot ulcer often overlap, which includes
- Little granulation tissue
- The wound bed is deep
- Risk factors such as hypertension and diabetes mellitus.
- Arterial ulcers are usually found in between the toes and are quite painful.
- Diabetic foot ulcers are usually found on the plantar area of the foot.
- Peripheral pulses are usually present in a diabetic foot ulcer, usually diminished in an arterial ulcer.
- Intermittent claudication (pain in the lower extremity when walking and relieved with rest) may be found in arterial ulcers because the cause is a peripheral arterial disease.
- Diabetic foot ulcers have a variable pain presentation because the pain may be attenuated due to neuropathy.
- Compression hose is not recommended for diabetic or arterial ulcers because they further decrease arterial blood flow, which is the crux of the disease process.
- **Hot compresses are not recommended for any ulcer.** The heat can damage forming granulation tissue and dry skin, cause further skin damage, and result in new ulcers.

Additional Info

✓ Treatment for venous stasis ulcers includes compression hose, vasodilation medication, leg elevation, and surgical debridement in extreme cases

✓ The client should be reminded that any ulcer should not be treated with hot compresses because of its damage to healing tissue and may cause further ulceration



Question 198

Type: multiple_response_all

The ABCDEs of melanoma identification include which of the following?

Select all that apply.

Answer Choices

A. Asymmetry: one half does not match the other half Correct

B. Birthmark: cafe au lait spot that does not fade

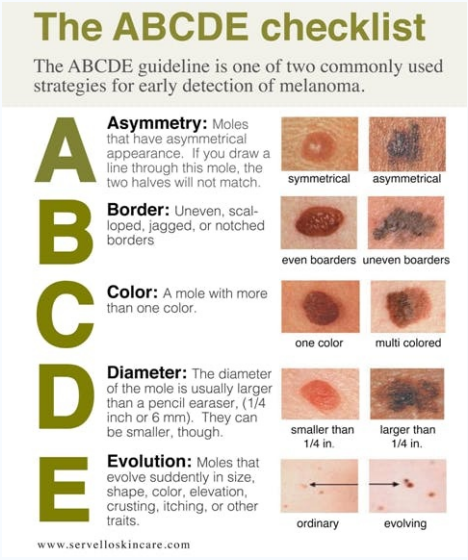
C. Color: pigmentation is not uniform Correct

D. Diameter: greater than 6 mm Correct

E. Evolving: any change in size, shape, color, elevation, or any new symptom such as bleeding, itching, or crusting Correct

Explanation

Choices A, C, D, and E are correct. ABCDE stands for: asymmetry, border, color, diameter, and evolution.



Choice B is incorrect. The B in ABCDE stands for the irregular border of the lesion.

NCSBN Client Need Topic: Physiological Integrity, **Subtopic:** Physiological Adaptation; Melanoma

Question 199

Type: drop_down_cloze

The nurse performs an assessment of the client's burn injuries.

➢ **Complete the sentence below from the list of options**

Sentence Structure

Based on the client's injuries, the client has sustained a **[Dropdown]** total body surface area burn.

Dropdown Options & Correct Answer

Dropdown #1

- 50%
- 75%
- 46.5%
- **76.5%** Correct

Correct Answer: 76.5%

Explanation

This client has sustained a potentially catastrophic burn. The TBSA of the burn is calculated as 76.5%.

Face → 4.5%

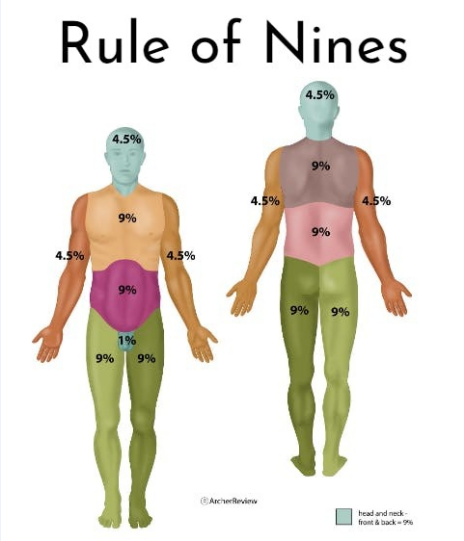
Anterior torso → 18%

Bilateral arms → 18% (each arm is 9%)

Bilateral legs → 36% (each leg is 18%)

4.5% (face) + 18% (anterior torso) + 18% (bilateral arms) + 36% (bilateral legs) = 76.5%

Additional Info



Source : Archer Review

Question 200

Type: single_choice

The nurse is caring for a client who sustained full-thickness burns to their entire torso and back.

➢ The nurse plans to take which **priority** action?

A. Assess the client's respiratory status ✔ Correct

B. Prepare an infusion of lactated ringers

C. Insert an indwelling urinary catheter

D. Obtain an accurate weight

Explanation

Choice A is correct. When caring for a client with a significant thermal burn (greater than 10% TBSA), the priority is assessing respiratory status. Smoke inhalation injuries and carbon monoxide poisoning are immediate concerns that must be addressed.

Choice B is incorrect. Fluid resuscitation is a central part of the emergent care of a major thermal burn. An isotonic solution, such as lactated ringers, is commonly utilized because of its fluid volume-expanding properties.

Choice C is incorrect. An indwelling catheter is necessary to determine the effectiveness of fluid resuscitation. However, this intervention does not prioritize airway patency.

Choice D is incorrect. An accurate weight is necessary to determine the amount of fluid needed to restore circulating volume. This is not a priority. The client's respiratory status after a major thermal burn is essential to evaluate and intervene when necessary.

Additional Info

Source : Source: Archer Review

✓ The emergent (resuscitation) phase of a burn injury begins at the onset of injury and continues for about 24.

✓ The type of burn determines the type of care along with the percentage of body surface affected.

✓ The priorities of care during the emergent phase include:

1. Securing the airway
2. Supporting circulation and perfusion through volume repletion
3. Maintaining body temperature
4. Providing adequate pain control
5. Rendering emotional support

Question 201

Type: single_choice

The nurse is conducting a staff in-service on managing an acute burn. The nurse should reinforce the utilization of which formula to guide fluid resuscitation?

A. 4 mL x kg x Total Body Surface Area (TBSA) burned ✔ Correct

B. 30 mL/kg

C. 0.5 mL/kg/hr

D. 0.10 mL/kg/hr

Explanation

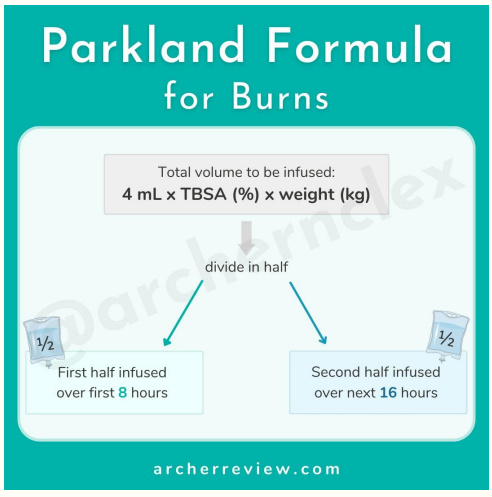
Choice A is correct. The Parkland formula is widely used to calculate fluid requirements following a major thermal burn. The formula, 4 mL x the client's weight in kilograms x the body surface area burned, determines the 24-hour fluid requirement. After calculating the total fluid amount, it should be divided by two to account for the two phases of fluid resuscitation (8 hours initially and then the remaining 16 hours).

Choice B is incorrect. This option prescribes a fixed volume of fluid (30 mL) per kilogram of body weight. While administering fluids to burn clients is essential, this fixed volume does not consider the variability in burn severity (TBSA burned), which significantly affects fluid requirements. This formula is not recommended for burn resuscitation; instead, it is used to determine repletion in clients with sepsis.

Choice C is incorrect. This option recommends a continuous infusion of a fixed rate of fluid (0.5 mL) per kilogram of body weight per hour. Again, it does not take into account TBSA. The 0.5 mL/kg/hr formula is used to estimate the hourly urine output (UOP) that a client should produce during the acute phase of a burn to assess treatment response.

Choice D is incorrect. Similar to option C, this formula suggests a continuous infusion of a fixed rate of fluid (0.10 mL) per kilogram of body weight per hour. It does not consider the initial large volume of fluids required to address the acute phase of burn injury and does not factor in the extent of burn injury (TBSA). Notably, 0.10 mL/kg/hr is not a relevant formula for any medical calculation.

Additional Info



Source : Archer Review

✓ The Parkland formula is a guide to determining the 24-hour fluid replacement following a major thermal burn. The phases of fluid replacement include the first eight hours and the remaining sixteen.

- The client's weight in kilograms will be multiplied by the total body surface area burned, then multiplied by 4 mL
- After the 24-hour fluid total is determined, it should be divided by two (for the two phases)
- The first eight hours begin at the time of injury - not hospitalization.
- Deduct any fluids given pre-hospital
- A central line is preferred to deliver this fluid
- Lactated Ringer's is commonly used as the fluid of choice because it may mitigate metabolic acidosis.
- Urine output is monitored closely to determine if the client is responding to treatment (0.5mL/kg/hr)
- The nurse should also monitor the mean arterial pressure (MAP) to determine if the client is responding (goal is > 65 mm Hg)

✓ Proper wound care is vital to prevent infection and promote healing. Nurses should follow sterile techniques when changing dressings and managing open burn wounds.

✓ Burn injuries can have a significant psychological impact on clients. Nurses should provide emotional support and involve mental health professionals as needed.

Question 202

Type: multiple_response_all

The nurse works with elderly clients. The nurse should recognize which of the following are physical changes associated with the aging client?

Select all that apply.

Answer Choices

A. Pronounced wrinkles on the face Correct

B. Decreased size of the nose and ears

C. Increased growth of facial hair Correct

D. Neck wrinkles Correct

E. Increased height

Explanation

Choices A, C, and D are correct. Many changes occur in the aging body. With age, the loss of adipose tissue causes sagging skin and wrinkles. This is especially noticeable around the head and face. Wrinkles on the face become more pronounced and tend to take on the general “mood” of the client over the years. For example, laugh lines or wrinkles around the lips, cheeks, and eyes are usually more noticeable. Changes in hormone levels, especially the androgen-estrogen ratio, often cause an increase in the growth of facial hair in most older adults. As individuals age, they lose estrogen. When estrogen decreases and testosterone levels are unopposed clients will start to grow more hair where men have it, especially on the face. The aging process causes the platysma muscle to shorten, which contributes to neck wrinkles. Neck skin is very similar to facial skin. As clients age, they lose important dermal plumping factors like collagen, elastin, and glycosaminoglycans. These factors are gradually lost over time with the aging process and are also enhanced with environmental stressors like frequent exposure to UV light.

Choice B is incorrect. The nose and ears of the aging client become more extended and broader. Over time, the nose and ears appear to grow in size due to gravity. As individuals age, gravity causes cartilage in the ear and nose to break down and sag which gives these features an elongated appearance.

Choice E is incorrect. Typically, height decreases through the aging process.

Additional Info

✓ Aging skin looks thinner, paler, and clear (translucent).

✓ Pigmented spots, including age spots or "liver spots," may appear in sun-exposed areas. The medical term for these areas is lentigos.

✓ Changes in the connective tissue reduce the skin's strength and elasticity. It becomes thinner, loses fat, and no longer looks as plump and smooth as it once did.

✓ Veins and bones can be seen more easily.

✓ Scratches, cuts, or bumps can take longer to heal.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 203

Type: single_choice

Which of the following accurately summarizes the **primary purpose** of skin care and hygiene?

A. Maintain skin sterility and prevent infection

B. Prevent bodily odors by eliminating bacteria

C. Protect the body’s first line of defense ✔ Correct

D. Provide the client with comfort and well-being

Explanation

Choice C is correct. The primary purpose of skin care and hygiene is to protect the body's first line of defense against infection, which is the skin. In addition to this primary purpose, skin care and hygiene also prevent bodily odors by eliminating skin surface bacteria, providing the client with comfort and well-being.

Choice A is incorrect. Maintaining skin sterility and the prevention of infection is not a primary purpose of skin care and hygiene. The skin cannot be sterilized and can only be cleaned and disinfected using topical pharmaceutical agents.

Choice B is incorrect. Although preventing bodily odors by eliminating bacteria is one purpose of skin care and hygiene, this is not the primary purpose.

Choice D is incorrect. Although providing the client with comfort and well-being is one of the purposes of skin care and hygiene, this is not the primary purpose.

Additional Info

- Although the primary purpose of skin hygiene is to serve as the mechanism for reducing infectious agents on the skin, the goal of skin care is more aligned with the purpose of protecting the skin from injury while providing overall reinforcement of the skin barrier against infection.
- When analyzed together, the overall primary purpose of skin care and hygiene is to protect the body's first line of defense.

Information Source

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier.

Larson, E. (2001). *Hygiene of the Skin: When Is Clean Too Clean? Emerging Infectious Diseases, 7*(2), 225–230. https://doi.org/10.3201/eid0702.010215

Question 204

Type: multiple_response_all

The nurse documents the presence of a skin lesion as a “palpable solid mass measured at 1 cm.” What types of skin lesions might this describe?

Select all that apply.

Answer Choices

A. Macule

B. Patch

C. Plaque Correct

D. Nodule Correct

E. Bulla

F. Pustule

Explanation

Choices C and D are correct. Plaque and nodules are palpable, elevated, solid masses that may measure 1 cm or greater.

Choices A and B are incorrect. Macules and patches are circumscribed, flat, nonpalpable changes in skin color. Macules are less than or equal to 1 cm, and patches are more significant than 1 cm.

Choices E and F are incorrect. Bulla and pustules are circumscribed, superficial skin elevations formed by free liquids in a cavity with skin layers. Bulla is higher than 0.5 cm, whereas pustules are filled with pus.

NCSBN Client Need Topic: Health Promotion and Maintenance, **Subtopic:** Assessing the Skin, Hair, and Nails

Question 205

Type: single_choice

The nurse has received a prescription for a high-potency topical corticosteroid lotion.

➢ The nurse should instruct the client to avoid applying the lotion to the client's

A. feet.

B. face. ✔ Correct

C. outer thigh.

D. abdomen.

Explanation

Choice B is correct. Clients should be discouraged from using over-the-counter topical glucocorticoids on their faces because these creams may cause permanent hypopigmentation and thinning of the skin. If a topical corticosteroid must be applied to the face, it is usually a low-dose formulation for less than two weeks.

Choices A, C, and D are incorrect. Most over-the-counter topical glucocorticoids may be safely used short term. The nurse should advise the client not to use topical corticosteroids on the face, between skin folds, and on the axilla.

Additional Info

✓ Topical corticosteroids are indicated in the treatment of psoriasis, severe atopic dermatitis, severe contact dermatitis

✓ They come prepared as a lotion, gel, ointment, or foam

✓ If a topical corticosteroid is necessary for the face, it should be low-potency and used for less than two weeks

✓ For optimal absorption, it is advised to apply topical corticosteroids to moist skin either immediately after bathing or after wet soaks

Question 206

Type: single_choice

The nurse is caring for a client who sustained 18% full-thickness burns. The nurse understands that the treatment goal during the acute emergent (resuscitation) phase is to

A. collaborate with occupational and physical therapy.

B. provide outpatient referrals.

C. administer parenteral nutritional replacement.

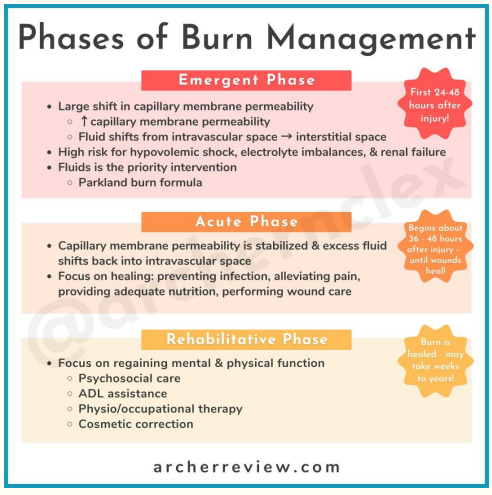
D. initiate intravenous (IV) fluids. ✔ Correct

Explanation

Choice D is correct. The treatment of burns is separated into three phases: **resuscitative (emergent), acute, and rehabilitative**. The goals of the **resuscitative (emergent) phase** are to maintain airway patency, provide pain control, and initiate parenteral fluids to restore and maintain hemodynamic stability. This stage is critical because insults to the airway may cause problems with both gas exchange and perfusion. This, coupled with severe fluid loss, makes treatment quite complicated.

Choices A, B, and C are incorrect. Maintaining cardiovascular and respiratory status and initiating nutritional replacement either parenterally or enterally is the goal in the **acute phase**. Healing may be delayed if appropriate nutrition is not started. Prevention of scars and contractures takes place during the **rehabilitative phase.** This phase focuses on restoring the patient to their highest level of functioning. The rehabilitative phase involves an interdisciplinary physical and occupational therapy approach, helping the client achieve maximum functionality. The rehabilitative phase may last for a year or a lifetime, depending on the severity of the burn. Outpatient referrals are often initiated during this phase to maximize the client's functioning.

Additional Info



Source : Archer Review

Burn care takes place in three phases. There is the emergent phase (resuscitation), acute phase (healing),

and rehabilitative phase (restorative).

➢ The resuscitation phase begins at the time of injury and continues for 24-48 hours after the injury. This is when the burn is evaluated, and priorities of care are established based on the severity. The priorities during this phase of the resuscitative process include securing the airway, supporting circulation and perfusion, maintaining body temperature, keeping the client comfortable with prescribed analgesics, and providing emotional support.

➢ The acute phase of burn injuries begins around 48 hours after the damage when the fluid shift resolves and lasts until wound closure is complete. Nursing care during this phase focuses on continuous assessment and maintenance of the cardiac and respiratory systems with a focus on nutritional support. The nurse will provide frequent burn dressing changes during this phase of recovery. Nursing interventions should also be targeted toward pain control, emotional support, and psychosocial interventions. Consultations with other disciplines, such as physical and occupational therapy, are expected.

➢ The rehabilitation phase of burn injury technically starts at wound closure and ends when the patient achieves their highest level of functioning. During this stage of the burn injury, the focus is targeted towards preventing scars or contractures and resuming the same level of activity they had before the burn injury. Outpatient referrals to promote maximum functioning are commonly provided.

Question 207

Type: multiple_response_select

➢ **Which two (2) assessment findings is the nurse most concerned with?**

A. Respiratory status

B. Extent of injury Correct

C. Oral temperature

D. Type of burns Correct

E. Sensation in the right arm

Explanation

- The client's burn severity (both the extent and type) is of serious concern. A full-thickness burn ranging from two to ten percent of the total body surface area is a severe burn injury requiring immediate medical attention.
- This client has sustained 36% TBSA burns (9% to the arm; 18% to the back; 9% to the right side of the torso).
- The client's decreased sensation in his arm is a characteristic finding of a full-thickness burn, as this type of burn causes nerve damage.
- The client's respiratory status is not a concern at this time. His pulse oximetry is 95%, and his lung fields are clear. While the client does have tachypnea, its etiology is to the client's reported severe pain.

Question 208

Type: drop_down_cloze

➢ **Complete the sentence below from the list of options**

Sentence Structure

Based on the client's injuries, the client has sustained a **[Dropdown]** total body surface area burn.

Dropdown Options & Correct Answer

Dropdown #1

- 18%
- 27%
- **36%** Correct

Correct Answer: 36%

Explanation

This client has sustained a total body surface area burn of 36%.

- Entire back → 18%
- Right arm → 9%
- Right side of the torso → 9% (an entire torso is 18%, and the client only sustained an injury to the right side, so it is counted as 1/2, which is 9%)

Question 209

Type: ngn_multiple_choice

➢ **Based on the clinical data, the nurse's immediate concern is the client's**

A. risk for infection.

B. thermoregulation.

C. airway patency.

D. fluid volume deficit. ✔ Correct

Explanation

The immediate concern for this client is their fluid volume status. The client is experiencing tachycardia and suboptimal blood pressure suggesting significant hypovolemia. Additionally, the extent and type of burn injury are severe. The client's airway is patent and does not require follow-up. Risk for infection is a concern with a major burn, but the client's hemodynamic instability needs to be addressed first.

Question 210

Type: matrix_multiple_choice

➢ **Click to specify the interventions the nurse anticipates incorporating into the client's care plan**

Intervention	Anticipated	Not Anticipated
Insertion of indwelling urinary catheter	Correct	
Irrigate wounds with cool saline solution	Correct	
Implement fluid restrictions		Correct
Remove any jewelry from affected extremity	Correct	
Administer tetanus prophylaxis (Tdap)	Correct	

Explanation

- This client has sustained a major thermal burn, and fluid repletion will be necessary. An indwelling catheter will be needed to determine if the fluid repletion is successful.
- The wounds should be irrigated with a cool (not cold) saline solution and wrapped lightly in sterile gauze.
- Any jewelry should be removed from the affected extremity because the area will swell, and this may cause vascular compromise.
- Tdap prophylaxis is commonly administered for any non-superficial burn.

Question 211

Type: drop_down_cloze

➢ **Complete the sentences below from the list of options**

Sentence Structure

The nurse should plan to obtain a prescription for **[Dropdown]** to restore circulating volume.The **[Dropdown]** will be used to determine the 24-hour fluid requirement. To measure the effectiveness of the fluid replacement, the nurse plans to **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- 0.45% saline
- Dextrose 5% Water (D5W)
- **Lactated ringers** Correct

Correct Answer: Lactated ringers

Dropdown #2

- **Parkland formula** Correct
- pulmonary function tests
- TNM staging

Correct Answer: Parkland formula

Dropdown #3

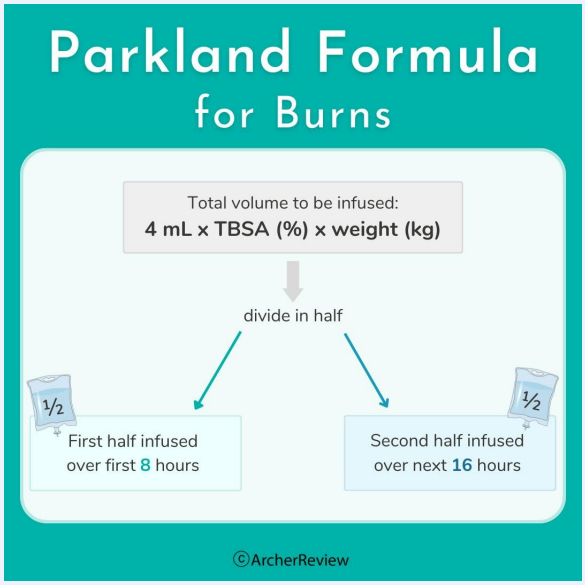
- **insert an indwelling urinary catheter.** Correct
- collect serial complete blood counts.
- monitor the serum potassium level.

Correct Answer: insert an indwelling urinary catheter.

Explanation

Isotonic fluids are used when providing fluid resuscitation to a client who sustained a major burn. Thus, LR is an appropriate choice for treating the hypovolemia caused by the burn. The Parkland formula (4 mL x client's weight in kilograms x total body surface area burned) will determine the 24-hour fluid requirement. An indwelling catheter is necessary to determine if the client is responding to the fluid volume replacement. While weight is the gold standard in determining a client's fluid status, urine output should be monitored closely during acute fluid resuscitation.

Additional Info



Source : Archer Review

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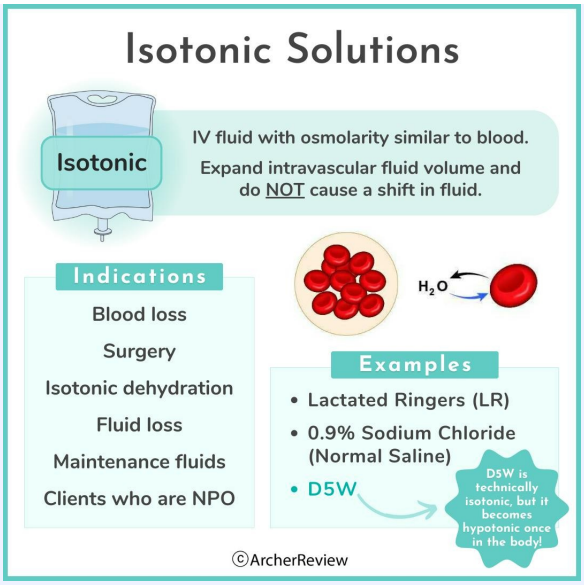


Source : Archer Review

Question 212

Type: ngn_multiple_choice

The nurse has initiated prescribed intravenous Lactated Ringers (LR) and inserted an indwelling urinary catheter

➢ The nurse assesses the urine output and determines whether the client is meeting the treatment goal when it reaches

A. 0.10 mL/kg/hr.

B. 0.25 mL/kg/hr.

C. 0.4 mL/kg/hr.

D. 0.5 mL/kg/hr. ✔ Correct

Explanation

Choice D is correct. This option suggests a urine output that falls within the generally accepted normal range for adult urine output, which is typically 0.5 to 1 mL/kg/hr. A urine output of 0.5 mL/kg/hr is often considered a minimum benchmark for maintaining proper renal perfusion and fluid balance. It indicates that the kidneys are functioning well enough to filter waste products and regulate fluid levels effectively.

Choice A is incorrect. This option suggests a very low urine output. A urine output of 0.10 mL/kg/hr is significantly below the normal range of 0.5 to 1 mL/kg/hr. Such a low urine output might indicate inadequate kidney function or dehydration.

Choice B is incorrect. This is below the generally accepted normal range of 0.5 to 1 mL/kg/hr. A urine output of 0.25 mL/kg/hr might raise concerns about decreased renal perfusion or fluid imbalances.

Choice C is incorrect. This is below the generally accepted normal range of 0.5 to 1 mL/kg/hr.

Additional Info

✓ The nurse should monitor the client's hourly urine output to determine if the client is responding to the fluid replacement.

✓ Monitoring urine output is part of a broader assessment. Nurses should consider other clinical indicators, such as blood pressure, heart rate, respiratory rate, and skin turgor, to gain a more holistic understanding of the patient's fluid status.

✓ Accurate documentation of intake and output is essential. This documentation helps track changes over time and provides valuable information to the healthcare team.

Information Source

Workman, D.I.M. L. ([2021]). Medical-Surgical Nursing (10th ed.)

Question 213

Type: multiple_response_all

The nurse is caring for a client with a major thermal burn. Which initial laboratory abnormalities does the nurse anticipate in response to the burn? **Select all that apply.**

Answer Choices

A. Hemodilution

B. Hyperkalemia Correct

C. Metabolic Acidosis Correct

D. Hyperglycemia Correct

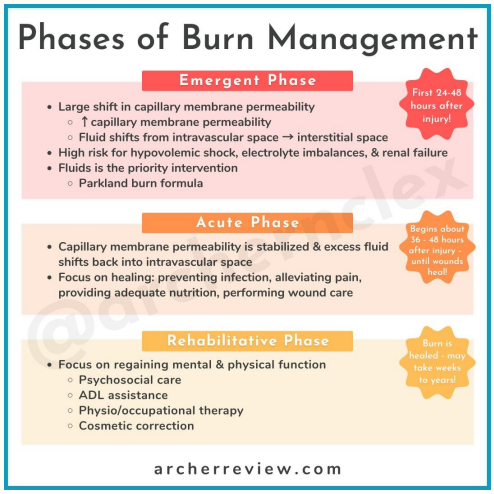
E. Hemoconcentration Correct

Explanation

Choices B, C, D, and E are correct. Following a major burn, significant fluid and electrolyte changes occur from cellular damage, which causes potassium to leak into the extracellular space. Thus, life-threatening hyperkalemia may occur. Metabolic acidosis is likely because of the impairment the burn causes to the kidney's ability to recycle bicarbonate. The discharge of catecholamines causes glucose release from the liver, raising the blood glucose. Finally, the loss of fluid causes hemoconcentration, illustrated by elevated hematocrit.

Choice A is incorrect. Initially, the client with a major thermal burn will have hemoconcentration from all of the fluid loss. Hemodilution may occur later in the process from the fluid shift.

Additional Info



Source : Archer Review

The criteria for a major thermal burn are as follows -

✓ Partial thickness burns greater than 10% TBSA

✓ Burns that involve the face, hands, feet, genitalia, perineum, or major joints

✓ Third-degree burns in any age-group

✓ Electrical burns, including lightning injury

✓ Chemical burns

✓ Inhalation injury

Question 214

Type: multiple_response_all

The nurse reviews the pathophysiology of burns with students. It would be correct to state which hormone alterations occur during a major burn. **Select all that apply.**

Answer Choices

A. Increased secretion of epinephrine Correct

B. Increased secretion of antidiuretic hormone (ADH) Correct

C. Increased secretion of aldosterone Correct

D. Decreased levels of glucose

E. Increased secretion of norepinephrine Correct

Explanation

Choice A is correct. Increased epinephrine levels are secreted during a major burn to reduce bleeding and fluid loss.

Choice B is correct. Antidiuretic hormone is released in high levels to reduce bleeding and fluid loss.

Choice C is correct. Aldosterone, released by the adrenal cortex, is released at high levels to reduce fluid loss. Aldosterone causes sodium retention (which in turn causes water retention) and potassium elimination.

Choice E is correct. The adrenal glands release norepinephrine in response to a major burn, which causes vasoconstriction, thereby increasing fluid and blood volume.

Choice D is incorrect. Glucose levels are increased during a significant thermal burn because the catecholamines increase the discharge of glucose from the liver. This could be harmful because increased glucose levels may lead to hyperglycemia, causing a delay in healing.

Additional Info

✓ After a burn injury, the body undergoes significant hormonal changes.

✓ The sympathetic nervous system is activated, releasing stress hormones such as cortisol and catecholamines, including epinephrine and norepinephrine.

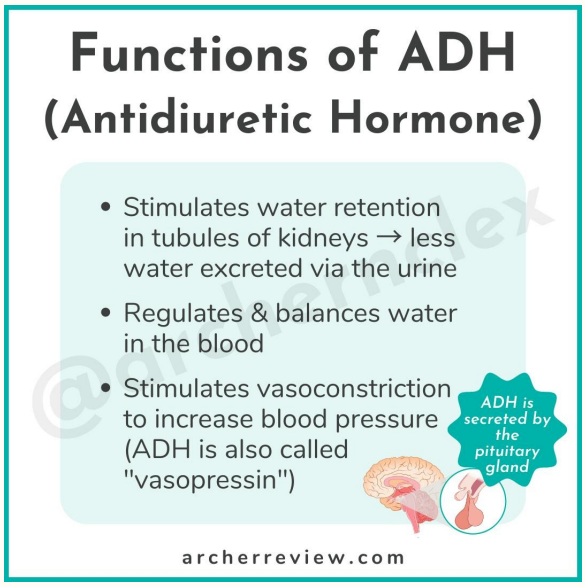
✓ These hormones help the body respond to stress and increase blood glucose levels.

✓ According to a study published in the Journal of Burn Care and Research, cortisol levels can increase up to 5-10 times the normal range within hours of a burn injury.

✓ Epinephrine and norepinephrine levels increase significantly, which can lead to tachycardia and hypertension.

✓ There is also an increase in antidiuretic hormone (ADH), which helps to retain water and sodium in the body.

✓ The renin-angiotensin-aldosterone system is activated, increasing aldosterone, which helps retain sodium and water and eliminate potassium.



Source : Archer Review

Information Source

Aslam, A., Singh, J. A., Rajan, M., & Hypolite, I. (2013). Hormonal and metabolic changes after thermal injury. Journal of Burn Care & Research, 34(3), e176-e182.

Wibbenmeyer, L., Shoemaker, W. C., & Wo, C. C. (2004). The endocrine response to critical injury. The Surgical clinics of North America, 84(4), 1143-1162.

Question 215

Type: single_choice

The nurse is caring for a client with several severe pressure ulcers. Which laboratory result requires the nurse to intervene?

A. Serum albumin level of 2.5 g/dL [3.5-5 g/dL] ✔ Correct

B. Serum potassium level of 4 mEq/L (mmol/L) [3.5 and 5.0 mEq/L (mmol/L)]

C. Serum sodium level of 140 mEq/L (mmol/L) [135-145 mEq/L (mmol/L)]

D. White blood cell count of 9,000 cells/uL ($9x10^9$) [4,500-11,000cells/uL, $3.5–10.5 \times 10^9$/L]

Explanation

Choice A is correct. The client's serum albumin level is low, indicating hypoalbuminemia. The normal range of serum albumin is 3.5-5 g/dL. Undernutrition is common among clients with pressure injuries and is a risk factor for delayed healing. Markers of undernutrition include albumin < 3.5 g/dL (< 35 g/L) or weight < 80% of ideal. Here, the client's serum albumin level of 2.5 g/dL(25 g/L) indicates undernutrition, thus placing the client at risk for delayed healing. Following the receipt of this information, some appropriate nursing interventions would include performing client education related to dietary intake, educating the client's family members regarding bringing high-protein foods from home (if allowed by the client's current dietary order) to promote intake, and/or speaking with the client's health care provider (HCP) regarding placing an order for a dietary consultation.

Choice B is incorrect. The client's serum potassium is within the normal range. The normal range for potassium is 3.5 to 5 mEq/L (mmol/L). Hypokalemia (low potassium) may occur for various reasons, including vomiting, diarrhea, fistulas, laxatives, diuretics, burns, excessive perspiration, etc. Hyperkalemia (high potassium) may arise from numerous reasons, including inadequate renal excretion, trauma, acidosis, excessive potassium intake, etc.

Choice C is incorrect. The client's serum sodium is within the normal range. The normal range for sodium is 135 to 145 mEq/L (mmol/L). Hyponatremia can be seen in clients with nephrotic syndrome, congestive heart failure, syndrome of inappropriate secretion of antidiuretic hormone (SIADH), renal failure, etc. Hypernatremia occurs in dehydration.

Choice D is incorrect. The client's white blood cell result is within the normal range. A normal white blood cell count ranges from 5,000-10,000 cells/uL (3.5–10.5 × 10^9/L). Ranges for pediatric clients are dependent upon the specific age of the client. Elevated white blood cell counts are often due to an infection or inflammatory response. Clients with a decreased white blood cell count typically have an autoimmune disorder or other pathogen compromising their immune system.

Additional Info

✓ Pressure injuries can develop secondary to immobilization and hospitalization, particularly in clients who are elderly, incontinent, and/or undernourished.

✓ A nutritional assessment is recommended in clients with pressure injuries, particularly those with stage 3 or 4 pressure injuries.

✓ In clients with pressure ulcers, protein intake of 1.25 to 1.5 g/kg/day, sometimes requiring oral, nasogastric, or parenteral supplementation, is desirable for optimal healing.

Question 216

Type: multiple_response_all

The nurse is discussing how to provide foot care to clients to a group of unlicensed assistive personnel (UAPs).

➢ The nurse should reinforce that **Select all that apply.**

Answer Choices

A. mild soap and tepid water should be used. Correct

B. the feet should be soaked in hot water and oil.

C. the feet should be dried thoroughly, as well as in between the toes. Correct

D. an alcohol rub may be used if the feet appear dry.

E. scaling and discoloration of the feet should be reported to the nurse. Correct

F. the toenails should be cut at the lateral corners when trimming the nails.

Explanation

Choices A, C, and E are correct. The following are recommended guidelines for foot care:

- Bathe the feet thoroughly in mild soap and a lukewarm water solution
- Dry the feet thoroughly, including the area between the toes. This helps prevent moisture-related skin issues and fungal infections.
- Signs of fungal infection should be reported. Manifestations include scaling of the skin and nail discoloration.

Choice B is incorrect. Soaking the feet in hot water is avoided because this causes skin drying. This will also be contraindicated if the client has neuropathy, as it could cause injury.

Choice D is incorrect. Moisturizer lotion should be used, not alcohol if the feet are dry. This lotion should be well absorbed in the skin before applying socks because this could promote the development of a fungus.

Choice F is incorrect. Cutting toenails straight across helps prevent ingrown toenails and related complications. This method reduces the risk of nail edges growing into the surrounding skin, which can cause pain and potential infections.

Additional Info

✓ Foot care may be delegated to a UAP and is essential in maintaining good hygiene.

✓ The feet are often a source of fungal infections, which may manifest by scaling of the feet, discoloration, itching, and odor. Treatment includes prescribed topical antifungals such as ketoconazole.

✓ Emphasize the importance of individualized foot care. Every client may have unique needs, especially those with diabetes, neuropathy, or vascular issues.

Question 217

Type: multiple_response_all

The nurse has attended a staff education program about pressure ulcers.

➢ Which of the following would the nurse recognize as an accurate statement regarding pressure ulcers? **Select all that apply.**

Answer Choices

A. "In a stage II pressure ulcer, part of the dermis and epidermis are lost." Correct

B. "In a stage I pressure ulcer, there is a loss of integrity of the epidermis only."

C. "In a stage III pressure ulcer, a deep tissue injury can expose fat." Correct

D. "In a stage IV pressure ulcer, the base of the wound is covered by eschar."

E. "Stage III involves extensive tissue damage and can lead to bone and muscle involvement."

Explanation

Choices A is correct. Stage II pressure ulcers occur when the **epidermis** and a **part of the dermis** are lost.

Choice C is correct. Stage III pressure ulcers expose **subcutaneous fat** but do not extend deep enough to expose the bone and muscle (choice C).

Choice B is incorrect. Stage I pressure ulcers do not involve any loss of tissue. The epidermis remains intact, but it is **reddened** and **does not blanch**.

Choice D is incorrect. Stage IV pressure ulcers expose **bone** and **muscle**. However, if the base of the wound is covered by slough or eschar, the nurse can not assess how deep the pressure injury goes. Therefore, such a pressure ulcer is considered **unstageable** rather than a stage IV.

Choice E is incorrect. Stage IV involves extensive tissue damage and can lead to bone and muscle involvement, not stage III.

Question 218

Type: single_choice

The nurse is caring for a client who sustained an electrical burn. Which **priority** action should the nurse take?

A. Obtain an electrocardiogram (ECG) ✓ Correct

B. Obtain an order for an arterial blood gas (ABG)

C. Perform wound care

D. Initiate supplemental oxygen

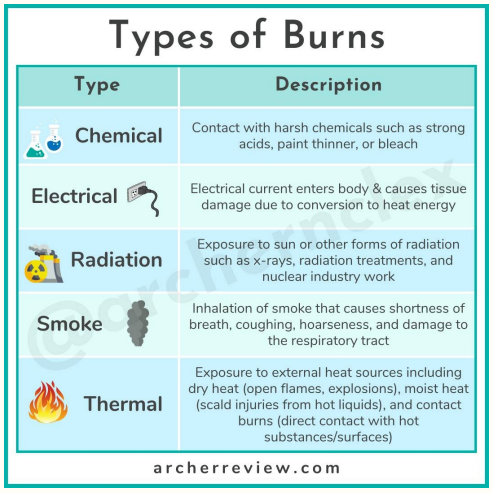
Explanation

Choice A is correct. Electrical burns are **serious** and require the client to undergo cardiac monitoring because of the risk of dysrhythmias. The nurse's priority action is to obtain telemetry monitoring or perform a 12-lead electrocardiogram.

Choices B, C, and D are incorrect. These types of burns cause an 'iceberg' effect where the client's external

injuries appear minor, but the internal injuries may be catastrophic. Electrical burns may trigger immediate ventricular fibrillation or asystole. Thus, it is important to monitor the client's cardiovascular status immediately following this type of injury.

Additional Info



Source : Archer Review

✓ Electrical burns may be caused by lightning or weapons such as tasers.

✓ Additionally, exposure to live power wires may cause this injury.

✓ The longer the electricity is in contact with the body, the greater the damage.

✓ It is a priority to terminate the electrical source (if possible) and render care.

✓ The care that should be provided includes an immediate assessment of the client's cardiovascular status because of the chance of fatal dysrhythmias.

✓ Accidental electrical injuries may be avoided by refraining from inserting objects into an electrical plug.

✓ Electrical devices should not be used near a body of water.

✓ Finally, any frayed electrical cords should be replaced.

Question 219

Type: single_choice

A nurse is caring for a client at risk of developing pressure ulcers. Which of the following is an intrinsic risk factor that contributes to this increased risk?

A. Shearing

B. Friction

C. Impaired tissue perfusion ✔ Correct

D. Pressure

Explanation

Choice C is correct. Intrinsic refers to anything essential or belonging naturally.

Impaired tissue perfusion is an internal risk factor. Other intrinsic risk factors associated with skin breakdown include:

- Poor nutritional status
- Incontinence
- Alterations in fluid balance
- Altered neurological functioning

Choice A is incorrect. Shearing is an extrinsic factor. It occurs when the skin moves in one direction while the underlying structures move in the opposite direction, often causing damage to blood vessels and tissue.

Choice B is incorrect. Friction is also an extrinsic factor. It occurs when the skin is dragged across a surface, such as bedding or clothing, which can damage the outer layer of the skin.

Choice D is incorrect. Pressure is generally considered an extrinsic factor. It refers to the sustained compression of tissue, typically over bony prominences, which can obstruct blood flow and cause tissue damage.

Additional Info

✓ Keep the skin clean and dry. Use moisture-wicking fabrics and absorbent pads to manage incontinence and perspiration. Apply barrier creams to protect the skin from excess moisture and prevent breakdown.

✓ Implement regular repositioning schedules to alleviate pressure on vulnerable areas. Use pressure-relieving devices such as special mattresses, cushions, and pads to redistribute pressure and reduce the risk of ulcer formation.

✓ Approximately 2.5 million clients develop pressure ulcers in U.S. acute care facilities each year.

✓ The treatment of pressure ulcers is costly, with estimates suggesting that pressure ulcers add an estimated $9.1 billion to $11.6 billion in healthcare costs annually in the U.S. Each pressure ulcer can increase the cost of care by over $20,000.

Source : Archer Review

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 220

Type: single_choice

A nurse is assigned to care for a client who reportedly has no special skincare needs. However, upon assessment, the nurse observes reddened areas over bony prominences. What action should the nurse take?

A. Document the finding and continue with routine care

B. Apply a topical antibiotic ointment to the affected areas

C. Conduct and document an emergency assessment

D. Perform and document a focused assessment of skin integrity ✓ Correct

Explanation

Choice D is correct. Performing and documenting a focused assessment on skin integrity is appropriate since this is a newly identified problem.

Choice A is incorrect. This option is not the best action because documenting the finding alone without further assessment may not be sufficient to address the potential skin breakdown. Reddened areas over bony prominences may indicate pressure injury or other skin conditions, and a focused assessment is necessary to determine the severity of the condition.

Choice B is incorrect. Applying a topical antibiotic ointment may not be necessary and could cause skin irritation. Moreover, the presence of reddened areas over bony prominences does not necessarily indicate an infection.

Choice C is incorrect. A reddened area over bony prominences does not constitute an emergency. An emergency assessment is reserved for situations that pose an immediate threat to the client's life or health.

Additional Info

✓ According to the National Pressure Ulcer Advisory Panel (NPUAP), pressure ulcers affect approximately 2.5 million clients in the United States each year.

✓ Reddened areas over bony prominences are a common concern in nursing care, particularly in clients who are immobile or have limited mobility. These areas are prone to pressure ulcers, which can lead to serious health complications if left untreated.

✓ Nurses play a crucial role in identifying and addressing these areas to prevent pressure ulcers and promote skin integrity.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 221

Type: multiple_response_all

The nurse is conducting a community health class on skin changes for older adults. It would be appropriate for the nurse to state which of the following are normal age-related changes? **Select all that apply.**

Answer Choices

A. Decreased dermal blood flow Correct

B. Development of actinic lentigo Correct

C. Degeneration of elastic fibers Correct

D. Loss of subcutaneous fat Correct

E. Increased epidermal thickness

Explanation

Choices A, B, C, and D are correct. Age-related skin changes include decreased dermal blood flow, which causes dry skin. The development of actinic lentigo (known as liver spots but have nothing to do with the liver) are darkened parts of the skin commonly found on the wrists, back of the hands, and forearms. Other age-related changes include the degeneration of elastic fibers, which causes decreased tone and elasticity. Finally, loss of subcutaneous fat is an expected finding which may cause hypothermia and pressure ulcers.

Choice E is incorrect. Increased epidermal thickness is not an age-related change; instead, the decreased epidermal thickness occurs, causing the skin to be fragile and transparent.

Additional Info

Some of the age-related skin changes include -

- Decreased epidermal thickness
- Increased epidermal permeability
- Decreased dermal blood flow
- Thinning subcutaneous layer
- Degeneration of elastic fibers

Question 222

Type: single_choice

The nurse is preparing to perform a dressing change on a client with deep partial-thickness and full-thickness burns. Which of the following actions would be inappropriate when caring for this client?

A. Administer an oral cyclooxygenase-2 (COX-2) inhibitor 30 minutes before the dressing change. ✔ Correct

B. Provide a clear explanation to the client about the procedure and how it will be performed.

C. Changing the client's dressing carefully and handling burned areas gently.

D. Let the client watch their favorite television show while dressing change is being performed.

Explanation

Choice A is correct. This is an incorrect nursing intervention and, therefore, the correct answer to this question. For clients with deep partial-thickness and/or full-thickness burns, opioids (e.g., morphine sulfate) are the class of medication used to control pain. Opioid pain medication should be administered intravenously to the client at least 30 minutes before any dressing change.

Choice B is incorrect. Providing a clear explanation to the client about the procedure and how it will be performed is an appropriate nursing intervention, as this helps to gain the client's cooperation and reduces their anxiety.

Choice C is incorrect. Changing the client's dressing carefully and handling burned areas gently is an example of an appropriate nursing intervention performed to minimize pain experienced by the client during the dressing change.

Choice D is incorrect. Letting the client watch their favorite television show while a dressing change is being performed is an example of an appropriate nursing intervention, as this is a method of providing the client with a distraction that can help decrease the client's pain.

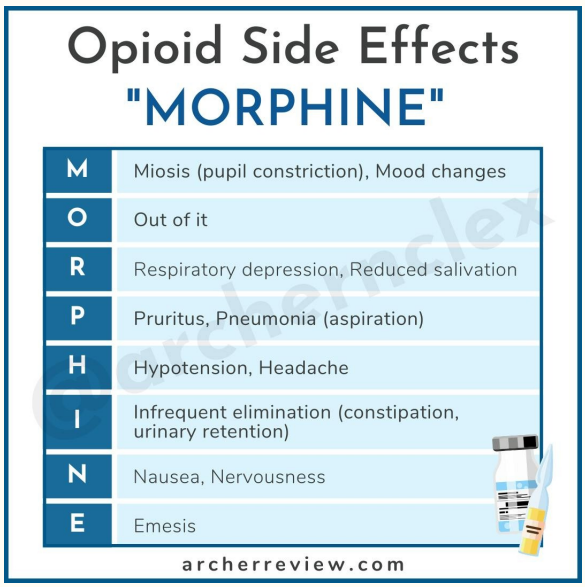
Additional Info

✓ Because dressing changes can be uncomfortable, medicating at least 30 minutes ahead of time can make the

client more comfortable.

✓ Opioids (e.g., morphine) should always be given intravenously, and large doses may be needed for adequate pain control.

✓ Engage the client in distraction techniques to divert their attention from the pain during the dressing change. This can include conversation, music, guided imagery, or watching a video.



Source : Archer Review

Information Source

Carter, D. W. (2022, November). *Burns.* Merck Manual Professional Edition. https://www.merckmanuals.com/professional/injuries-poisoning/burns/burns?query=burns

Ignatavicius, D. D., Workman, M. L., Rebar, C. R., & Heimgartner, N. M. (2021). *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* (10th ed.). Elsevier.

Question 223

Type: fill_in_the_blanks

The nurse is caring for a client who sustained a full-thickness burn to their chest, abdomen, back, and bilateral anterior arms.

➢ Using the rule of nines, calculate the total body surface area (TBSA) burned. **Fill in the blank.**

45% Correct

Explanation

This client sustained a 45% TBSA burn

Chest and abdomen → 18%

Entire back → 18%

Anterior arm → 4.5%

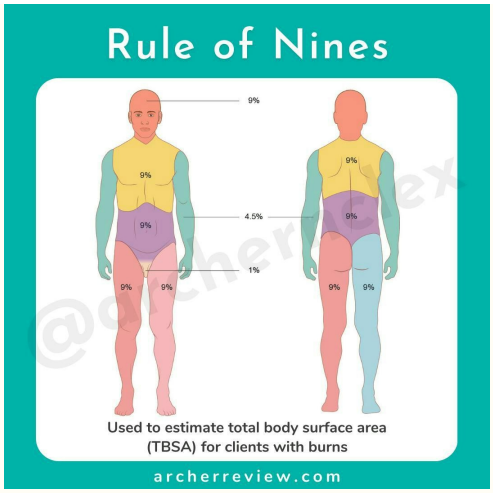
Anterior arm → 4.5%

45%

Learning Objective

NCLEX takeaway: Use the Rule of Nines to estimate total body surface area (TBSA) burned.

Additional Info



Source : Archer Review

Information Source

Ignatavicius, D. D., Rebar, C. R., & Heimgartner, N. M. (2024). *Medical-surgical nursing: Concepts for clinical judgement and collaborative care* (11th ed.). Elsevier. p. 466

Question 224

Type: drag_drop_rationale

The nurse reviews the client's triage note

➢ **Select one (1) condition and one (1) finding in the following sentence**

The nurse is ****immediately**** concerned that the client is at risk for developing [Select] as evidenced by the client's [Select]

Options Group 1

- carbon monoxide poisoning
- wound infection
- cardiac dysrhythmias Correct

Options Group 2

- Glasgow Coma Scale.
- pulse. Correct
- pain level.

Explanation

The client sustained an electrical burn; an **immediate** concern associated with these types of burns is the client's cardiovascular status. The client's pulse is irregular, and this irregular pulse should prompt the nurse to immediately obtain a 12-lead electrocardiogram (ECG) and establish continuous telemetry monitoring. Electrical burns rarely result in carbon monoxide poisoning. Thus, this concern would be associated with a significant thermal burn with certain fumes. The client's GCS is 14 (normal is 15), and his incomplete orientation is likely due to the electrical burn that produced amnesia. This is common in certain electrical burns, especially at high voltage. While wound infection could be a concern if localized wound care is not provided, this is not the immediate concern.

Additional Info

✓ Electrical burns may be caused by lightning or weapons such as tasers.

✓ Additionally, exposure to live power wires may cause this type of injury.

✓ The longer the electricity is in contact with the body, the greater the damage.

✓ It is a priority to terminate the electrical source (if possible) and then render care.

✓ The care that should be provided includes an immediate assessment of the client's cardiovascular status because of the chance of fatal dysrhythmias.

✓ Accidental electrical injuries may be avoided by refraining from inserting objects into an electrical plug.

✓ Electrical devices should not be used near a body of water.

✓ Any frayed electrical cords should be replaced.

Question 225

Type: single_choice

The nurse is caring for a client with a pressure ulcer with a shallow, partial skin thickness, eroded area but no necrotic areas. The nurse would treat the area with which dressing?

A. Alginate

B. Dry gauze

C. Hydrocolloid ✔ Correct

D. Transparent

Explanation

Choice C is correct. Hydrocolloid dressings protect shallow ulcers and promote an appropriate healing environment. Several factors contribute to the formation of pressure ulcers: friction and shearing, immobility, inadequate nutrition, fecal and urinary incontinence, decreased mental status, diminished sensation, excessive body heat, advanced age, and certain chronic conditions. The stage of the pressure ulcer will determine treatment. Nurses should review standing orders from their facility and any additional physician's orders for pressure ulcer care.

Choice A is incorrect. Alginates are used for wounds with significant drainage, they can absorb a large amount of wound exudate.

Choice B is incorrect. Dry gauze will stick to new granulation and result in more damage.

Choice D is incorrect. Transparent dressings are often used for superficial wounds or as a protective cover for healing wounds. They are not the first choice for a pressure ulcer with erosion and partial skin thickness, especially if there is moderate exudate.

Additional Info

✓ Nurses should conduct a thorough assessment of the pressure ulcer, including its size, depth, and surrounding tissue condition. Regular assessments are crucial for monitoring progress and adjusting the treatment plan as needed.

✓ Collaboration with other healthcare professionals, including wound care specialists, physical therapists, and physicians, is essential. This ensures a comprehensive approach to pressure ulcer management, taking into account the diverse needs of the client.

✓ Hydrocolloid dressings are designed to create a moist wound environment, which can be beneficial for the healing process.

Question 226

Type: order_response

The emergency department (ED) nurse is caring for a client who sustained a partial thickness thermal burns to 18% total body surface area burn (TBSA).

➢ **Place the following actions in the order in which they need to be performed, starting with the highest priority action.**

Original Choices (As Presented)

A Initiate a large-bore peripheral vascular access device.

B Administer prescribed intravenous (IV) pain medication.

C Perform wound care to the affected area(s).

D Perform a respiratory assessment and inspect the client's nose and mouth.

E Administer prescribed intravenous (IV) fluids.

Correct Order

1 Perform a respiratory assessment and inspect the client's nose and mouth.

2 Initiate a large-bore peripheral vascular access device.

3 Administer prescribed intravenous (IV) fluids.

4 Administer prescribed intravenous (IV) pain medication.

5 Perform wound care to the affected area(s).

Explanation

Correct sequence:

- The burn's emergent (resuscitation) phase requires the nurse to a**ssess and potentially intervene if the client has any respiratory difficulties**. Securing the airway is always the priority in a major thermal burn. Smoke inhalation may manifest as black carbon particles in the nose, mouth, and sputum, and edema of the nasal septum indicates smoke inhalation or a “smoky" smell to the client's breath. Also, the nurse should take this opportunity to assess if the client may have been exposed to carbon monoxide, which may cause the client to experience headaches, blurred vision, and disorientation. The mainstay treatment for carbon monoxide poisoning would be high-flow oxygen.
- The nurse should then **start a large-bore peripheral vascular access device** (PVAD), enabling the nurse to collect blood for labs. The PVAD should be away from any burned areas.
- Once the blood for laboratory data is collected, the nurse should **administer prescribed fluids** to prevent (or treat hypovolemia). This prioritizes over administering pain medication as the client may face circulatory collapse for hypovolemic shock.
- Once this PVAD is started, **pain control should be administered as prescribed**. The nurse should request pain medication via intravenous push (IVP) to ensure adequate pain management. Medications commonly used include fentanyl, hydromorphone, morphine, and, to a lesser extent, ketorolac.
- The nurse should then **perform wound care** after the client has been appropriately medicated for pain and fluids are being administered.

Additional Info

✓ Lactated Ringer's is commonly used as the fluid of choice for treating thermal burns because it may mitigate metabolic acidosis.

✓ Urine output is monitored closely to determine if the client is responding to treatment (0.5mL/kg/hr).

✓ The nurse should also monitor the mean arterial pressure (MAP) to determine if the client is responding (goal is > 65 mm Hg).

✓ Proper wound care is vital to prevent infection and promote healing. Nurses should follow sterile techniques when changing dressings and managing open burn wounds.

✓ Burn injuries can have a significant psychological impact on clients. Nurses should provide emotional support and involve mental health professionals as needed.

Source : Archer Review

Information Source

Ignatavicius, D., & Workman, M. L. (2020) *Medical-surgical nursing (*10th ed.). Elsevier. p. 462

Question 227

Type: single_choice

The nurse is providing discharge instructions to a client with a skin abscess that has tested positive for methicillin-resistant *Staphylococcus aureus* (MRSA). Which of the following instructions should the nurse include?

A. Avoid using alcohol-based hand sanitizer.

B. Use disposable dishes and utensils for all meals.

C. Wear a surgical mask when you are out in public.

D. Keep the wound covered with a dry bandage. ✔ Correct

Explanation

Choice D is correct. MRSA transmission requires contact with a colonized individual or contaminated surface. The nurse should advocate for appropriate infection control by advising the client to cover the wound with a dry clean bandage. This will help decrease the pathogen from being deposited onto surfaces.

Choice A is incorrect. Alcohol-based sanitizers are effective in the prevention of MRSA infections. If the pathogen is C. difficile, soap, and water must be used for hand hygiene because alcohol-based sanitizers cannot kill the spores.

Choice B is incorrect. Disposable dishes and utensils are unnecessary for MRSA infections, as hot water and detergents kill the pathogen.

Choice C is incorrect. The client transmits this pathogen by contact means, not droplets; thus, a mask is unnecessary.

Additional Info

✓ According to the Centers for Disease Control, the transmission of **MRSA** can be disrupted in the home through:

- Meticulous **hand hygiene** with soap and water or alcohol-based hand sanitizers.
- **Disinfect surfaces** with a cleaning agent such as 70% isopropyl alcohol. Alcohol-based cleaning agents are very effective in the case of MRSA disinfection, but not C. difficile. Alcohol can not kill the spores formed by C. difficile. Therefore, chlorine-releasing bleaching agents are used to disinfect surfaces contaminated with C. difficile.
- **Not sharing** contaminated towels, razors, or linens with others.
- **Keeping the wound covered** and disposing of used bandages in the trash.

✓ Emphasize the importance of following contact precautions, including the use of gloves and gowns when providing care to individuals with MRSA infections. Educate healthcare providers and visitors on proper infection control measures.

✓ Stress the need for routine and thorough environmental cleaning, especially in healthcare settings. Focus on high-touch surfaces and areas where MRSA may persist. Provide education on the proper use of disinfectants.

Question 228

Type: single_choice

Which client is at the highest risk for developing a decubitus ulcer among the following patients in a long-term care facility?

A. An incontinent client who had 3 diarrheal stools.

B. An 80-year-old ambulatory diabetic client.

C. A 79-year-old malnourished client on bed rest. ✔ Correct

D. An obese client who occasionally uses a wheelchair.

Explanation

Choice C is correct. Prolonged inadequate nutrition causes weight loss, muscle atrophy, and the loss of subcutaneous tissue. These three conditions reduce the amount of padding between the skin and bones, thus increasing the risk of pressure ulcer development. Specifically, inadequate protein, carbohydrates, fluids, zinc, and vitamin C intake contribute to pressure ulcer formation. Immobility resulting from prolonged bed rest is a risk factor. Several factors contribute to the formation of pressure ulcers: friction and shearing, immobility, inadequate nutrition, fecal and urinary incontinence, decreased mental status, diminished sensation, excessive body heat, advanced age, and certain chronic conditions.

Choice A is incorrect. Stool incontinence can be a source of skin irritation and contribute to pressure ulcer formation. However, it is not the highest risk for developing a decubitus ulcer. A malnourished client on bed rest is at the highest risk.

Choice B is incorrect. While diabetics may develop skin ulcers and experience slower healing times, ambulatory patients are not at risk for developing pressure sores.

Choice D is incorrect. As long as the client is ambulating, occasional wheelchair use and obesity are not significant risk factors for developing a decubitus ulcer.

Question 229

Type: multiple_response_all

➢ **Which assessment findings are most significant? Select all that apply.**

Answer Choices

A. Vital signs

B. Urinary hesitancy Correct

C. Aspirin prescription

D. Urine color

E. Urination at night Correct

F. Weak urinary stream Correct

Explanation

The most significant assessment findings are the client's reports of urinary hesitancy, urinary at night, and a weak urinary stream. These symptoms are not only new for the client, but he reports worsening. The client's vital signs and urine color are within normal limits, and the aspirin prescription would not relate to his current urinary problems.

Question 230

Type: ngn_multiple_choice

➢ **Which factor best explains the client's symptoms?**

A. Alterations in antidiuretic hormone

B. Obstructed urinary tract ✔ Correct

C. Urinary stone formation

D. Increased bladder control

Explanation

The best explanation for the client's symptoms is an obstructed urinary tract. Age-related prostate hyperplasia is likely occurring and weakening his urinary stream and causing him to dribble in his underwear. No manifestations that the client is reporting coincide with antidiuretic hormone level alterations. The client is experiencing a decrease in bladder control – not an increase. The client does not convey flank pain, so urinary stone formation is excluded.

Question 231

Type: drop_down_cloze

➢ **Complete the following sentence by using the list of options**

Sentence Structure

The client is demonstrating manifestations consistent with **[Dropdown]**

Dropdown Options & Correct Answer

Dropdown #1

- urolithiasis.
- stress incontinence.
- cystitis.
- **prostate hyperplasia.** Correct

Correct Answer: prostate hyperplasia.

Explanation

- The client is demonstrating a risk of developing prostatic hyperplasia based on the manifestations of weak urinary stream, nocturia, and dribbling in his underwear. This is likely causing him to develop overflow incontinence – not stress incontinence which is characterized by a weak urinary sphincter.
- The client does not report any pain with urination, and this excludes urolithiasis and cystitis.

Question 232

Type: multiple_response_all

➢ **Which orders does the nurse anticipate from the primary healthcare provider (PHCP)? Select all that apply**

Answer Choices

A. Urine analysis Correct

B. Post-void bladder scan Correct

C. Insertion of indwelling urinary catheter

D. Testicular ultrasound

E. Digital rectal exam Correct

Explanation

An order urine analysis to exclude infection and identify any abnormalities will be anticipated. Further, a post-void bladder scan will be done to determine the amount of residual urine in the client's bladder. Finally, a digital rectal exam will be performed, where the examiner will palpate the enlarged prostate.

An indwelling urinary catheter is unnecessary and could expose the client to infection. A testicular ultrasound would be useful if the client had testicular pain, which this client does not report.

Question 233

Type: ngn_multiple_choice

The physician has diagnosed the client with benign prostatic hyperplasia (BPH)

➢ **The nurse reviews the client's current medications and plans to question which prescription?**

A. lisinopril

B. nortriptyline ✔ Correct

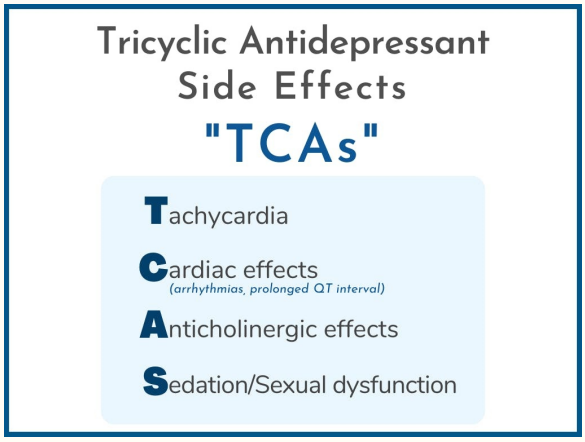
C. clonidine

D. aspirin

Explanation

- Nortriptyline is a tricyclic antidepressant that has anticholinergic properties, which can worsen symptoms of benign prostatic hyperplasia (BPH) by causing urinary retention. This is a significant concern in individuals with BPH, as urinary retention is already a common symptom due to prostate enlargement.
- Lisinopril – An ACE inhibitor used for hypertension; does not affect urinary function or the prostate.
- Clonidine – A centrally acting antihypertensive; not known to worsen BPH symptoms.
- Aspirin – An antiplatelet agent; no direct effect on prostate or urinary function in BPH.

Additional Info



Question 234

Type: multiple_response_all

The physician orders the client to be discharged and prescribes tamsulosin

The nurse educates the client on the prescribed tamsulosin.

➢ Which statement, if made by the client, would indicate a need for follow-up? **Select all that apply.**

Answer Choices

A. "This medication may cause me to urinate more often." Correct

B. "It will be important for me to change positions slowly."

C. "I may notice an increase in my blood pressure." Correct

D. "My urine will change to an orange or red color." Correct

E. "I should notify my doctor if I have persistent dizziness."

Explanation

- Tamsulosin is an alpha antagonist and causes vasodilation; thus, relaxing the prostate provides the client with symptom relief.
- It would require follow-up if the client states that the medication will cause them to urinate more often as this medication is not a diuretic. In fact, it would decrease the number of times the client will urinate because the client can empty the bladder completely.
- This medication may cause a decrease in blood pressure because of its vasodilation effects. Thus, persistent dizziness should be reported because the dose may need to be adjusted.
- The client should change positions slowly because of the risk of orthostatic hypotension.
- The medication does not cause changes to the color of the urine. Drugs causing urine discoloration include phenazopyridine and rifampin.

Question 235

Type: single_choice

The sense of hearing is assessed using which standardized test?

A. Taylor test

B. Rinne test ✔ Correct

C. Babinski test

D. APGAR test

Explanation

Choice B is correct. The sense of hearing is assessed using the Rinne test, Weber test, and a tuning fork.

Choice A is incorrect. A Taylor hammer, not a Taylor test, is used to check reflexes like the biceps and triceps reflexes.

Choice C is incorrect. The Babinski sign occurs when the foot goes into dorsiflexion and the great toe curls up; this sign is an abnormal response to this stimulation and can indicate the presence of neurological lesions.

Choice D is incorrect. The APGAR test is used to assess the neonate immediately after birth in terms of the infant's appearance, grimace, reflexes, skin color, and respiratory rate/effort.

NCSBN Client Need Topic: Health Promotion and Maintenance, **Subtopic**: sensation, Perception & Cognition

Question 236

Type: multiple_response_all

The nurse is conducting a health screening at a local health fair. Which of the following should the nurse recognize as an increased risk for developing primary open-angle glaucoma? **Select all that apply.**

Answer Choices

A. Blue eyes

B. Older age Correct

C. African ethnicity Correct

D. Diabetes mellitus Correct

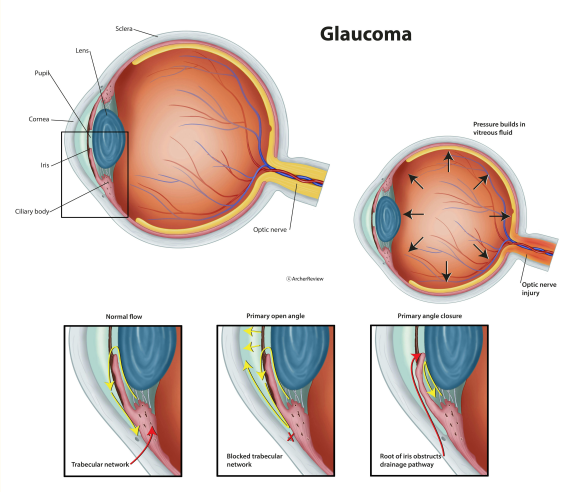
E. Use of contact lenses

Explanation

Choices B, C, and D are correct. Risk factors for primary open-angle glaucoma (POAG) include **hypertension**, **African American ethnicity**, **family history**, and **diabetes mellitus**, all of which can increase intraocular pressure (IOP).

Choices A and E are incorrect. **Eye color** and **using corrective lenses** do not increase POAG risk.

Additional Info



Question 237

Type: single_choice

The nurse reviews a client's medical history and identifies a diagnosis of presbycusis. The nurse should integrate which intervention in the care plan?

A. Have educational materials in large print

B. Provide an eye patch to the affected eye

C. Request food be seasoned with herbs

D. Move closer to the better-hearing ear ✔ Correct

Explanation

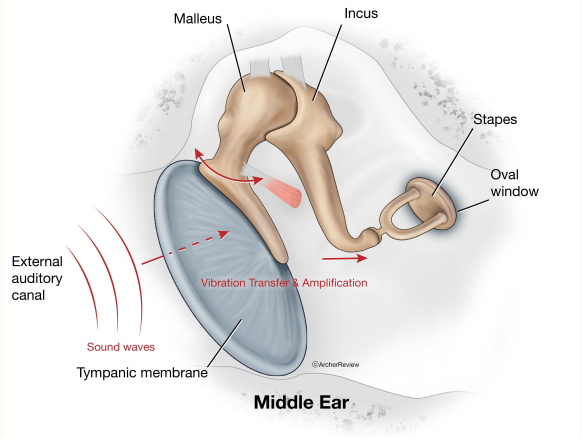
Choice D is correct. Presbycusis is a type of sensorineural hearing loss associated with aging. Sensorineural hearing loss is often permanent. Interventions for a client with this type of hearing loss include speaking in the ear less affected, speak clearly and slowly, avoid shouting, and ensure that the environment is well lit while conversing.

Choices A, B, and C are incorrect. Presbycusis is a type of sensorineural hearing loss, and interventions such as having large print for reading materials, wearing an eye patch, and seasoning food are not relevant to this condition.

Additional Info

Hearing loss is divided into sensorineural or conductive.

- **Conductive hearing loss** is caused by obstruction. Causes of this type of hearing loss include cerumen, foreign body, water, edema, infection, or tumor. This type of hearing loss may be reversible.
- Impairments of the nerve fibers cause **sensorineural hearing loss**. Causes of this type of hearing loss include prolonged exposure to noise, ototoxic substances (aminoglycosides), diabetes mellitus, and presbycusis (age-related hearing loss). This type of hearing loss is often not reversible.



Source : Archer Review

Question 238

Type: Audio / Graphic

The nurse is caring for a client who has been diagnosed with macular degeneration. Which of the following images represent the visual field of a client with macular degeneration?

Choice A

Choice B

Choice C

Correct

Choice D

Explanation

Choice C is correct. This represents what a client with macular degeneration would see. Their **peripheral vision remains intact,** while the **central area becomes darker** and darker until there is a **spot in the center of their visual field through which they cannot see**.

Choice A is incorrect. This represents what a client with **end-stage glaucoma** would see. End-stage glaucoma will show a **very constricted** visual field with the **loss of peripheral vision by causing damage to the optic nerve.**

Choice B is incorrect. This represents what a client with cataracts would see. It shows a **uniformly blurred** image. Cataracts affect the visual field reasonably consistently. Cataracts cause visible degradation by three mechanisms: image blur, light scattering, and decreased illumination.

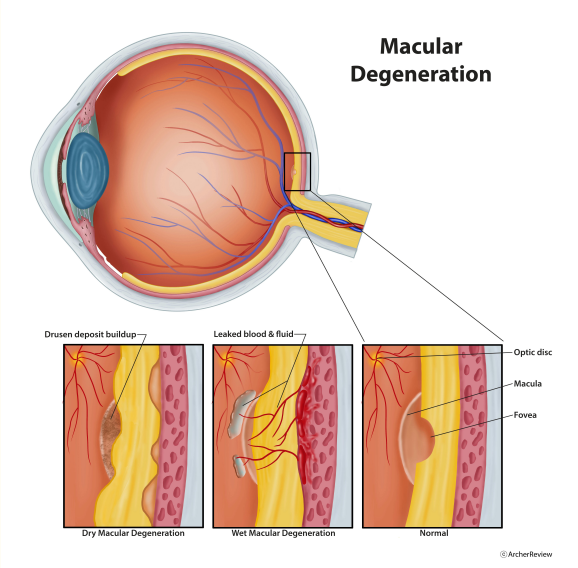
Choice D is incorrect. This represents what a client would see if they had a **detached retina**. It is often described as a "**curtain coming down over their field of vision".** This is a medical emergency.

Additional Info

✓ Recommend the use of magnifying glasses, large-print reading materials, and electronic visual aids to help the client maintain independence in daily activities.

✓ Educate the client and their family about macular degeneration, its progression, and management strategies. Discuss the importance of regular eye exams and monitoring for changes in vision.

✓ Age-related macular degeneration (AMD) affects approximately 11 million people in the United States. This number is expected to double to nearly 22 million by 2050 due to the aging population .



Source : Archer Review

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 239

Type: single_choice

The nurse is caring for a client who has developed retinal detachment. Which of the following actions should the nurse take **first**?

A. Instruct the client to restrict activity ✔ Correct

B. Establish a vascular access device

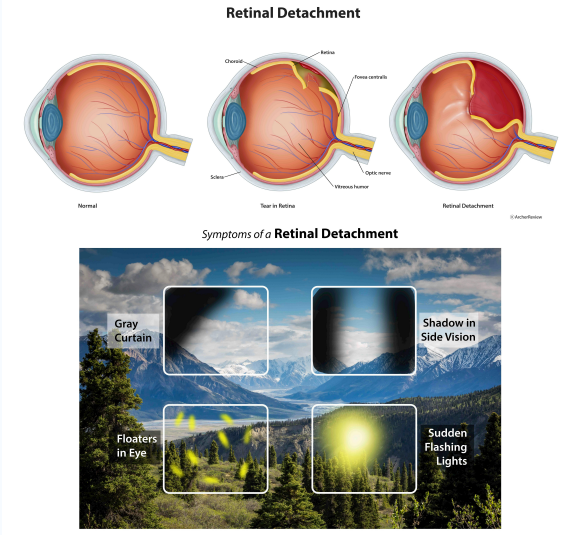
C. Review the client's current medications

D. Educate the client about topical eye ointments

Explanation

Choice A is correct. A retinal detachment is an ocular emergency. The client moving may hasten the detachment. It is important to inform the client to restrict their activity, and the nurse should apply an eye patch to the affected eye.

Choices B, C, and D are incorrect. A client with a retinal detachment will likely need surgery. Obtaining the client's current medications, establishing vascular access, and educating the client about topical eye ointments that will be prescribed does not prioritize over instructing the client to restrict their head movements. Delaying the instruction of informing the client to restrict their head movements may worsen the detachment.



Source : Archer Review

Additional Info

✓ A retinal detachment is a serious ocular condition that occurs suddenly and is painless.

✓ The client often describes bright flashes of light or floating dark spots in the eye.

✓ Aging and ocular injury are common causes of retinal detachment.

✓ The client should seek emergent medical treatment, as surgery is the remedy.

Question 240

Type: single_choice

The nurse is assessing a client with age-related cataracts. Which of the following assessment findings would support this diagnosis of age-related cataracts?

A. peripheral vision loss

B. central vision loss

C. difficulty seeing at night, especially while driving ✔ Correct

D. blurred vision with headache

Explanation

Choice C is correct. Age-related cataracts are caused by the formation of opacities in an individual's lens. Almost all individuals who are 75 have some degree of cataracts. Age-related cataracts are *painless* and include the individual reporting blurred vision, difficulty driving (especially at night), and decreased color perception. Cataracts are progressive and may be treated with an outpatient procedure (phacoemulsification).

Choice A is incorrect. Peripheral vision loss is a characteristic of glaucoma. This is not a manifestation consistent with cataracts.

Choice B is incorrect. Central vision loss is consistent with macular degeneration. This is not a manifestation consistent with cataracts.

Choice D is incorrect. Age-related cataracts are painless, and although the client will have blurring of their vision, headache is not an expected finding.

Additional Info

✓ Cataracts cause an individual to have blurred vision related to developing opacities in the lens.

✓ Most cases of cataracts are age-related and may affect only one eye.

✓ Excessive exposure to ultraviolet (UV) light hastens the risk of cataracts.

✓ An individual with cataracts may report blurred or double-vision that is worse at night and decreased color perception. Without surgery, the condition is progressive.

Information Source

Ignatavicius, D., Workman, M. L. (102020). Medical-Surgical Nursing, 10th Edition. p. 939

Question 241

Type: single_choice

The nurse is caring for a client with angle-closure glaucoma.

➢ Which prescription should the nurse anticipate from the primary healthcare provider (PHCP)?

A. timolol ✔ Correct

B. hydroxyzine

C. phenylephrine

D. imipramine

Explanation

Choice A is correct. Timolol is an intraocular beta-blocker and is effective in treating angle-closure glaucoma. This medication is indicated for this ocular emergency as it lowers intraocular pressure (IOP).

Choice B is incorrect. Hydroxyzine is an anticholinergic medication intended to treat allergies. This anticholinergic medication would worsen glaucoma because of its propensity to increase IOP.

Choice C is incorrect. Phenylephrine is a medication intended to raise blood pressure. Raising blood pressure would not be helpful for a client with increased IOP.

Choice D is incorrect. Imipramine is a tricyclic antidepressant (TCA). This medication is strongly anticholinergic and should not be given to individuals with increased IOP.

Additional Info

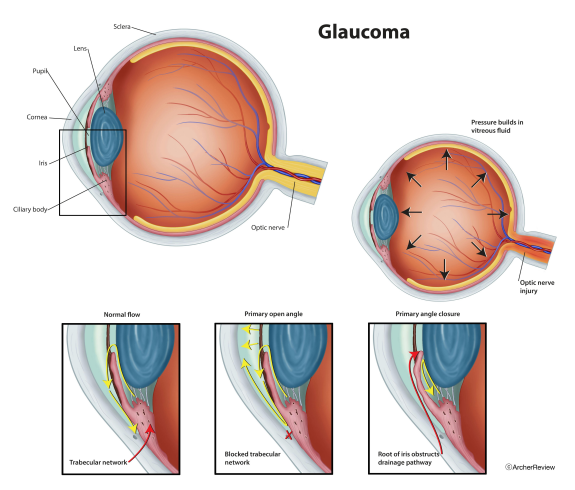
✓ Angle-closure glaucoma is an ocular emergency that occurs when the intraocular pressure exceeds 30 mm Hg (normal is 10-21 mm Hg).

✓ The client may experience ipsilateral headache, brow pain, nausea, and blurred vision.

✓ Emergent prescriptions such as timolol eye drops are used to lower intraocular pressure.

✓ Other useful agents include oral/intravenous acetazolamide.

✓ The client should be supine, which will assist in the lens falling away from the iris, decreasing the pupillary block.



Source : Archer Review

Question 242

Type: multiple_response_all

The nurse is developing a care plan for a client with a hearing impairment. Which of the following interventions should the nurse take? **Select all that apply.**

Answer Choices

A. Ensure that the room is well lit when communicating with the client. Correct

B. Use non-verbal forms of communication like gestures and sign language, if applicable. Correct

C. Speak loudly and shout when communicating with the client.

D. Face the client directly when speaking. Correct

E. Provide written information as needed. Correct

Explanation

Choices A, B., D, and E are correct.

A is correct.
Adequate lighting is necessary for the client to see the nurse's facial expressions and lip movements, which can help them understand what the nurse is saying.

B is correct. Non-verbal communication can be beneficial for clients with hearing impairments. Using gestures and sign language can aid in the communication process.

D is correct. When speaking to the client, the nurse should face them directly. This allows the client to use lip reading and visual cues to understand the conversation better.

E is correct. Providing written information can be beneficial for clients with hearing impairments, especially for complex or essential information. This ensures that the client has all the information needed, even if some verbal communication is not understood.

Choice C is incorrect.

C is incorrect. Shouting or speaking loudly can distort speech sounds and make it harder for the client to understand. The nurse should speak at a normal volume, enunciate clearly, and slow down if necessary.

Additional Info

Nursing Communication and Care Tips for the Hearing-Impaired Client

✓Ensure the environment is well-lit to assist the client in reading lips and understanding facial expressions.

✓Use gestures, facial expressions, and sign language (if known by the client) to assist in communication.

✓Always face the client directly when speaking to assist with lip reading.

✓Articulate your words clearly and speak at a moderate pace, but avoid shouting as it may distort speech sounds and cause confusion.

✓Offer written materials or use whiteboards to convey essential instructions or information to ensure the client understands them.

✓Encourage hearing aids or cochlear implants if the client has them. Make sure they are functioning well.

✓Reduce background noise as much as possible when communicating. This can help the client focus on the conversation better.

✓Educate the client on the importance of regular follow-ups, assistive devices, and coping strategies to manage their condition.

✓Involve the family or significant others in the communication process. They can be instrumental in reinforcing teaching and supporting the client.

✓Always validate that the client has understood the information or instructions provided. This can be done by asking them to repeat it to you or demonstrate understanding.

Information Source

Workman, D.I.M. L. (2021). Medical-Surgical Nursing (10th ed.)

Question 243

Type: multiple_response_all

The nurse is developing a discharge plan for a client who had a phacoemulsification procedure. Which of the following should the nurse include?

Select all that apply.

Answer Choices

A. Teach the client how to instill eye drops. Correct

B. Instruct the client not to lie on the affected side. Correct

C. Remind the client that a reduction of vision is normal.

D. Provide the client with an eye patch for the affected eye. Correct

E. Educate the client to avoid bending at the waist. Correct

Explanation

Choices A, B, D, and E are correct. Post-procedure, the client should be taught how to instill eye drops. If not the client, then a family member or friend. The client should not lie on the operative side, and an eye patch may be given to protect the eye from injury while they are sleeping. Any activities such as bending at the waist, coughing, or

vomiting should be avoided as they raise the intraocular pressure.

Choice C is incorrect. A reduction of vision after the procedure is highly concerning. *This report should be reported to the surgeon.* The client often experiences an enhancement of vision following this procedure – not a reduction. Additionally, if the client starts to exhibit purulent drainage from the operative site, that should be reported to the surgeon.

Additional Info

A phacoemulsification procedure is utilized for clients with cataracts. This procedure often is combined with an intraocular lens implant. The crux of the procedure is that it utilizes sound waves to break up the clouded lens, which is then removed by suction. The client should be taught that intraocular eye drops will be needed after this procedure, avoid doing any activities that raise the intraocular pressure (bending at the waist, coughing, vomiting), and that a reduction of vision should be reported promptly.

Question 244

Type: single_choice

The nurse is performing a physical assessment on a client.

➢ To assess the client's visual acuity, the nurse would use a

A. Snellen chart. ✔ Correct

B. tonometer device.

C. penlight.

D. slit lamp.

Explanation

Choice A is correct. Having a client stand 20 feet away from a Snellen chart is an appropriate assessment tool to determine a client's visual acuity. Snellen chart can be used to diagnose myopia (near-sightedness) and hyperopia (far-sightedness). While using a Snellen chart, the normal vision at a distance is set at 20/20. The numerator represents the distance that the client is away from the chart (in feet). The denominator represents the distance at which a person with normal vision can clearly read the smallest font that the patient perfectly sees at 20 feet.

Choice B is incorrect. A tonometer device is used to determine intraocular pressure. The normal intraocular pressure is generally between 10- and 20 mm Hg. A tonometer helps diagnose ocular problems such as glaucoma.

Choice C is incorrect. A penlight can be used for various ocular assessments, including if the pupils are reactive to light.

Choice D is incorrect. A slit lamp is a tool used by an advanced provider that may determine any abnormality in the cornea, lens, or anterior vitreous humor.

Additional Info

✓ When using a Snellen chart, the client is instructed to stand 20 feet away from the chart, keep glasses on and contact lenses in (if they have them), then cover the eye not being tested as they read aloud the line with the smallest letters they can see.

✓ The results are expressed as a fraction where 20/20 is considered optimal.

✓ For example, if a client has a visual acuity of 20/40, that means an individual with 20/40 vision sees things at 20 feet that most people who don't need vision correction can see at 40 feet.

Information Source

Ignatavicius, D. D., Rebar, C. R., & Heimgartner, N. M. (2024). *Medical-surgical nursing: Concepts for clinical judgement and collaborative care* (11th ed.). Elsevier. p. 48

Question 245

Type: multiple_response_all

The nurse is caring for a client with Meniere's Disease. Which of the following assessment findings would be expected? **Select all that apply.**

Answer Choices

A. Presbyopia

B. Tinnitus Correct

C. Vertigo Correct

D. Dyskinesia

E. Hearing loss Correct

Explanation

Choices B, C, and E are correct. The cardinal features of Meniere's disease include sensorineural hearing loss, vertigo, and tinnitus. These features relapse and remit and can be debilitating.

Choices A and D are incorrect. Presbyopia is age-related farsightedness that is not a feature of Meniere's disease. Dyskinesia is difficult motor movements which is not a finding with this condition.

Additional Info

Meniere's disease is a condition that is caused by excessive endolymphatic fluid in the inner ear. This relapsing and remitting disease may bring bouts of tinnitus, vertigo, and hearing loss. Treatment includes diuretics, antiemetics, antihistamines, and a diet low in sodium.

Question 246

Type: single_choice

The nurse is assessing a client with drooping of their left eyelid. The nurse documents this finding as

A. mydriasis.

B. ptosis. ✔ Correct

C. presbyopia.

D. hyphema.

Explanation

Choice B is correct. Ptosis is drooping of the eyelid. Ptosis may be congenital or acquired and may be a clinical feature of neurological conditions such as myasthenia gravis or multiple sclerosis.

Choice A is incorrect. Mydriasis is the dilation of the pupil. This is not drooping of the eyelid. Mydriasis may be caused by the fight or flight response and certain medications such as central nervous stimulants.

Choice C is incorrect. Presbyopia is age-related vision loss that causes farsightedness. This is progressive and may be corrected with glasses or contact lenses.

Choice D is incorrect. Hyphema is blood in the anterior chamber of the eye. This is commonly caused by blunt trauma to the eye.

Additional Info

✓ Ptosis is eyelid drooping, which may be congenital or acquired.

✓ Ptosis may be a manifestation associated with neurological conditions such as multiple sclerosis, stroke, and myasthenia gravis.

✓ If ptosis is congenital, surgery may be done to correct it.

Question 247

Type: single_choice

The nurse is assessing a client who has a suspected retinal detachment.

➢ Which of the following client statements would be consistent with this diagnosis?

A. "My vision has a cloudy appearance."

B. "I have intense pain above my eyebrow."

C. "I am having difficulting seeing while driving at night."

D. "I can see bright flashes of light." ✔ Correct

Explanation

Choice D is correct. Seeing bright flashes of light (photopsia) is a classic early symptom of retinal detachment. This

occurs because as the retina begins to pull away from its normal position, the mechanical traction stimulates the retinal cells, which the brain interprets as flashes of light. These flashes can occur in one or both eyes and may be accompanied by the sudden appearance of floaters or a shadow over the visual field. This symptom should prompt urgent evaluation to prevent permanent vision loss.

Choice A is incorrect. A cloudy or blurry vision typically points to problems with the eye's lens or cornea, such as cataracts, where the normally clear lens becomes opaque over time. This opacity scatters light, causing vision to become hazy or foggy. Retinal detachment, on the other hand, affects the retina, the light-sensitive layer at the back of the eye, and does not usually cause a general cloudiness in vision. Instead, retinal detachment tends to cause more distinct visual disturbances like flashes, floaters, or shadows.

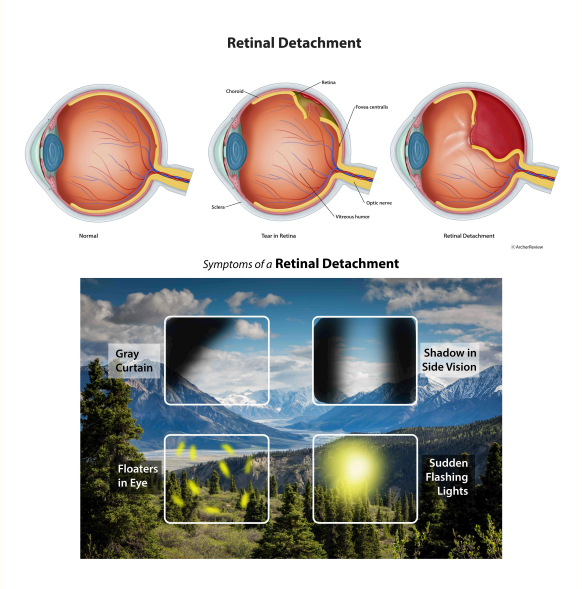
Choice B is incorrect. Retinal detachment is generally painless because the retina itself lacks pain receptors. Intense pain above the eyebrow is more characteristic of other conditions, such as sinusitis, migraines, cluster headaches, or even glaucoma (which causes eye pain but not specifically above the eyebrow). Pain is not a typical symptom because retinal detachment involves a separation of retinal tissue rather than inflammation or infection.

Choice C is incorrect. Difficulty with night vision, or "night blindness," is often linked to disorders affecting the rods of the retina or lens problems, such as cataracts or retinitis pigmentosa. These conditions cause decreased ability to see in low light. While retinal detachment may eventually cause vision loss, it does not usually start with isolated night vision difficulty. Its onset is often more sudden and dramatic, involving flashes of light, floaters, or a shadow or curtain effect.

Additional Info

Nursing care for a client with a suspected (or confirmed) retinal detachment

- Encourage the client to have bed rest
- Apply an eye patch to both eyes
- Instruct the client to avoid sudden movements
- Prepare the client for surgery, as directed



Source : Archer Review

Question 248

Type: single_choice

The nurse is caring for a client who sustained injuries from a light bulb explosion. On assessment, the nurse notes that a piece of glass was lodged in the client's eye.

➢ The **initial** nursing intervention should be which of the following?

A. Attempt to carefully remove the glass from the eye

B. Reassure the client that everything is okay

C. Administer a sedative for pain relief

D. Advise the client to remain in a sitting position until a specialist arrives ✔ Correct

Explanation

Choice D is correct. To prevent the intraocular pressure (IOP) from increasing, the client should be advised to remain seated, as the lying position may increase IOP and cause the glass to advance further into the eye. The nurse should also recommend the client rest and avoid unnecessary movement until a specialist (typically an ophthalmologist on call) arrives to evaluate the client.

Choice A is incorrect. In cases of penetrating wounds, a nurse should never attempt to remove the foreign body (such as this piece of glass from a lightbulb) from the client's eye, as the object could tear or rupture the internal ocular structure, resulting in further damage, permanent damage, and/or blindness.

Choice B is incorrect. The nurse may reassure the client that medical help is on the way and remain with the client

until the specialist arrives. Conversely, the nurse should avoid providing false reassurance with statements broadly informing the client, "[e]verything will be okay," as these statements undermine the nurse's credibility and hamper any potential attempt by the client to express concern. False reassurance is inappropriate.

Choice C is incorrect. The nurse must not administer any sedative unless ordered by a health care provider. Additionally, sedatives are not the class of medications typically utilized for pain relief.

Additional Info

✓ Surface foreign bodies are often removed with irrigation (i.e., Morgan lens, etc.) and a moistened cotton-tipped applicator.

✓ Intraocular foreign bodies, or any penetrating injuries, are treated surgically by an ophthalmologist.

✓ Document all findings accurately, including the time of injury, mechanism, and any initial symptoms observed.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 249

Type: single_choice

The nurse is caring for a client with a hyphema. The nurse should plan to take which action?

A. Shield the affected eye. ✔ Correct

B. Place the client supine.

C. Apply a cold compress to the eye.

D. Request a prescription for aspirin.

Explanation

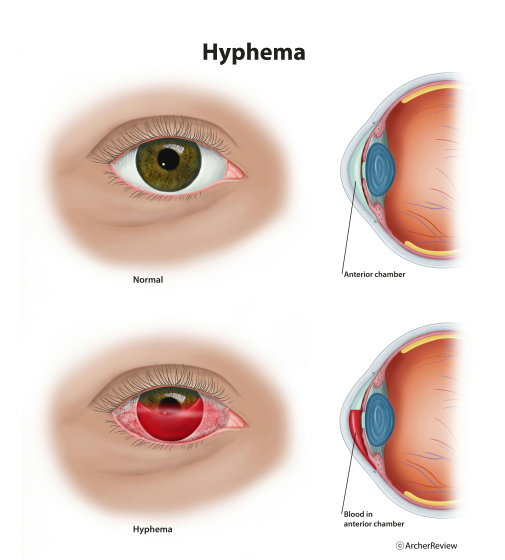
Choice A is correct. The initial nursing priorities for a hyphema are shielding the affected eye and raising the head-of-the bed to 30 degrees.

Choices B, C, and D are incorrect. Placing a client supine would aggravate the injury. The purpose of raising the head-of-the-bed to 30 degrees is because it promotes the settling of blood in the anterior chamber away from the visual axis. Cold compression of the eye would not be helpful. This compression may raise intraocular pressure which would be contraindicated. Aspirin and NSAIDs should be avoided because of their platelet inhibition which will promote more bleeding.

NCLEX Category: Physiological Adaptation

Activity Statement: Illness management

Question type: Knowledge/comprehension



Source : Archer Review

Additional Info

A hyphema is an ocular emergency caused by blood in the anterior chamber. This injury results from trauma and should be addressed promptly. Initial nursing actions include:

✓ Elevation of the head of the bed to 30 degrees. This will keep the blood below the visual axis.

✓ Application of an eye shield to the affected eye. This will prevent further injury.

✓ Prescribed pain medication should not include aspirin or NSAIDs.

✓ Educate the client to avoid any activity that raises the intraocular pressure, such as bending at the waist, vomiting, or coughing.

Question 250

Type: single_choice

The nurse is providing discharge instructions to a client who underwent left eye cataract surgery with a lens implant. Which statement by the client would indicate a correct understanding of the teaching?

A. "I should avoid getting water in the eye for 3 to 7 days after surgery." ✔ Correct

B. "It is okay for me to resume normal chores such as vacuuming."

C. "It is okay for me to have green or yellow, thick drainage from the eye."

D. "I may take aspirin for any pain I may experience."

Explanation

Choice A is correct. This statement indicates effective teaching by the nurse. Following cataract surgery, the client should not get water in the affected eye for three to seven days. This measure will reduce the potential for infection.

Choices B, C, and D are incorrect. Following cataract surgery, the client may resume light chores, but activities that may increase the intraocular pressure (normal is 10-21 mm Hg), such as vacuuming, should be avoided for several weeks because of the forward flexion involved and the rapid, jerky movements. Other activities that may raise the intraocular pressure that should be suspended include lifting objects heavier than 10 pounds, straining, vomiting, sexual intercourse, and keeping the head in a dependent position. Creamy, white drainage is normal that may cause crusting (especially in the morning); however, yellow or green drainage is suggestive of infection. Aspirin should not be taken because of its impact on blood clotting; acetaminophen is preferred for pain control. Cool compresses and acetaminophen are generally permitted.

Additional Info

✓ Following cataract surgery, the nurse should educate the client about the prescribed eye drops they will need. It is helpful to write this information out so it may be later referenced.

✓ The nurse should emphasize the need for appropriate follow-up.

✓ Most clients experience a dramatic improvement in their vision following this procedure. However, the maximum benefit may be delayed for up to several weeks.

✓ The nurse should instruct the client to avoid activities that can raise the IOP, such as sexual intercourse, tight shirt collars, and straining during a bowel movement.

Question 251

Type: multiple_response_all

The nurse is discussing ocular disorders with a group of nursing students. Which of the following statements would be correct for the nurse to make?

Select all that apply.

Answer Choices

A. Cataracts are caused by increased ocular pressure (IOP).

B. Graves' disease may cause exophthalmos. Correct

C. Macular degeneration is manifested by loss of peripheral vision.

D. Angle-closure glaucoma is manifested by headache and eye pain. Correct

E. Hyphema results in increased aqueous humor in the anterior chamber.

Explanation

Choice B is correct. Graves' disease may cause a client to develop exophthalmos. Exophthalmos causes abnormal protrusion of the eyes.

Choice D is correct. Angle-closure glaucoma is a medical emergency where the IOP is greater than 30 mmHg, and the client has manifestations such as eye pain, headache, blurred vision, and reddened eye appearance.

Choice A is incorrect. Increased IOP is a central feature of glaucoma. Cataracts are a disorder of the lens as it

causes the client to have difficulty discriminating colors and seeing in low light. Opacities can commonly be seen in the affected eye.

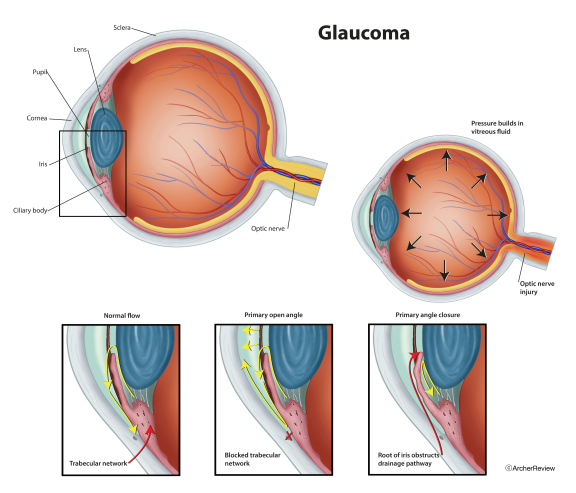
Choice C is incorrect. Macular degeneration causes central vision loss, not vision loss in the peripheral fields. This condition is age-related and worsens if the individual smokes.

Choice E is incorrect. A hyphema is caused by blood in the eye's anterior chamber. This is commonly caused by eye trauma.

Additional Info

✓ A hyphema is an ocular emergency caused by blood in the anterior chamber. This injury results from trauma and should be addressed promptly with interventions such as elevating the head of the bed to 30 degrees and shielding the affected eye.

✓ Angle-closure glaucoma is an ocular emergency that requires the client to receive prescribed agents such as timolol to lower intraocular pressure. The client should be supine, which will assist in the lens falling away from the iris, decreasing the pupillary block.



Source : Archer Review

Question 252

Type: single_choice

The nurse is caring for a client following a cataract removal from their left eye.

➢ Which statement by the client's wife indicates an understanding of the post-operative care instructions?

A. "He should sleep on his left side."

B. "He should sleep on his right side." ✔ Correct

C. "I will need to give him postoperative antibiotic eye drops every hour."

D. "He needs to sleep sitting completely upright."

Explanation

Choice B is correct. This client would be the safest sleeping on their right side. This helps prevent edema in the operative eye. This client would also benefit from being placed in a semi-Fowler's position.

Choice A is incorrect. This client should not sleep on their left side. This may increase the potential for swelling, increased pressure, and bleeding.

Choice C is incorrect. A client recovering from cataract surgery will be prescribed a short course of ocular antibiotics, but they will not need to be administered hourly. Hourly ocular antibiotics are typically prescribed for a cornea ulcer.

Choice D is incorrect. Sleeping completely upright following this surgery is not necessary. The client should avoid sleeping on the operative side and wear the ordered eye shield. The eye shield is usually worn for up to one week.

Additional Info

✓ Following cataract surgery, the nurse should educate the client about the prescribed eye drops they will need. It is helpful to write this information out so it may be later referenced.

✓ The nurse should emphasize the need for appropriate follow-up.

✓ Most clients experience a dramatic improvement in their vision following this procedure. However, the maximum benefit may be delayed for up to several weeks.

✓ The nurse should instruct the client to avoid activities that can raise the IOP, such as sexual intercourse, tight shirt collars, and straining during a bowel movement.

Question 253

Type: single_choice

The med-surge nurse receives a report on a client who is legally blind. Which action by the nurse would be **most** likely to reduce this client's anxiety?

A. Assign the client to a private room.

B. Orient the client to their room. ✔ Correct

C. Request for a sitter to be assigned.

D. Instruct the UAP to check on the client frequently.

Explanation

Choice B is correct. The nurse should meet the client upon arrival to the unit and should describe the layout of the room using a focal point and directions. The nurse should include information about calling for help when needed. These measures will reduce the client's anxiety as well as promote the client's independence and safety.

Choice A is incorrect. A client would not require a private room due to visual impairment. These rooms should be reserved for clients with impaired immunity or transmittable diseases. Being placed in a private room would not necessarily directly mitigate the client's anxiety.

Choice C is incorrect. A client's visual impairment would not be a reason to assign a sitter automatically. If the nurse assesses the client to be a safety risk, the nurse may consider interventions such as requesting a sitter or moving the client to a room close to the nurse's station. Still, these would not relate to reducing the client's anxiety.

Choice D is incorrect. Without having first assessed the client's level of impairment/functional status, the nurse would not know if more frequent monitoring would be appropriate. It is not suitable for the nurse to delegate this action until the client has been assessed.

Additional Info

✓ Before approaching the client, the nurse should introduce themselves by name and identify their role. This helps establish a sense of trust and lets the client know who is speaking to them.

✓ Speak in a calm and clear voice while facing the client. Let them know when you are entering or leaving the room to avoid startling them.

✓ Orient the client to their surroundings by describing the room layout, including the location of furniture and the bathroom. Use the client's non-visual senses (e.g., touch, hearing) to assist them in understanding their environment.

Question 254

Type: single_choice

The nurse is caring for a client with suspected retinal detachment. Which of the following manifestations would not be consistent with a diagnosis of retinal detachment?

A. Seeing “floaters” in the field of vision

B. A sense of having a curtain drawn over the eyes

C. Flashes of light

D. Intense pain in the affected eye ✔ Correct

Explanation

Choice D is correct. Intense pain is not generally associated with retinal detachment. Retinal detachment may present with floaters in the field of vision, partial loss of sight, and increasingly blurred images. Some clients feel like a curtain has been drawn over their eyes. Other individuals may report flashes of bright light. Intense ocular pain may be a manifestation associated with angle-closure glaucoma.

Choice A is incorrect. Floaters in the field of vision are all common symptoms associated with retinal detachment. Clients may also lose sight in a portion of the visual field and have increasingly blurred vision.

Choice B is incorrect. A sense of having a curtain drawn over the eyes is a commonly reported symptom of retinal detachment.

Choice C is incorrect. Seeing flashes of light is a common symptom associated with retinal detachment. Clients may also lose sight in some visual fields and have increasingly blurred vision.

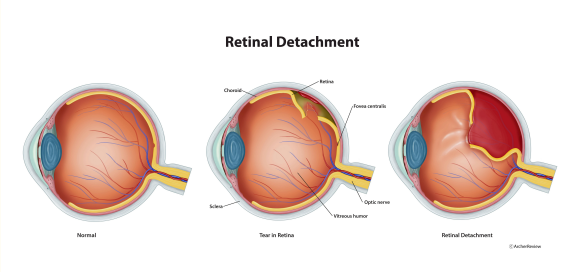
Additional Info

✓ A retinal detachment is a serious ocular condition that occurs suddenly and is painless.

✓ The client often describes bright flashes of light or floating dark spots in the eye.

✓ Aging and ocular injury are common causes of retinal detachment.

✓ The client should seek emergent medical treatment, as surgery is the remedy.



Source : Archer Review

Question 255

Type: single_choice

The nurse is caring for a client with acute angle-closure glaucoma of the right eye. It would be correct to place the client in which position?

A. Trendelenburg

B. Supine ✔ Correct

C. Right lateral decubitus with head end elevated

D. Prone

Explanation

Choice B is correct. The client with **acute angle-closure glaucoma** should be placed supine, which will assist in the lens falling away from the iris, mechanically helping to relieve angle closure and decreasing the pupillary block. Clients with open-angle glaucoma (OAG) are advised to sleep with their heads elevated to about 30 degrees. However, there is insufficient evidence to recommend the same for angle closure glaucoma. The supine position is widely accepted for angle-closure glaucoma.

Choices A, C, and D are incorrect. Lateral decubitus, prone, and trendeleburg are all positions that can significantly increase the IOP. Therefore, they are unhelpful in the management of angle-closure glaucoma. Placing the client supine will enable the treatment (mannitol, acetazolamide) to achieve its objective of reducing the pupillary block by separating the lens from the iris.

- Trendelenburg position can significantly increase the IOP. Surgeons should be aware of this effect in glaucoma clients that are placed in the Trendelenburg position during surgery (choice A)
- The lateral decubitus position increases the IOP in the dependent eye. In this case, the right eye is affected, and lying in the right lateral position will exacerbate the angle closure of glaucoma (choice C).
- In a prone position, the lens-iris diaphragm moves forward, tending to occlude an anatomically predisposed angle and further increasing intra-ocular pressure (choice D).

Additional Info

✓ Angle-closure glaucoma differs from open-angle glaucoma. Most studies regarding posture-related changes in intraocular pressure (IOP) were done in patients with open-angle glaucoma. Because the IOP increases slightly from sitting to a supine position, clients with **open-angle glaucoma** are advised to sleep with their heads **elevated to about 30 degrees**. However, there are no significant evidence-based studies to recommend head-end elevation in acute angle closure glaucoma. Therefore, based on widely available evidence, clients with an acute attack of **angle-closure glaucoma** are placed in the **supine** position.

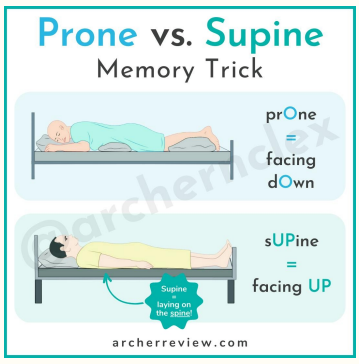
✓ Angle-closure glaucoma is an **ocular emergency** that occurs when the intraocular pressure exceeds 30 mmHg (normal is 10–21 mmHg). This increased pressure can result in optic nerve damage. If not treated promptly, peripheral vision is lost initially, followed by central vision loss and blindness.

✓ The client may experience an ipsilateral headache, brow pain, nausea, and blurred vision.

✓ Emergent prescriptions, such as timolol eye drops, are used to lower intraocular pressure. Other agents used in an acute attack include oral/intravenous acetazolamide.

✓ Other helpful agents include intraocular timolol.

✓ The client with acute angle-closure glaucoma should be supine for as long as possible.



Source : Archer Review

Question 256

Type: single_choice

The nurse is performing discharge education to an older adult diagnosed with cataracts. Which of the following statements indicates effective understanding?

A. “I may have to quit driving until I get the cataracts treated.” ✔ Correct

B. "I should spend less time outdoors in the sun and plan more activities at night."

C. "I will need to avoid activities that raise my intraocular pressure, such as bending at the waist."

D. “I will have to be careful since my eyes won’t move together.”

Explanation

Choice A is correct. As individuals age, they are at increased risk for cataracts. During the early stages of this condition, diminishing distance vision is the highest risk for older adults. The nurse must caution the client that the ability to see signs when driving will present a significant risk.

Choice B is incorrect. Activities during the day are not restricted. Activities at night may become more difficult because cataracts already cause an individual to have blurred vision, which is worsened by the lack of light.

Choice C is incorrect. Cataracts do not cause an individual to have an increase in intraocular pressure (IOP). Glaucoma is a condition that raises the IOP and is the leading cause of blindness in North America.

Choice D is incorrect. Extraocular movements are not affected by cataracts. Cataracts do not affect the cranial nerves that control eye movements, as this is an issue with the lens.

Additional Info

✓ Cataracts cause an individual to have blurred vision related to developing opacities in the lens.

✓ Most cases of cataracts are age-related and may affect only one eye.

✓ Excessive exposure to ultraviolet (UV) light hastens the risk of cataracts.

✓ An individual with cataracts may report blurred or double-vision that is worse at night and decreased color perception. Without surgery, the condition is progressive.

Information Source

Ignatavicius, D., Workman, M. L. (102020). Medical-Surgical Nursing, 10th Edition. p. 939

Question 257

Type: single_choice

The nurse is assessing a client who has sustained a blunt chest injury. Which of the following findings would support a diagnosis of pneumothorax?

A. Diminished breath sounds ✔ Correct

B. Barrel chest

C. Bradypnea

D. Pulse deficit

Explanation

Choice A is correct. Diminished or absent breath sounds in the affected area are an expected finding with pneumothorax. This is because air has entered the pleural space and collapsed that portion of the lung making it ineffective in gas exchange.

Choice B is incorrect. A barrel chest occurs over time, indicating chronic obstructive pulmonary disease (COPD). In a barrel chest, the chest's anteroposterior (AP) diameter and its lateral diameter are 1:1 rather than the normal ratio of 1:1.5 due to lung overinflation and diaphragm flattening.

Choice C is incorrect. When a client experiences a pneumothorax, the client's oxygenation status may decrease, causing the client to have tachypnea in an attempt to increase their oxygen saturation. The client would not experience bradypnea.

Choice D is incorrect. Pulse deficit is when the client's peripheral pulse rate differs from the apical one. This occurs in arrhythmias such as atrial flutter and atrial fibrillation. This is not an expected finding in pneumothorax.

Additional Info

✓ Pneumothorax may be caused by chest wall trauma, insertion of a central vascular access device (subclavian or intrajugular), severe pulmonary tuberculosis, and cystic fibrosis

✓ Pneumothorax causes a loss of negative pressure in the pleural space, leading to the collapsing of the lung that causes a reduction in vital capacity

✓ Manifestations of a pneumothorax include reduced or absent breath sounds on the affected side, tachypnea, tachycardia, and hyper resonance on chest percussion

✓ Nursing care includes applying supplemental oxygen and the preparation of the physician inserting a chest tube

✓ Pneumothorax is diagnosed by chest radiograph (x-ray)

Information Source

Ignatavicius, D., Workman, M. L. (102020). Medical-Surgical Nursing, 10th Edition.

Question 258

Type: multiple_response_all

➢ Which of the following assessment findings require **immediate** follow-up? **Select all that apply.**

Answer Choices

A. clubbing of the fingers

B. arterial blood gas Correct

C. pulse, respirations, and blood pressure Correct

D. hemoglobin and hematocrit

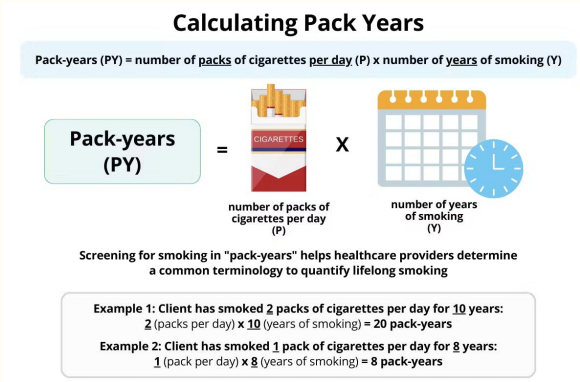
E. 20-pack-year cigarette smoking

F. pulse oximetry Correct

Explanation

- The arterial blood gas results show respiratory acidosis (pH 7.30, $PaCO_2$ 54 mm Hg). While this is expected with individuals with COPD, it is the PaO2 that requires follow-up because it is showing hypoxemia.
- The vital signs reveal tachycardia (pulse 114 bpm) and tachypnea (respiratory rate 26/min), both of which are abnormal and consistent with respiratory distress. These findings suggest the client is struggling to maintain adequate oxygenation and need prompt evaluation.
- The pulse oximetry reading of 87% on room air indicates significant hypoxemia. This is a critical value and warrants immediate oxygen therapy and further assessment.
- The hemoglobin and hematocrit are elevated, likely due to chronic hypoxia leading to secondary polycythemia. While this is an important finding, it is not acutely life-threatening and does not require immediate follow-up.
- Clubbing of the fingers is a chronic change associated with long-term hypoxia, often seen in conditions like COPD. It does not require urgent attention.
- A 20-pack-year smoking history is a significant risk factor for chronic pulmonary disease but is a background detail, not an acute issue requiring immediate follow-up

Additional Info



Source : Archer Review

Question 259

Type: single_choice

The nurse observes a client with a chest tube connected to a closed drainage system ambulating to the bathroom. During ambulation, the chest tube becomes disconnected from the client.

➢ Which action should the nurse take?

A. Reinsert the tube after instructing the client to perform the Valsalva maneuver

B. Hold direct pressure over the insertion site with a transparent dressing

C. Apply a sterile occlusive dressing taped on three sides to the insertion site ✔ Correct

D. Clamp the chest tube immediately and return the client to bed

Explanation

Choice C is correct. Placing a sterile occlusive dressing taped on **three sides** over the chest tube site is an essential action. The nurse follows infection prevention by placing a sterile dressing over the site. Taping the dressing on **three sides** will cover the site. The open side will **prevent** a tension pneumothorax by allowing exhaled air to escape the dressing.

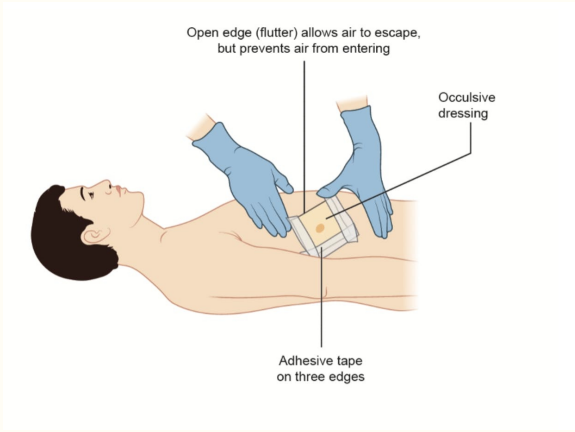
Choice A is incorrect. The nurse should not reinsert the chest tube because this is not in the nurse's scope of practice, and it is unsafe to insert a contaminated item into the chest cavity of the client.

Choice B is incorrect. The client will likely bleed from the insertion site. The nurse will need to hold pressure but secure an *occlusive* dressing over the site and tape it on three sides to prevent tension pneumothorax.

Choice D is incorrect. Clamping a chest tube after it has been removed from the client can increase the risk of tension pneumothorax. The priority is sealing the chest wall opening to prevent air from entering the pleural space.

Additional Info

Chest tube dislodgement is a medical emergency. The nurse should immediately apply a 3-sided occlusive dressing, call for help, and notify the physician.



Source : ArcherReview

Information Source

Potter, P., Perry, A., Stockert, P., Hall, A. (2022). Fundamentals of Nursing, 11th Edition. p. 1000

Question 260

Type: multiple_response_all

You are assigned to take care of a client who just underwent a cholecystectomy. Which of the following would decrease the risk of developing atelectasis in this client?

Select all that apply.

Answer Choices

A. Deep inspiration. Correct

B. Supine position with the head of the bed elevated. Correct

C. Change position every 2 hours. Correct

D. Encourage the patient to cough at least 10 times/hr. Correct

E. Encourage use of incentive spirometry Correct

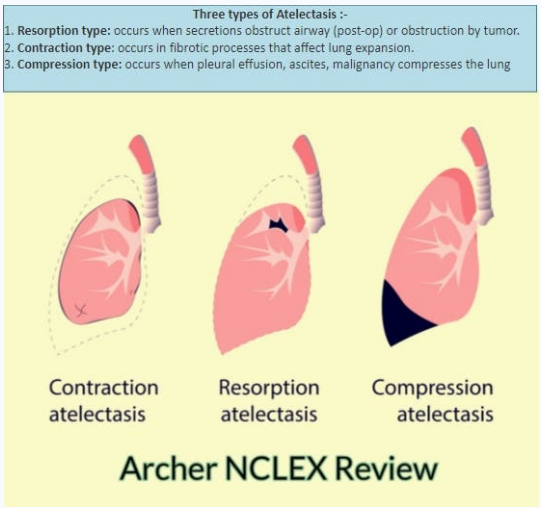
Explanation

Choices A, B, C, D and E are correct. Atelectasis is defined as the total or partial collapse of the alveoli. This is a common complication in the immediate postoperative period, especially after abdominal surgeries. If atelectasis is not addressed, it may progress to **pneumonia**. Since alveoli are responsible for gas exchange, alveolar collapse can lead to impaired gas exchange/impaired oxygenation.

Post-operatively, the client may not be able to take deep breaths due to pain from the movement of abdominal muscles. This impaired expansion of the alveoli leads to the accumulation of secretions/mucus plug, decreased surfactant, as well as the obstruction of airway and collapse of alveoli. Additional factors that predispose to this may include hypoventilation, sedation, and reduced mobility. When such factors are identified, the nurse should encourage the client to adopt interventions to mitigate those factors and **prevent** atelectasis. Such interventions include:

1. Encouraging clients to take **deep inspirations (Choice A) and use incentive spirometry (Choice E)**. An incentive spirometer encourages the client to pursue deep breathing. Deep breathing aids in gas exchange and promotes the full expansion of the alveoli.
2. Keeping the client in the supine **position with the head end of the bed elevated** (**Choice B**) or **semi-recumbent area (head of the bed raised 30 to 45 degrees)**. This allows for maximum thoracic expansion by lowering the abdominal pressure on the diaphragm.
3. Encouraging the client to **change position at least every 2 hours** (**Choice C**). This increases mobility and allows full chest expansion and increases perfusion to both lungs.
4. Encouraging the client to **cough at least ten times per hour** (**Choice D**) when awake. This helps promote alveolar expansion.

The above interventions are aimed at preventing atelectasis. However, the nurse should be aware of **detecting** atelectasis if it did end up happening. Physical exam findings assist in the diagnosis and include **fever and decreased breath sounds on the side of atelectasis**. In the case of complete atelectasis/collapse, the trachea/mediastinum may be **shifted to the same side** due to the pull by a collapsed lung. Atelectasis in the postoperative period is referred to as "resorption atelectasis" but the nurse should also be aware of other types in different client scenarios.



Once the nurse detects atelectasis, treatment interventions from a nurse's perspective include:

1. **Use of incentive spirometry** (**IS**) - IS mimics the natural process of sighing or yawning. It encourages the patient to take slow and deep breaths. The result of this process is decreased pleural pressure, increased lung expansion, and improved gas exchange. Regular repetition of **IS** can prevent or even **reverse atelectasis**.
2. Supportive devices to assist with deep coughing.
3. Chest physiotherapy includes tapping on the chest to loosen mucus
4. Mobilizing the patient early, i.e. encouraging sitting up in bed, sitting over the edge of the bed, standing, or assisted ambulation.
5. Postural drainage - to achieve this, the body is positioned with the head **lower than the chest to promote gravitational drainage of the mucus** from the bottom of the lungs. (Note this position is for **treatment of atelectasis** and is **different from the semi-recumbent area used to prevent atelectasis**)
6. Bronchoscopy may be ordered in certain cases by the physician to remove the mucus plug if the patient is not showing improvement despite the above non-invasive measures.

Additional Info

✓ Provide education and observation to ensure the incentive spirometer is being used properly and to it's fullest potential

✓ If not contraindicated, encouraging early ambulation can also help prevent atelectasis

Question 261

Type: multiple_response_all

Which of the following should be included when teaching a 65-year-old male client with COPD about exercise? **Select all that apply.**

Answer Choices

A. Instruct the client to avoid sudden position changes that may cause dizziness. Correct

B. Recommend that the client restrict fluid until after exercising is finished.

C. Instruct the client to push a little further beyond his fatigue with each session.

D. Instruct the client to avoid exercising in very cold or very hot temperatures. Correct

E. Encourage the client to exercise if he feels ill or weak.

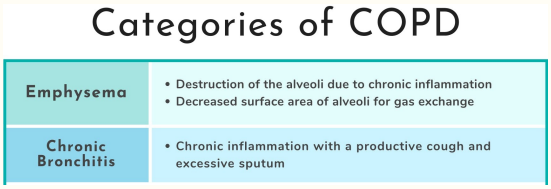
F. Recommend to consume a high-carb, low protein diet.

Explanation

Choices A and D are correct. Teaching points for exercising in patients with COPD include avoiding sudden position changes that may cause dizziness and avoiding extreme temperatures.

Choices B, C, E, and F are incorrect. Older adults should consume a high-protein, high-calcium, and vitamin D-enriched diet (Choice F). The nurse should also instruct the patient to provide adequate hydration, limit fatigue by not pushing to the point of exhaustion, and **avoid exercise** if weak or ill (Choice E).

Additional Info



Source : ArcherReview

Question 262

Type: single_choice

The nurse is educating a client scheduled for pulmonary function tests. It would indicate effective teaching if the client makes which statement?

A. "I should not use my bronchodilator four to six hours before these tests." ✔ Correct

B. "I should not eat or drink six to eight hours prior to these tests."

C. "I will need someone to drive me home after I wake up from the anesthesia."

D. "My gag reflex will have to return before I resume eating and drinking."

Explanation

Choice A is correct. Bronchodilators, such as inhalers, can impact the results of pulmonary function tests. It is generally recommended to withhold the use of a bronchodilator for a specific period before the tests to obtain accurate results. This period may vary depending on the specific medication and the healthcare provider's instructions, but the client's statement about withholding the bronchodilator for four to six hours before the tests is generally appropriate.

Choice B is incorrect. While fasting may be required for certain medical procedures, it is not a standard requirement for pulmonary function tests. Clients are typically allowed to eat and drink before these tests.

Choice C is incorrect. Pulmonary function tests do not typically involve anesthesia, so there is no need for someone to drive the client home afterward.

Choice D is incorrect. The return of the gag reflex is not related to pulmonary function tests. It is typically a consideration after certain types of anesthesia or surgery but not for routine pulmonary function testing.

Additional Info

✓ Pulmonary function tests (PFTs) do not require any sedation or invasive machinery and may be done at the bedside. The purpose is to assess lung function and breathing problems.

✓ These tests measure lung volumes and capacities, flow rates, diffusion capacity, gas exchange, airway resistance, and ventilation distribution. The results are interpreted by comparing the client's data with expected findings for age, gender, race, height, weight, and smoking status.

✓ Some PFTs may require specific preparation, such as avoiding certain medications or fasting for a few hours before the test. Client's should follow their healthcare provider's instructions to ensure accurate and reliable test results.

Question 263

Type: single_choice

The nurse is assessing a client immediately following a thoracentesis.

➢ The nurse recognizes that the most common complication following this procedure is a

A. pleural effusion.

B. pneumonia.

C. pulmonary embolism.

D. pneumothorax. ✔ Correct

Explanation

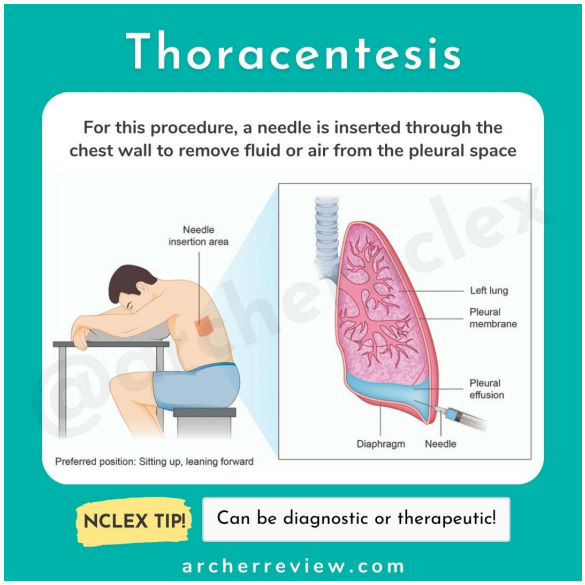
Choice D is correct. The *most common* complication associated with thoracentesis is a pneumothorax. The nurse should assess the client for this adverse reaction, which includes the client experiencing tachypnea, coughing decreased or absent lung sounds on the affected side, and decreased blood oxygen levels. Following this procedure, it is common for the physician to order a chest radiograph (x-ray) to determine if this complication has occurred.

Choice A is incorrect. Pleural effusion is commonly associated with lung cancer. This is not a complication associated with a thoracentesis.

Choice B is incorrect. Pneumonia is a complication associated with mechanical ventilation, aspiration, and hospitalization. This is not a complication associated with a thoracentesis.

Choice C is incorrect. Pulmonary embolism is a complication associated with venous thromboembolism. This is not a complication associated with a thoracentesis.

Additional Info



Question 264

Type: multiple_response_all

What findings are expected when assessing a patient with atelectasis?

Select all that apply.

Answer Choices

A. Decreased breath sounds Correct

B. Decreased tactile fremitus Correct

C. Hyperresonance

D. Shortness of breath Correct

E. Decreased oxygen saturation Correct

Explanation

Choices A, B, D, and E are correct. Incomplete lung expansion or the collapse of alveoli, known as atelectasis, prevents pressure changes and gas exchange by diffusion in the lungs. With atelectasis, lung tissue has collapsed, which leads to less lung mass available for oxygenation. The oxygen saturation is decreased, as well as breath sounds. Additionally, the patient will experience shortness of breath. Since alveoli collapse, there is more open space between the lung tissue and the chest wall. Open space does not transmit sound very well (decreased tactile fremitus).

Areas of the lung with atelectasis cannot fulfill the function of respiration. Coughing, chest pain, cyanosis, dyspnea, and tachycardia are common symptoms of atelectasis.

Choice C is incorrect. The percussion sound may be dull but not hyper-resonant in atelectasis or consolidation.

Question 265

Type: multiple_response_all

➢ Which orders does the nurse anticipate from the primary healthcare provider (PHCP)? **Select all that apply**

Answer Choices

A. chest physiotherapy

B. pulmonary function tests

C. purified protein derivative (PPD) skin test

D. d-dimer level Correct

E. albuterol via nebulizer

F. chest computed tomography (CT) scan Correct

Explanation

- This client is strongly suspected of developing a pulmonary embolism (PE).
- The client's cough, shortness of breath, and chest heaviness are consistent findings of a PE. This is further supported by the client having tachypnea. The PE may have developed from the client's prolonged immobility during the recent road trip. The diagnostic testing supporting the potential diagnosis of a PE includes a D-dimer and a CT scan.
- While the client has asthma, the assessment does not support an asthma exacerbation. Clients with an asthma exacerbation exhibit wheezes that are often audible. This classic manifestation is absent. Thus, albuterol via nebulizer would not be helpful or anticipated by the PHCP. This further excludes pulmonary function tests, as this is used to determine a client's ventilation status.
- A PPD is unnecessary, as this testing is required if the client has been exposed to pulmonary tuberculosis. The client has no fever or night sweats, which were mentioned in the H&P.
- Chest physiotherapy is not indicated, as it is helpful for conditions such as bronchitis and assists with mobilizing respiratory secretions.

Additional Info

✓ Pulmonary embolism has manifestations such as a sudden onset of dyspnea, chest pain, apprehension/restlessness, cough, tachypnea, tachycardia, hypoxia, and diaphoresis.

✓ Diagnostic testing in determining if a client has a PE includes laboratory testing such as a D-dimer level, troponin, and brain natriuretic peptide. Imaging classically consists of a computed tomography pulmonary angiography. This CT test, involving contrast dye, is the gold standard in diagnosing a PE.

Question 266

Type: single_choice

The nurse caring for a client with a history of chronic obstructive pulmonary disease (COPD) is prescribed home oxygen therapy. Which instruction should the nurse include in the client's teaching plan to promote safe oxygen use?

A. Keep the oxygen tubing tucked under the bed linens

B. Use petroleum-based products on the face to prevent dryness

C. Avoid smoking while using oxygen ✔ Correct

D. Keep the oxygen flow rate at the highest level for optimal benefit

Explanation

Choice C is correct. Smoking in the presence of oxygen is extremely hazardous and can lead to a fire. Clients must

be educated to refrain from smoking while using oxygen.

Choice A is incorrect. Keeping oxygen tubing under bed linens can lead to reduced ventilation and pose a risk of fire. It is important to keep the tubing in open spaces.

Choice B is incorrect. Petroleum-based products are flammable and should be avoided using oxygen due to the increased fire risk.

Choice D is incorrect. Keeping the oxygen flow rate at the highest level is unnecessary and can lead to oxygen toxicity. Flow rates should be adjusted based on the client's prescribed requirements.

Additional Info

✓ Emphasize the importance of clear and effective communication with clients regarding safety measures. Ensure clients understand the specific risks associated with smoking in the presence of oxygen, keeping oxygen tubing under bed linens, and using flammable products.

✓ Collaborate with respiratory therapists, occupational therapists, and other members of the healthcare team to ensure a comprehensive approach to oxygen safety. Seek input from caregivers and family members to enhance the effectiveness of safety strategies.

✓ Chronic Obstructive Pulmonary Disease (COPD) is one of the leading causes of long-term oxygen therapy. According to the American Thoracic Society, in the United States, approximately 1.5 million people with COPD use long-term oxygen therapy.

Question 267

Type: multiple_response_all

The nurse is providing discharge instructions to a client prescribed nasal cannula oxygen. Which of the following instructions should the nurse include?

Select all that apply.

Answer Choices

A. Keep a pulse oximetry device readily available. Correct

B. Pad the tubing in areas that put pressure on the skin. Correct

C. Have a sign on your door indicating the presence of oxygen. Correct

D. Use the oven and not the stovetop to cook.

E. You may apply petroleum jelly to your nares to prevent drying.

Explanation

Choices A, B, and C are correct. A pulse oximetry device should be provided to the client, and they should be encouraged to log their oxygen saturations as directed. If the client experiences dyspnea or tachypnea, the client should be instructed to seek medical attention for a level less than 95% (unless otherwise directed). Padding the tubing around pressure ears (back of the ears) is recommended to avoid injury. A sign posted on the door should be visible to alert visitors of the oxygen and extinguish and open flames.

Choices D and E are incorrect. Stovetop and oven cooking is highly discouraged as the presence of oxygen may accelerate any fire that may ignite. Rather, if cooking is to be done using heat or flames, another individual should do the cooking, and the oxygen should be greater than six feet away from the flame source. Petroleum jelly should not lubricate the nares as it may be aspirated. Water-soluble jelly is recommended.

NCLEX Category: Physiological Adaptation

Activity Statement: Illness management

Question type: Application

Additional Info

For a client being discharged with oxygen therapy, important teaching points to emphasize include:

- Have a pulse oximetry device readily available.
- Avoiding any open flame or heat. This includes an oven, stovetop, candles, matches, and cigarettes. Flammable products such as alcohol and oil should be avoided.
- Have working smoke detectors in the home as well as fire extinguishers.
- Use a water-soluble jelly to lubricate the nasal passages and mouth to prevent drying.

Question 268

Type: multiple_response_all

The nurse is preparing for a physician to remove a client's chest tube used to treat a hemothorax. Which actions

should the nurse perform before removing the tube and drainage system? **Select all that apply.**

Answer Choices

A. Placing a suture removal kit at the bedside Correct

B. Administering prescribed pain medication Correct

C. Clamping the chest tube for 30 minutes prior to removal

D. Obtain a trash bag to dispose of the system

E. Obtain a prescription for a intravenous bolus of isotonic saline

Explanation

Choices A and B are correct. The physician will remove the chest tube device and is done after the sutures are removed. The chest tube is sutured into place to prevent tube migration. Having a suture removal kit readily available is an essential part of the chest tube discontinuation process. Removing a chest tube is painful, and administering prescribed pain medication before removal will alleviate the discomfort.

Choices C, D, and E are incorrect. The chest tube is clamped by the physician immediately before it is to be discontinued. It would be inappropriate for the tube to be clamped 30 minutes before removal because that could cause lung collapse. A chest tube is discarded using a biohazard bag, especially considering the client has a hemothorax, which means the collection chamber is full of blood. It would be inappropriate for the device to be discarded via regular trash. Obtaining a prescription and administering isotonic saline before removal is inappropriate because hypotension or any other type of volume depletion following the chest tube removal is unexpected. Administering isotonic saline before an epidural is placed is appropriate, but not for a chest tube's removal.

Additional Info

✓ The PHCP performs chest tube discontinuation.

✓ Nursing should have the pertinent supplies at the bedside (suture removal kit, occlusive gauze, dry sterile gauze, tape, biohazard bag, and a clamp).

✓ This is a painful procedure, so medicating the client with an opioid prior to this procedure is recommended.

✓ The sutures will be discontinued; the tape will be torn and prepared, as well as the gauze.

✓ The tube will be clamped, and while the client performs the Valsalva maneuver, the tube will be pulled and discontinued.

✓ The gauze will be applied and taped firmly

✓ The device should be secured in a biohazard bag and disposed of accordingly.

✓ A post-procedure chest radiograph may be prescribed to determine if the initial problem has recurred.

Question 269

Type: single_choice

The nurse is caring for a client with a chest tube for a pneumothorax. The nurse assesses a crackling sensation beneath the fingertips around the chest tube insertion site. The nurse should

A. document the finding as expected.

B. clamp the chest tube.

C. notify the primary healthcare provider (PHCP). ✔ Correct

D. apply nasal cannula oxygen.

Explanation

Choice C is correct. Notifying the PHCP is essential because this assessment indicates crepitus, which is air trapped in and under the skin, known as subcutaneous emphysema. The PHCP needs to be notified because this is a complication, and measures such as increasing the suction on the chest tube need to be considered.

Choice A is incorrect. Documenting the findings as expected is inappropriate because this is a complication of chest tube therapy.

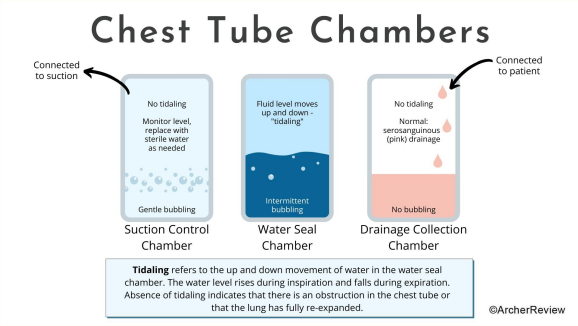
Choice B is incorrect. Chest tubes should rarely be clamped; if they are clamped, they should be for a brief period. Chest tubes are usually clamped when changing from an old device to a new one or when the healthcare provider removes the tube.

Choice D is incorrect. This is not an oxygen issue; thus, applying nasal cannula oxygen is inappropriate and unnecessary. The client has air trapped under the skin, which may require modification to the chest tube settings, such as increased suction.

Additional Info

✓ Subcutaneous emphysema is the presence of air in the skin's tissue layers and is usually seen as skin swelling around the puncture site.

✓ Air in these tissues makes a crackling sound when pressure is applied to it. The presence of subcutaneous emphysema may indicate a persistent air leak caused by a puncture that tears the pleura.



Question 270

Type: single_choice

The nurse in the emergency department is caring for a client who was hit with a baseball bat in the chest. Which of the following findings would support a diagnosis of pneumothorax?

A. Decreased respiratory rate

B. Diminished breath sounds ✓ Correct

C. Presence of a barrel chest

D. A sucking sound at the injury site

Explanation

Choice B is correct. A client who experiences a pneumothorax may initially experience shortness of breath and chest pain. When the pneumothorax increases in size the client will display an increased respiratory rate, cyanosis, diminished breath sounds, and subcutaneous emphysema.

Choice A is incorrect. The client who has a pneumothorax would display tachypnea (an increase in respiratory rate), not a decrease in respiratory rate.

Choice C is incorrect. A barrel chest would indicate emphysema, a form of COPD. Clients with pneumothorax do not exhibit a barrel chest.

Choice D is incorrect. The client's injuries are from a blunt object; therefore, the resulting pneumothorax would be a closed one. A sucking sound at the site of injury would denote an open chest injury.

Additional Info

✓ The symptoms of traumatic pneumothorax can vary depending on the severity of the condition. Common signs and symptoms may include

- Sudden-onset chest pain
- Shortness of breath and difficulty breathing.
- Rapid and shallow breathing
- Cyanosis
- Decreased or absent breath sounds on the affected side of the chest during auscultation.
- Tachycardia

✓ Management of Traumatic Pneumothorax will vary from client to client and can be as simple as observation or as complex as surgery.

✓ Traumatic pneumothorax is a serious medical emergency that requires prompt evaluation and appropriate management. Early recognition and intervention can lead to better outcomes and prevent potential complications associated with lung collapse and respiratory compromise.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 271

Type: Bowtie

➢ **Complete the diagram by dragging from the choices below to specify what condition the client is most likely experiencing, two (2) actions the nurse should take to address that condition, and two (2) parameters**

the nurse should monitor to assess the client's progress

Action to Take	Potential Conditions	Parameter to Monitor
Slot 1 • Administer oxygen via non-rebreather mask • Obtain a prescription for a bronchodilator Correct • Obtain a prescription for glucagon • Obtain a prescription for a benzodiazepine • Obtain a prescription for bilevel positive airway pressure (BiPap)	**Slot 1** • Metabolic acidosis • Hypoglycemia • Respiratory alkalosis • Respiratory acidosis Correct	**Slot 1** • Neurological status Correct • Arterial blood gas • Capillary blood glucose • Urinary output
Slot 2 • Administer oxygen via non-rebreather mask • Obtain a prescription for a bronchodilator • Obtain a prescription for glucagon • Obtain a prescription for a benzodiazepine • Obtain a prescription for bilevel positive airway pressure (BiPap) Correct		**Slot 2** • Neurological status • Arterial blood gas Correct • Capillary blood glucose • Urinary output

Explanation

- The client is experiencing **respiratory acidosis,** evidenced by low pH and high CO2. Clients with COPD often experience respiratory acidosis. However, the CO2 level is very high, causing the client's altered mental status (AMS). The client's hypercapnia is the cause of the altered mental status and can be explained by the client not using their prescribed CPAP. CPAP is used for obstructive sleep apnea and facilitates the discharge of CO2. Failure to use the CPAP will cause the CO2 levels to rise, leading to altered mental status.
- The nurse should **obtain a prescription for a bronchodilator.** The wheezes signify airway inflammation which needs to be treated by a bronchodilator such as albuterol or levalbuterol. Additionally, the nurse should **obtain a prescription for BiPap** as this will assist with removing the CO2 by keeping the airways open during exhalation.
- The nurse should **monitor the client's neurological status and ABG** to see if the intervention of BiPap and a bronchodilator is efficacious.
- A non-rebreather mask is inappropriate and would make the retention of CO2 worse. The client's oxygenation status is acceptable because an SPO2 of 88% is optimal for a client with COPD. Oxygenation is not the issue here; it is the high levels of CO2 that need to be exhaled to treat their AMS.
- The client's glucose is acceptable. Clinical hypoglycemia is a blood glucose less than 70 mg/dL and would cause AMS. However, the client's blood glucose is fine and cannot be linked to the current blood glucose level. Obtaining a prescription for glucagon would be inappropriate.
- The client being anxious would resolve once the CO2 decreases. However, administering a benzodiazepine would be inappropriate because this may adversely depress respirations, causing further retention of CO2.

Additional Info

✓ The causes of respiratory acidosis include pulmonary emphysema, obstructive sleep apnea, atelectasis, and hypoventilation

✓ Treatment is aimed at the underlying cause, including instructing the client to turn, cough, and breathe deeply

✓ An incentive spirometer may also be used to help treat respiratory acidosis

Question 272

Type: single_choice

The nurse has provided education to a client newly diagnosed with obstructive sleep apnea (OSA).

➢ Which client statement would indicate a correct understanding of the teaching? **Click to view the additional client information in the exhibit.**

A. "I should use an antiseptic mouthwash immediately before going to bed."

B. "I will plan on exercising at least 150 minutes a week." ✔ Correct

C. "I have been reading about the potential for me needing supplemental oxygen overnight."

D. "I will sleep flat on my bed without any pillows."

Explanation

Choice B is correct. A crucial part of mitigating the symptoms of obstructive sleep apnea is for a client to lose weight. The client's BMI is 27.5 kg/m2, which is categorized as overweight. Weight reduction is a pivotal part of the

treatment plan for an individual with OSA, as being overweight or obese causes fat deposits in the upper airways. Reducing these fat deposits improves muscle activity and allows for better ventilation. The client stated that they plan on exercising 150 minutes a week, which is a favorable response because that is the national recommendation.

Choice A is incorrect. Antiseptic mouthwash does not influence the management of OSA. OSA is when the client has a mechanical obstruction that decreases ventilation and gas exchange. Antiseptic mouthwash and flossing are the cornerstone treatments for gingivitis.

Choice C is incorrect. The *primary* issue with OSA is not low oxygen; the tongue, soft palate, and other neck muscles relax, causing displacement and obstruction. This impediment causes the client to retain carbon dioxide, which explains why they have a headache in the morning and do not feel rested. Low oxygen is also found, but supplemental oxygen is not the remedy, as continuous positive airway pressure (CPAP) is the gold standard because of its positive pressure. The positive pressure keeps the upper airways open, allowing gas exchange. The client requires positive pressure, not oxygen.

Choice D is incorrect. Sleeping flat with no pillows will further relax the airway and worsen the OSA. Side-sleeping with the use of a pillow is helpful.

Additional Info

✓ During sleep, head and neck muscles relax, displacing the tongue, soft palate, and neck structures, thus causing obstruction.

✓ Manifestations of OSA include the client snoring, waking up not rested, irritability, and a headache in the morning

✓ OSA is a concern because it raises blood pressure which may increase the client's risk for hypertension, stroke, and myocardial infarction

✓ Diagnosis is through a validated questionnaire or sleep study

✓ Treatment is weight reduction, instructing the client to avoid alcohol before bed, certain oral appliances, positive pressure ventilation, and consultation with an ear, nose, and throat specialist to determine if any surgical intervention may be helpful

✓ For the client receiving CPAP, the nurse should instruct the client to keep the device sanitized as it may be a source of pneumonia

Question 273

Type: single_choice

The nurse is caring for a client who has a chest tube connected to a drainage system. The nurse has received an order that the physician will discontinue the chest tube.

➢ Prior to the physician removing the chest tube, the nurse should take which action?

A. Administer prescribed pain medication ✔ Correct

B. Apply oxygen via nasal cannula at 4 liters per minute

C. Clamp the chest tube two hours before the removal

D. Administer prescribed bronchodilator immediately before removal

Explanation

Choice A is correct. Chest tube removal can be painful. The nurse should administer prescribed analgesics approximately 30 minutes prior to the procedure to reduce discomfort and promote cooperation. This is a standard pre-procedural nursing intervention that supports client-centered care.

Choice B is incorrect. Routine oxygen supplementation is not necessary unless the client is hypoxic. Applying oxygen without a clinical indication or prescription is not evidence-based.

Choice C is incorrect. Clamping a chest tube prior to removal is not routine practice and should only be done with a specific order. Doing so without clinical justification increases the risk of complications such as tension pneumothorax.

Choice D is incorrect. A bronchodilator is not routinely indicated prior to chest tube removal unless the client has an underlying respiratory condition (e.g., asthma, COPD) and is symptomatic. This is not a standard pre-removal intervention.

Additional Info

✓ The PHCP performs chest tube discontinuation.

✓ Nursing should have the pertinent supplies at the bedside (suture removal kit, occlusive gauze, dry sterile gauze, tape, biohazard bag, and a clamp).

✓ This is a painful procedure so medicating the client with an opioid prior to this procedure is recommended.

✓ The sutures will be discontinued; the tape will be torn and prepared, as well as the gauze.

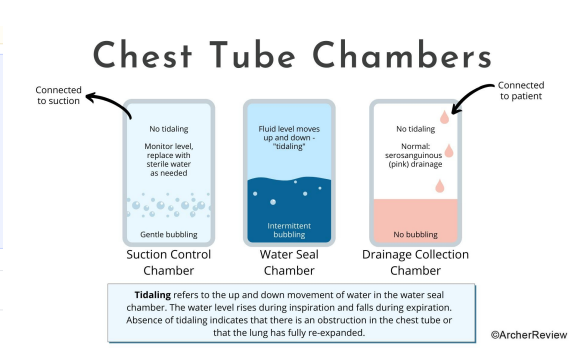
✓ The tube will be clamped, and while the client performs the Valsalva maneuver, the tube will be pulled and discontinued.

✓ The gauze will be applied and taped firmly.

✓ The device should be secured in a biohazard bag and disposed of accordingly.

✓ A post-procedure chest radiograph may be prescribed to determine if the initial problem has recurred.

Source : Archer Review



Information Source

Potter, P., Perry, A., Stockert, P., Hall, A. (2022). Fundamentals of Nursing, 11th Edition. p. 1000

Question 274

Type: single_choice

When assessing a client's nose, the normal expected findings should be documented as:

A. Nose symmetrical and midline ✔ Correct

B. Nose symmetrical with yellow drainage

C. Nose asymmetrical with clear drainage

D. Nose asymmetrical and proportional to facial features

Explanation

Choice A is correct. Normal documentation of the assessment of the nose would include findings such as symmetrical, midline, without drainage, and proportional to facial features.

Choice B is incorrect. Yellow nasal drainage is never a normal finding.

Choices C and D are incorrect. The nose should be symmetrical.

Question 275

Type: single_choice

The nurse is caring for a client with acute respiratory distress. The physician has ordered non-invasive positive pressure ventilation (NIPPV). The nurse understands that the therapeutic goal of NIPPV is to

A. provide supplemental oxygen to correct hypoxemia.

B. reduce the work of breathing and improving ventilation. ✔ Correct

C. treat underlying pulmonary infections with positive pressure.

D. prevent the development of tension pneumothorax.

Explanation

Choice B is correct. NIPPV, including methods such as bilevel positive airway pressure (BiPAP) or continuous positive airway pressure (CPAP), is used to support ventilation, decrease respiratory muscle fatigue, and improve overall respiratory function.

Choice A is incorrect. While NIPPV does provide some degree of supplemental oxygen, its primary goal is to assist with ventilation and improve respiratory mechanics. The focus is on reducing the work of breathing rather than primarily addressing hypoxemia.

Choice C is incorrect. While NIPPV can support respiratory function, its primary goal is not to treat underlying infections. Antibiotics and other specific treatments are used for infection management.

Choice D is incorrect. NIPPV is not designed to prevent tension pneumothorax. Its main focus is on improving ventilation and respiratory effort in conditions such as acute respiratory distress.

Additional Info

✓ Types of NIPPV:

Continuous Positive Airway Pressure (CPAP):

- Delivers a constant flow of air at a steady pressure
- Keeps the airways open during both inhalation and exhalation
- Beneficial for conditions like sleep apnea

Bilevel Positive Airway Pressure (BiPAP):

- Delivers two levels of pressure during the respiratory cycle
- Higher pressure during inhalation, lower pressure during exhalation
- Assists with the effort of breathing in and releasing air during exhalation
- Used for respiratory failure and certain types of sleep apnea.

✓ Provide thorough education to clients and their families about the purpose of NIPPV, its benefits, and what to expect during the process. Include information on mask fit, adjustments, and potential challenges.

✓ Assess and monitor the skin integrity of the client, especially around the areas where the mask interfaces with the face. Provide appropriate skin care and address any signs of pressure points or irritation. This may include mask changes and/or the use of padding to prevent skin breakdown.

Question 276

Type: single_choice

The nurse is developing a plan of care for a client admitted *P. aeruginosa* pneumonia. Which of the following should the nurse include in the client's plan of care?

A. Instruct the client to wear an N95 mask when ambulating in the hall.

B. Initiate a vascular access device and encourage by-mouth fluids. ✔ Correct

C. Obtain daily weights every morning using the same scale.

D. Administer prescribed oseltamivir within 48 hours of symptom onset.

Explanation

Choice B is correct. Initiating vascular access is essential for a client admitted with *P. aeruginosa* pneumonia because parenteral antibiotics are the mainstay of treatment. Dehydration is common in pneumonia, and encouraging non-caffeinated fluids is beneficial.

Choice A is incorrect. The client should wear a surgical mask when ambulating around the nursing unit. Droplet precautions will be instituted, and the essential PPE for droplet precautions includes a surgical mask.

Choice C is incorrect. Daily weights are not part of care standard of care for a client with pneumonia, as fluid volume overload is unlikely. This would be recommended for a client admitted with congestive heart failure or acute kidney injury.

Choice D is incorrect. Oseltamivir is indicated for influenza infections, not bacterial pneumonia. This antiviral reduces influenza symptoms if taken within 48 hours of symptom onset.

Additional Info

✓ For a client with *P. aeruginosa* pneumonia, the nurse should initiate droplet precautions and maintain airway patency.

✓ The biggest complication associated with pneumonia is acute respiratory distress syndrome or sepsis.

✓ Obtaining blood cultures, providing pulmonary hygiene, and initiating prescribed antibiotics are essential in managing pneumonia.

Question 277

Type: single_choice

A nurse has attended a continuing education conference about seasonal influenza.

➢ Which of the following statements would indicate a correct understanding of the conference?

A. "Oseltamivir therapy should be started 96 hours after the onset of symptoms."

B. "The live attenuated vaccine (LAIV) is for healthy non-pregnant individuals, starting from 2 years of age up to 49 years of age." ✔ Correct

C. "Individuals who are pregnant should not receive the inactivated influenza vaccine."

D. "Visitors should be provided face shields when entering a client's room."

Explanation

Choice B is correct. This statement is correct. The LAIV is a nasal spray flu vaccine approved for use in healthy non-pregnant people, 2 through 49 years old. Individuals who are pregnant, immunocompromised, younger than 2, or older than 49 should not receive this vaccine. The LAIV contains weakened influenza viruses that are cold-adapted, which means they are designed to only multiply at the cooler temperatures found within the nose and not the lungs or other areas where warmer temperatures exist. No influenza vaccine causes influenza. The LAIV has demonstrated a more robust immune response when compared to the IIV.

Choice A is incorrect. This statement requires correction as oseltamivir, an antiviral, is started within 48 hours of influenza symptoms.

Choice C is incorrect. This statement requires correction, as pregnant individuals should receive the inactivated influenza vaccine (IIV). This vaccine is safe. The client who is pregnant should not receive the LAIV.

Choice D is incorrect. This statement requires correction, as visitors should be given a facemask upon entry to a

client's room. A face shield is used if the individual is going to perform a procedure that may result in blood or bodily fluids splashing.

Additional Info

✓ Droplet precautions should be implemented for clients with suspected or confirmed influenza for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer, while a client is in a healthcare facility.

✓ No influenza vaccine causes the illness

✓ The LAIV is recommended for individuals 2 through 49 years old

✓ The IIV is recommended for individuals older than 6 months

✓ The IIV is safe for individuals who are pregnant

Information Source

https://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

Question 278

Type: single_choice

The nurse attends to a client with shortness of breath, bilateral lung crackles, weak pulses, and frothy pink sputum. Which of the following orders should the nurse **question** for this client?

A. Supplemental oxygen via nasal cannula or mask

B. Losartan

C. Fowler's position

D. Diltiazem ✔ Correct

Explanation

Choice D is correct. The client is exhibiting symptoms and signs of **left ventricular heart failure.** Decreased cardiac output associated with acute systolic heart failure results in reduced blood pressure, weak pulses, and **acute pulmonary edema** (**dyspnea, frothy pink sputum,** and **lung crackles)**. Diltiazem and other calcium channel blockers (CCBs) produce a **negative inotropic** effect (reduced myocardial contractility) and are **contraindicated** in acute systolic heart failure. CCBs may exacerbate systolic dysfunction and cause heart failure symptoms to worsen. The nurse should question this order to determine if there is a more appropriate medication to accomplish the intended therapeutic effect with a lower risk of complications.

Choices A, B, and C are incorrect. These orders are appropriate for a client presenting with acute heart failure and pulmonary edema.

- The nurse should administer **supplemental oxygen** to promote adequate tissue oxygenation in clients with impaired tissue perfusion from decreased cardiac output (choice A).
- **Losartan** is an angiotensin receptor blocker (ARB). It is indicated in systolic heart failure because it reduces mortality and morbidity. In systolic heart failure, the afterload increases because the renin-angiotensin-aldosterone axis (RAAS) kicks in, making the peripheral vascular resistance go up. Increased afterload further decreases cardiac output. By blocking angiotensin II receptors, **losartan** causes vasodilation and decreases afterload.
- **Fowler's position** (choice C) is indicated for patients with heart failure symptoms. Fowler's position promotes **oxygenation** by allowing maximum chest expansion.

Additional Info

Heart failure is associated with reduced cardiac output and reduced blood flow to organs, including the kidneys.

- **RAAS system activation in heart failure**: Reduced renal blood flow stimulates renin release. Renin converts Angiotensinogen to Angiotensin I, which is further activated to Angiotensin II by the angiotensin-converting enzyme in the lungs. Angiotensin II is a vasoconstrictor, and it increases peripheral vascular resistance (afterload). When medications are used to reduce afterload, the heart pumps better, and cardiac output increases.
- Losartan is an angiotensin receptor blocker (ARB). It reduces systemic blood pressure (afterload) by countering angiotensin II. Losartan **does not** have direct inotropic action on the heart, but it helps the cardiac output by decreasing the afterload.
- Losartan improves the morbidity and mortality in heart failure, and hence it's an important drug in treating heart failure.
- **Neprilysin system in heart failure**: independent of the RAAS system, another system called the **Neprilysn** system is also critical in heart failure. In heart failure, natriuretic peptides (brain natriuretic peptide and atrial natriuretic peptide) and bradykinin are released. The natriuretic peptides are helpful in heart failure because they cause natriuresis and diuresis. However, neprilysin in the body degrades these favorable peptides. Additionally, neprilysin also degrades angiotensin II. Inhibiting neprilysin will increase both angiotensin II and natriuretic peptides. In this case, inhibiting neprilysin while also inhibiting angiotensin will produce the best results. Therefore, a new class of combination drugs called **angiotensin receptor-neprilysin inhibitors (ARNI)** is now preferred in clients with heart failure with reduced ejection fraction. An example of an ARNI is ***sacubitril -valsartan*** (Entresto)
- In clients who can not tolerate an ARNI, an ARB or ACEI can be used.

Question 279

Type: single_choice

The nurse performs a respiratory assessment on an older adult client and observes apnea that alternates with periods of rapid breathing. The nurse should document this respiratory pattern as

A. Cheyne-Stokes. ✔ Correct

B. Kussmaul's.

C. agonal.

D. tachypnea.

Explanation

Choice A is correct. Cheyne-Stokes respirations are characterized when the respiratory rate and depth are irregular and alternate with periods of apnea and hyperventilation. The pattern then reverses, and the breathing slows and becomes shallow, concluding as apnea before respiration resumes. This may occur in older adults without any underlying pathology. This also could be characteristic of the client's critical condition following a neurological injury.

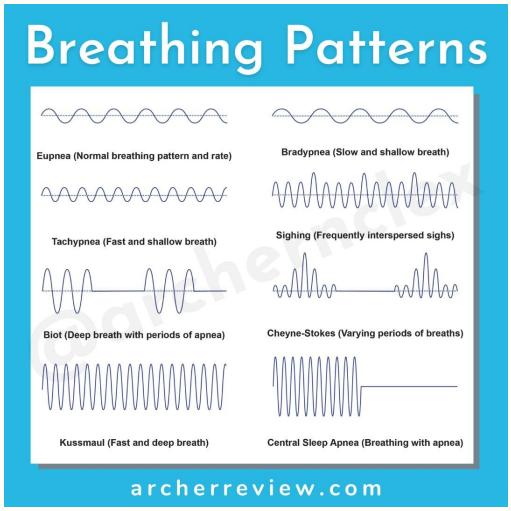
Choices B, C, and D are incorrect.

➢ Kussmaul's are characterized by respirations that are abnormally deep, regular, and increased in rate

➢ Agonal breathing is always concerning because the client is gasping for air and warrants **immediate** intervention

➢ Tachypnea is when the respiratory rate is > 20 respirations per minute and is associated with conditions such as fear, anxiety, etc

Additional Info



Source: Archer ReviewSource: Archer Review

Question 280

Type: single_choice

The nurse is caring for a client with pneumothorax with a chest drainage system in place. On assessment, the system has become dislodged from the client. The nurse should **initially**

A. obtain an order for chest radiograph (x-ray)

B. prepare the client for intubation via an endotracheal tube (ETT).

C. notify the primary healthcare provider.

D. place an occlusive dressing over the site and tape on three sides. ✔ Correct

Explanation

Choice D is correct. The dislodgment of a chest tube is considered an emergency. The nurse's initial intervention should be to immediately apply an occlusive dressing to the site when the client exhales. The nurse should tape it on three sides to prevent a tension pneumothorax. Once a dressing is in place, the nurse should send a colleague to notify the health care provider (HCP) immediately while remaining with the client and closely monitoring the client's

vital signs and respiratory status.

Choice A is incorrect. A chest x-ray may be ordered by the health care provider (HCP) to assess for lung expansion. However, this is not the initial action for the nurse.

Choice B is incorrect. The nurse must focus on preventing the most serious complication of a tension pneumothorax. This can be done by applying an occlusive dressing over the chest tube site and taping it on three sides.

Choice C is incorrect. Although notifying the health care provider (HCP) is a priority, the initial intervention for the nurse is to place a sterile, occlusive dressing over the incision site to prevent air from entering the pleural space and causing pneumothorax or hemothorax. When caring for a client who accidentally pulled out their chest tube, correctly identify placing a sterile, occlusive dressing over the incision site as the correct initial intervention for the nurse to take.

Additional Info

✓ Emergency supplies should be readily available at the bedside, including an occlusive dressing, a bottle of sterile water, and a clamp

✓ The chest drainage system should always be kept below the insertion site

✓ The chest drainage system should never be routinely clamped

✓ The tubing is temporarily clamped when changing out the collection chamber

Information Source

Association of periOperative Registered Nurses (AORN). (2021). *Guidelines for perioperative practice.* Association of periOperative Registered Nurses (AORN), Inc. Wolters Kluwer Health, Inc. (n.d.).

Monitoring a Client with a Chest Drainage System. *Oxygenation: Respiratory: Chest drainage systems.* Retrieved March 24, 2023, from http://downloads.lww.com/wolterskluwer_vitalstream_com/sample-content/9780781788786_Craven/samples/mod09/topic12a/text.html

Question 281

Type: multiple_response_all

The nurse is caring for a client with a suspected pulmonary embolism.

➢ After notifying the rapid response team, which actions should the nurse take? **Select all that apply.**

Answer Choices

A. Place the client in a left lateral Trendelenburg position.

B. Obtain vital signs. Correct

C. Obtain a prescription for warfarin.

D. Place the client in the high-Fowler's position. Correct

E. Obtain an order for a chest radiograph (x-ray).

Explanation

Choice B is correct. The nurse needs to obtain vital signs because a client with a suspected pulmonary embolism may experience hypoxia, tachypnea, and tachycardia. The nurse can intervene by providing supplemental oxygen if the vital signs show hypoxia. Finally, the nurse will need to notify the physician, and having recent vital signs is essential to determine the client's overall stability.

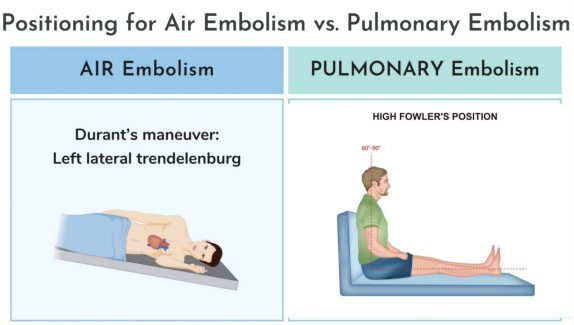
Choice D is correct. The client should be placed in a high Fowler's position. This allows full chest expansion, which may optimize the client's oxygen saturation.

Choice A is incorrect. Clients with suspected *air embolism* should be placed in a left lateral Trendelenburg position. This position encourages the air bubble to move out of the right ventricular outflow tract (RVOT) and into the right atrium, where it can be trapped and reabsorbed. If this does not work, the client may need immediate treatment via interventional radiology. 100% oxygen administration will also help reduce the size of the air bubbles and prevent organ ischemia. This client has a pulmonary embolism and needs to be in a high Fowler's position.

Choice C is incorrect. The nurse does not need to obtain a prescription for warfarin. Warfarin takes 3-5 days to establish efficacy. The client needs immediate treatment, such as anticoagulants, thrombolytics, or interventional radiology. Warfarin may be used to prevent future PE, but it would not be efficacious in treating a current PE.

Choice E is incorrect. A chest radiograph is not used to diagnose a pulmonary embolism. This test would be unable to visualize the embolism. A CT angiogram of the chest is used to diagnose a PE.

Additional Info



Question 282

Type: single_choice

The nurse is preparing to transport a client who is requiring oxygen.

➢ What **initial** action does the nurse perform to follow safe techniques when using a portable oxygen cylinder?

A. Check the amount of oxygen in the cylinder before using it. ✔ Correct

B. Use a cylinder for a client transfer that indicates available oxygen is at 500 psi.

C. Place the oxygen cylinder on the stretcher next to the client.

D. Discontinue oxygen flow by turning the cylinder key counter-clockwise until it is tight.

Explanation

Choice A is correct. Before transporting a client requiring oxygen, the nurse's initial action should always be to check the amount of oxygen remaining in the cylinder. This ensures that there is an adequate supply for the duration of the transport.

Choice B is incorrect. It is unsafe to use a cylinder that reads 500 psi or less because not enough oxygen remains for a client transfer.

Choice C is incorrect. A cylinder that is not secured correctly may result in injury to the client during transfer.

Choice D is incorrect. Oxygen flow is discontinued by turning the valve clockwise until it is tight.

Additional Info

✓ Ensure the oxygen cylinder is securely fastened to the transport device or wheelchair using appropriate securing mechanisms. This prevents the cylinder from tipping over during movement, reducing the risk of injury to the client and others.

✓ Have an emergency plan in place for potential oxygen-related emergencies during transport, such as equipment malfunction or sudden deterioration in the client's condition.

✓ Be mindful of environmental factors that may affect oxygen delivery. Length and location of transport. It may be necessary to bring more than one oxygen cylinder or utilize oxygen at the transport destination.

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 283

Type: single_choice

The nurse is assessing a client with carbon monoxide (CO) poisoning. Which of the following would be an expected finding?

A. Decreased pulse oximetry (SpO2)

B. Hyperarousal

C. Bradycardia

D. Headache ✔ Correct

Explanation

Choice D is correct. CO poisoning is odorless, colorless, and tasteless. This potentially lethal poison initially causes clients to develop symptoms such as headache, reduced visual acuity, and slight breathlessness. As the CO level increases, it causes hypotension, confusion, and vertigo and then progresses to death.

Choice A is incorrect. CO poisoning does result in tissue hypoxia due to the displacement of oxygen by CO on hemoglobin, pulse oximetry readings may be normal or even elevated in CO poisoning. This is because pulse oximeters cannot differentiate between oxygen-bound hemoglobin and CO-bound hemoglobin. Therefore, decreased SpO2 would not be an expected finding in CO poisoning.

Choice B is incorrect. CO poisoning would not cause hyperarousal. Instead, clients with CO poisoning may present with neurological symptoms such as confusion, dizziness, or loss of consciousness due to cerebral hypoxia.

Choice C is incorrect. Bradycardia is not a characteristic finding in CO poisoning. Instead, clients with CO poisoning may exhibit tachycardia due to compensatory mechanisms aimed at increasing tissue oxygen delivery in response to hypoxia.

Additional Info

✓ Carbon monoxide binds to a red blood cell approximately 200x more than oxygen

✓ Carbon monoxide poisoning may occur from smoke inhalation from fires, poorly functioning heating systems, and motorboat and motor vehicle exhaust exposure in a closed setting

✓ Manifestations include headache, dizziness, weakness, malaise, altered mental status, and visual changes

✓ This poisoning is tasteless, odorless, and colorless

✓ Treatment includes removing the client from the source of the poison, putting them outside, calling EMS, and administering 100% high-flow oxygen

Information Source

Ignatavicius, D., Workman, M. L. (2020). Medical-Surgical Nursing, 10th Edition.

Question 284

Type: multiple_response_all

A nurse is caring for a client diagnosed with chronic obstructive pulmonary disease (COPD). Which of the following interventions should the nurse implement for this client? **Select all that apply.**

Answer Choices

A. Administer a long-acting bronchodilator for acute dyspnea.

B. Encourage smoking cessation. Correct

C. Provide oxygen therapy at a rate of 4 liters per minute.

D. Instruct the client to lie down in a supine position.

E. Teach pursed-lip breathing technique. Correct

Explanation

Choices B and E are correct. Smoking is a major risk factor for the development and progression of COPD. Encouraging smoking cessation is an essential intervention to prevent further lung damage and improve the client's respiratory status. Pursed-lip breathing is a breathing technique that can help clients with COPD improve their breathing efficiency and control dyspnea.

Choice A is incorrect. A client experiencing an acute episode of dyspnea would require a medication with a rapid, or 'short' onset. A long-acting bronchodilator is a medication used to provide sustained bronchodilation and relief of respiratory symptoms over an extended period. Therefore a long-acting bronchodilator would not be appropriate.

Choice C is incorrect. Oxygen therapy is often necessary for clients with severe COPD and hypoxemia. However, the specific oxygen flow rate should be based on the client's oxygen saturation levels and arterial blood gas results. The nurse should assess the client's oxygenation status and consult with the healthcare provider to determine the appropriate oxygen flow rate as it may vary from client to client.

Choice D is incorrect. Clients with COPD often experience dyspnea and difficulty breathing, especially when lying flat. The supine position can further compromise respiratory function by reducing lung expansion and causing discomfort. It is more appropriate to instruct the client to sit in an upright or semi-upright position, which helps optimize lung expansion and improve ventilation.

Additional Info

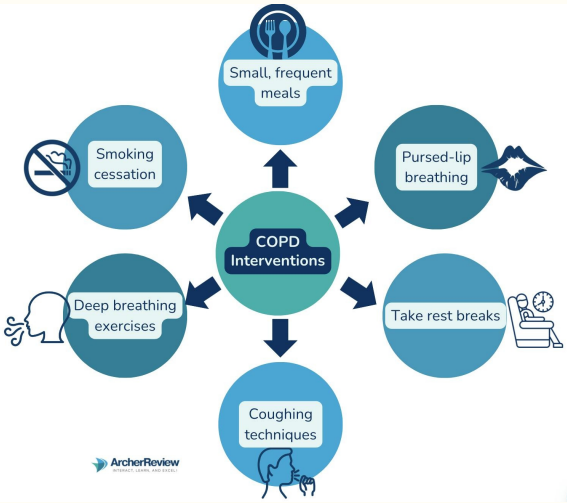
✓ Monitor the client's respiratory status closely, including respiratory rate, depth, and effort. Assess for any signs of respiratory distress, such as increased work of breathing, use of accessory muscles, or cyanosis.

✓ Provide instruction on deep breathing exercises and effective coughing techniques to help clear mucus from the airways.

✓ Encourage the client to pace their activities and take frequent rest breaks to avoid excessive fatigue. Teach them energy conservation techniques, such as using assistive devices and planning activities strategically to optimize their energy levels.

✓ Lung injury from inhalants such as tobacco smoke, exposure to secondhand smoke, and fumes from hair dyes, artificial nail products, and paints can lead to COPD.

✓ More women than men die from COPD



Information Source

Workman, D.I.M. L. ([2021]). Medical-Surgical Nursing (10th ed.).

Question 285

Type: highlight_table

The nurse reviews the client's admission orders from the physician.

➢ **Click to highlight the orders below that would require follow-up.**

Order Category	Physician order
Diet	Regular diet Correct
Activity	Out of bed for meals and ambulate as tolerated
Weight	Daily weights
Medications	naproxen 500 mg PO every six hours PRN fever Correct
-	vancomycin 1 gram intraveous (IV) piggy-back every 12 hours Correct
-	azithromycin 500 mg intravenous piggyback once a day
Continuous infusions	3% saline at 75 mL/hr Correct

Explanation

The client's clinical status is showing concerns of pneumonia and acute kidney injury because of the increase in creatinine and BUN.

This warrants a careful review of orders that may worsen renal function.

Orders written by the primary healthcare provider that require follow-up include –

- The regular diet. Individuals with AKI require a diet modified with sodium and potassium restrictions. If the AKI is severe enough, the PHCP may order fluid restrictions.
- 3% saline at 75 mL/hr. This prescription requires follow-up because hypertonic saline is not utilized in pneumonia or AKI. This could be detrimental.
- This client is dehydrated because of their fever and requires fluid resuscitation with isotonic fluids.
- Naproxen is an NSAID and is nephrotoxic. Thus, this prescription should be clarified with the PHCP and potentially changed to acetaminophen.
- Vancomycin was prescribed to cover any pathogens, such as MRSA. This antibiotic should be questioned because of the client's increased creatinine.
- It is recommended that a client with pneumonia mobilize. This helps with airway clearance and preventing complications such as venous thromboembolism. Thus, no clarification is needed for the activity order.
- Daily weights would be essential in tracking the client's clinical progress of the AKI. The other prescriptions do not pose any harm to the client during the management of AKI and pneumonia.
- Azithromycin is predominantly hepatically eliminated and is okay for the client to receive.

Additional Info

✓ Pneumonia may cause an acute kidney injury because of its ability to cause a client to develop dehydration.

✓ Pneumonia's clinical features include fever, productive cough, malaise, adventitious breath sounds, and pleuritic pain.

✓ Clinical features of an acute kidney injury include increased creatinine, decreased urine output, and, at worst, fluid volume overload.

✓ The nurse must act quickly to intervene, identify nephrotoxic agents, and collaborate with the PHCP to reduce the client's exposure.

Question 286

Type: multiple_response_all

The client is diagnosed with acute pancreatitis. Which preventative intervention should the nurse implement to reduce the client's risk of developing a respiratory infection?

Select all that apply.

Answer Choices

A. Assist the client to turn and reposition frequently Correct

B. Document the respiratory rate and oxygen saturation

C. Place the client in a semi-fowlers position Correct

D. Encourage deep breathing and coughing. Correct

E. Obtain a prescription for prophylactic antibiotics

Explanation

Choices A, C, and D are correct. Respiratory infections are common in acute pancreatitis due to retroperitoneal fluid pushing the diaphragm upwards and causing the client to take shallow abdominal breaths. Assisting the client to change positions frequently, encouraging deep breathing, coughing exercises, and positioning clients for maximum chest expansion would all be preventative interventions to reduce the risk of respiratory infection.

Choices B and E are incorrect. While documentation would be indicated to recognize any changes or complications, it would not prevent respiratory complications associated with pancreatitis. Obtaining an antibiotic prescription is not reasonable and not directly a prevention strategy for respiratory complications. Giving antibiotics prophylactically may build resistance and cause unnecessary adverse reactions. Ambulation, cough, deep breathing, and repositioning are all practical and non-invasive ways to prevent respiratory complications.

Additional Info

✓ Incentive spirometry can assist clients in their coughing and deep breathing exercises

✓ Early ambulation, if not contraindicated, can help prevent respiratory infections by getting the client upright and moving air more effectively

Question 287

Type: multiple_response_all

The nurse is teaching a client who is scheduled for a thoracentesis.

➢ Which of the following information should the nurse include? **Select all that apply.**

Answer Choices

A. "This procedure will require you to receive general anesthesia."

B. "You will need to report any shortness of breath following the procedure." Correct

C. "You will need to empty your bladder before this procedure."

D. "A follow-up chest x-ray will be done after the procedure." Correct

E. "You will need to be on a clear liquid diet one day before the procedure."

Explanation

Choice B is correct. This statement is correct and should be included while providing client education for a thoracentesis. A thoracentesis is a procedure indicated for pleural effusions. The client will need to report any dyspnea after the procedure.

Choice D is correct. Dyspnea following the thoracentesis procedure may indicate either **iatrogenic pneumothorax** or **re-expansion pulmonary edema**.

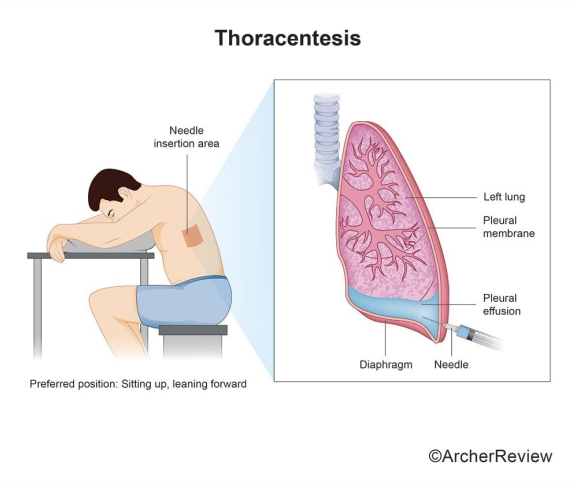
- **Pneumothorax** is a common complication following thoracentesis (studies report post-thoracentesis pneumothorax rates ranging from 0 to 19%). The nurse should assess the client carefully for any signs of pneumothorax. Symptoms and signs of a pneumothorax include shortness of breath and reduced or absent breath sounds on the affected side. A more severe pneumothorax, such as a tension pneumothorax, may present with obstructive shock. A nurse must notify the physician immediately if any of these signs or symptoms occur. A chest x-ray must be completed post-procedure to ensure no iatrogenic pneumothorax, even if the client did not show any of the above signs or symptoms.
- **Re-expansion pulmonary edema** (REPE) is a complication that occurs after rapid re-expansion of a collapsed lung within 1 to 24 hours. It has been reported that <1% of most studies are associated with high mortality. The pathophysiologic mechanism of REPE is unknown. Clinical features vary from coughing and chest tightness to acute respiratory failure. Treatment is usually supportive and includes continuous non-invasive positive pressure ventilation or mechanical ventilation in severe cases; some clients also require vasopressors, steroids, and diuretics.

Choice A is incorrect. Thoracentesis is a bedside procedure that can be completed under local anesthesia. This statement would be inappropriate for the client.

Choice C is incorrect. It would be inappropriate to advise that the client empty their bladder before the procedure. This is teaching relevant for a client undergoing amniocentesis after 20 gestational weeks.

Choice E is incorrect. Finally, a clear liquid diet one day before the procedure would be appropriate for a colonoscopy, not a thoracentesis.

Additional Info



Question 288

Type: Bowtie

➢ Complete the diagram by dragging from the choices below to specify what condition the client is most likely experiencing, two (2) actions the nurse should take to address that condition, and two (2) parameters the nurse should monitor to assess the client's progress.

Action to take

Slot 1

- Administer high-flow oxygen via a non-rebreather mask. Correct
- Initiate a fluid bolus of 0.9% normal saline
- Administer sublingual nitroglycerin as prescribed.
- Administer IV morphine sulfate as prescribed.
- Position the client in the Trendelenburg position

Slot 2

- Administer high-flow oxygen via a non-rebreather mask.
- Initiate a fluid bolus of 0.9% normal saline
- Administer sublingual nitroglycerin as prescribed. Correct
- Administer IV morphine sulfate as prescribed.
- Position the client in the Trendelenburg position

Most likely experiencing

Slot 1

- Chronic obstructive pulmonary disease (COPD) exacerbation
- Acute respiratory distress syndrome (ARDS)
- Cardiac tamponade
- pulmonary edema Correct

Parameter to Monitor

Slot 1

- Blood pressure
- Oxygen saturation Correct
- Respiratory rate
- Urine output
- Temperature

Slot 2

- Blood pressure
- Oxygen saturation
- Respiratory rate Correct
- Urine output
- Temperature

Explanation

Conditions most likely experiencing

- The clinical presentation of pink frothy sputum, bilateral crackles, JVD, and pulmonary vascular congestion on X-ray is classic for pulmonary edema caused by acute heart failure exacerbation.
- COPD typically presents with wheezing and sputum production. Pink frothy sputum, JVD, bilateral crackles, and vascular congestion point to acute decompensated heart failure (ADHF) instead.
- ARDS involves diffuse lung injury and bilateral infiltrates, not the pulmonary vascular congestion seen here. Pink frothy sputum and JVD suggest a cardiac cause like ADHF, not ARDS.
- Cardiac tamponade typically presents with muffled heart sounds, hypotension, and JVD, not pink frothy sputum, pulmonary congestion, and bilateral crackles.

Action to take

- High-flow oxygen is crucial to address severe hypoxemia and improve tissue oxygenation. The client's oxygen saturation of 82% indicates a significant level of hypoxia, which will improve without intervention. Pulmonary edema reduces alveolar gas exchange, making supplemental oxygen the priority.
- Nitroglycerin reduces preload and afterload by causing vasodilation, which decreases pulmonary congestion and improves cardiac output in acute heart failure. Rationale:
- Administering fluids would worsen pulmonary edema by increasing circulatory volume, and exacerbating congestion. This client requires fluid reduction through diuretics, not additional fluids.
- Trendelenburg increases venous return and preload, worsening pulmonary edema. Semi-Fowler's or Fowler's position supports better lung expansion and reduces breathing effort.
- While morphine may alleviate anxiety and respiratory effort, the priority is to reduce pulmonary congestion with oxygen therapy, diuretics, and vasodilators. Morphine is not a first-line intervention here.

Parameter to Monitor

- Oxygen saturation: Monitoring SpO_2 ensures the client receives adequate oxygenation and allows the nurse to assess the effectiveness of oxygen therapy.
- Respiratory rate: The respiratory rate reflects the severity of the client's respiratory distress and response to interventions. Improvement in the rate indicates the resolution of acute distress.
- Urine output helps assess renal perfusion but is not a priority in acute pulmonary edema. Focus instead on oxygenation (SpO_2) and respiratory rate to monitor respiratory distress.
- While fever might suggest infection, the priority is managing respiratory distress and oxygenation.
- Monitoring SpO_2 and respiratory rate takes precedence in this acute phase. Monitoring BP is less critical than tracking oxygen saturation and respiratory rate, as oxygenation status directly reflects improved pulmonary edema.

Additional Info

✓ Anticipate the need for IV diuretics like furosemide to reduce pulmonary congestion and relieve symptoms.

✓ Monitor fluid balance closely. Assess for signs of fluid overload or diuresis to evaluate the effectiveness of treatment for pulmonary edema.

✓ Reassess oxygenation frequently. Monitoring SpO_2 and respiratory effort to ensure adequate oxygenation and adjust oxygen delivery as needed.

✓ Explain the importance of adherence to heart failure management strategies, including medication compliance and fluid restriction, to prevent recurrence.

Information Source

Workman, D.I.M. L. (2021). Medical-Surgical Nursing (10th ed.). Elsevier Health Sciences (US).

Question 289

Type: single_choice

The nurse is caring for a client with a chest tube connected to a drainage system. The physician has ordered that the tube be removed.

➢ Which supply item should the nurse place at the bedside in preparation for the procedure?

A. Suture removal kit ✔ Correct

B. Bag valve mask (BVM)

C. Nasal cannula oxygen

D. Wall suction with tubing

Explanation

Choice A is correct. If the PHCP prescribes a chest tube to be discontinued, nursing should have pertinent supplies such as a suture removal kit, occlusive gauze, dry sterile gauze, tape, biohazard bag, and a clamp. A suture removal kit is necessary because the chest tube is sutured into place.

Choice B is incorrect. A BVM is not pertinent when discontinuing a chest tube. This device is always at the bedside and is necessary for a client receiving mechanical ventilation.

Choice C is incorrect. Nasal cannula oxygen is not prescribed during or after the removal of a chest tube. If the chest tube is to be removed, this indicates improvement in their condition. If the client experiences complications following the removal of a chest tube, high-flow oxygen will likely be utilized, not nasal cannula oxygen.

Choice D is incorrect. Wall suction and tubing are not necessary to remove a chest tube. This may be necessary to

operate the chest tube – but not for its removal.

Additional Info

✓ The PHCP performs chest tube discontinuation.

✓ Nursing should have the pertinent supplies at the bedside (suture removal kit, occlusive gauze, dry sterile gauze, tape, biohazard bag, and a clamp).

✓ This is a painful procedure, so medicating the client with an opioid prior to this procedure is recommended.

✓ The sutures will be discontinued; the tape will be torn and prepared, as well as the gauze.

✓ The tube will be clamped, and while the client performs the Valsalva maneuver, the tube will be pulled and discontinued.

✓ The gauze will be applied and taped firmly.

✓ The device should be secured in a biohazard bag and disposed of accordingly.

✓ A post-procedure chest radiograph may be prescribed to determine if the initial problem has recurred.

Information Source

Potter, P., Perry, A., Stockert, P., Hall, A. (2022). Fundamentals of Nursing, 11th Edition. p. 1000

Question 290

Type: single_choice

The nurse is assessing a client with chronic obstructive pulmonary disease (COPD).

➢ Based on the vital signs, which of the following actions should the nurse take? **Click the exhibit button for additional client information.**

A. Administer acetaminophen (APAP) ✔ Correct

B. Provide the client with warm blankets

C. Apply oxygen at 2 liters via nasal cannula

D. Obtain an arterial blood gas (ABG)

Explanation

Choice A is correct. The client has a fever, and the treatment for a fever includes fluids and antipyretics such as acetaminophen or ibuprofen. Fever increases the work of breathing and may cause respiratory muscle fatigue, precipitating an *exacerbation* of chronic obstructive pulmonary disease (COPD). Therefore, the fever should be controlled. The etiology of the fever in a COPD client should be identified (bronchitis, pneumonia) and treated.

Choice B is incorrect. The client's temperature is increased, and providing warm blankets would be detrimental, considering the client has pyrexia. Tepid water baths may be used to promote comfort.

Choice C is incorrect. Oxygen is not indicated as the oxygen saturation is above 88%. A slightly lower-than-normal oxygen saturation (88 to 92%) is the norm for individuals with COPD, and oxygen need not be administered unless the oxygen saturation (SaO_2) is less than 88%. Studies have shown that over-treatment of COPD clients with oxygen and increasing oxygen saturation beyond 93% may lead to increased mortality.

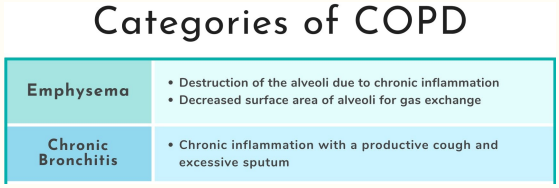
Choice D is incorrect. There is no indication in the question that the client requires an ABG. An ABG may be obtained if the oxygen saturation falls below 88% or if a severe COPD exacerbation is suspected. The client does not have altered mental status to indicate acute CO_2 retention. The client has tachypnea and mild hypoxia, a cardinal manifestation associated with COPD.

Additional Info

✓ Common symptoms of COPD include shortness of breath, chronic cough, production of sputum, wheezing, and chest tightness.

✓ In COPD, the airways become partially blocked, leading to reduced airflow in and out of the lungs. This obstruction is usually irreversible and worsens over time.

✓ COPD is diagnosed based on a combination of medical history, physical examination, lung function tests, and imaging studies.



Source : Source: Archer Review

Information Source

Ignatavicius, D., & Workman, M. L. (2020). *Medical-Surgical nursing: Concepts for interprofessional collaborative care* (10th ed.). Elsevier. p. 548

Question 291

Type: single_choice

The nurse is caring for a client who had a thoracentesis two hours ago. Which assessment finding requires follow-up?

A. persistent cough ✔ Correct

B. soreness at the needle site

C. urine output of 200 mL

D. scant bloody drainage

Explanation

Choice A is correct. The most immediate postoperative risk factor is pneumothorax. Thoracentesis is when a needle is inserted into the pleural space between the lungs and the chest wall. This procedure removes pleural effusion (excess fluid) from the pleural space to help ease breathing. The risks of this procedure may include air in the area between the lung covering (pleural space) that causes the lung to collapse (pneumothorax), bleeding, infection, and liver or spleen injury (rare). Symptoms of pneumothorax include dyspnea, chest pain, shortness of breath, and frequent coughing.

Choice B is incorrect. Soreness at the needle site is common and usually resolves in several hours.

Choice C is incorrect. A urine output following this procedure of 200 mL is irrelevant and does not require follow-up.

Choice D is incorrect. Scant bloody drainage at the needle site is expected and not a finding that requires follow-up.

Additional Info

✓ A thoracentesis is used to remove air or fluid from the pleural space

✓ Informed consent is required for this procedure

✓ This procedure is performed at the bedside by the provider using local anesthetic

✓ The most common complication following this procedure is pneumothorax or hemothorax

✓ Manifestations of a pneumothorax include tachypnea, tachycardia, decreased oxygen saturation, diminished/absent breath sound on the affected side and coughing,

✓ It has been standard practice at many facilities to obtain a chest x-ray after thoracentesis to rule out pneumothorax, document the extent of fluid removal, and view lung fields previously obscured by fluid

Question 292

Type: multiple_response_select

➢ **Which of the following three (3) assessment findings would require immediate follow-up?**

A. Blood pressure

B. Capillary refill

C. Glasgow Coma Scale

D. Oxygen saturation Correct

E. Medical history

F. Respiratory rate Correct

G. Lung sounds Correct

Explanation

The concerns from the assessment include the client's oxygen saturation, respiratory rate, and lung sounds.

- An oxygen saturation (SaO2) of less than 95% is defined as hypoxemia. An oxygen saturation of less than 90%, as seen in this client, is referred to as **moderate** hypoxemia and is concerning. Moderate hypoxemia