M_CardiacVasPQ (600+ Questions) - Quiz Questions with Answers

1.

Persistent **atrial fibrillation is defined as fibrillation that:**

ends spontaneously or with treatment within 1 week.

continues for more than 1 week.

continues for more than 1 year.

cannot be converted to sinus rhythm.

Explanation:

Atrial fibrillation is defined in terms of duration and response to treatment. Definitions of atrial fibrillation include:

- *Paroxysmal: ends spontaneously or with treatment within 1 week.*
- *Persistent: continues for more than 1 week.*
- *Longstanding: continues for more than 1 year.*
- *Permanent: has not responded to treatment, and patient and clinician agree to stop further attempts—at least for the present—to convert the fibrillation to sinus rhythm.*

2.

According to the National Heart, Lung, and Blood Institute Adult Treatment Panel III (ATP III) recommendations for cholesterol management, the primary target of therapy for LDL cholesterol is:

<80 mg/dL.

<100 mg/dL.

100 to 129 mg/dL.

130 to 159 mg/dL.

Explanation:

According to the National Heart, Lung, and Blood Institute Adult Treatment Panel III (ATP III) recommendations for cholesterol management, the primary target of therapy for LDL (low-density lipoprotein) cholesterol is below 100 mg/dL. LDL classification:

<100 Optimal

100-129 Near optimal/above optimal

130-159 Borderline high

160-189 High

≥190 Very high

Total cholesterol should be maintained below 200 mg/dL. HDL (high-density lipoprotein) is low if below 40 mg/dL and high if ≥60 mg/dL. High risk factors for coronary heart disease events include coronary heart disease, symptomatic carotid artery disease, peripheral arterial disease, and abdominal aortic aneurysm.

3.

A patient who died in the cardiac care unit had confided to the cardiac/vascular nurse prior to her death that her daughter was not her husband's child and that she had never divulged this information but believed perhaps she should have. The nurse should:

tell the husband.

tell the daughter.

maintain confidentiality.

document the information in the patient's records.

Explanation:

If a patient tells a cardiac/vascular nurse something of a personal nature in confidence, the nurse should maintain confidentiality, according to HIPAA regulations, even if the patient has died. Information that a patient shares that is unrelated to the patient's condition or treatment, such as the fact that the patient's daughter was not her husband's, should not be divulged to others, including family members, or documented in the patient's records because this would also violate confidentiality.

4.

A patient states that he has an advance directive and does not want to be resuscitated in the event of cardiac arrest or maintained on life support but is concerned his family may feel otherwise. The best advice the cardiac/vascular nurse can give the patient is to:

not worry because his advance directive will be honored.

discuss the matter with his family and let them know his wishes.

tell the doctor about his wishes.

make sure all health care providers have copies of the advance directive.

Explanation:

In most states, advance directives are not legally binding and may be overridden by family members because health care providers are reluctant to stop treatment if family members insist the treatment be provided. Therefore, in most cases, the best advice is to encourage patients to discuss the matter with their families and to let the families know their wishes so that, if the issue arises, the families can make informed decisions based on what the patients want.

5.

A patient who is recovering from insertion of a pacemaker because of bradycardia related to heart block tells the cardiac/vascular nurse that she worries about living with cardiac disease and needs more information. The best referral is probably to the:

Mended Hearts.

American Heart Association.

patient's physician.

Internet.

Explanation:

If a patient recovering from insertion of a pacemaker because of bradycardia related to heart block tells the cardiac/vascular nurse that she worries about living with cardiac disease and needs more information, the best referral is probably to the Mended Hearts. Mended Hearts provides educational resources and support groups for patients and families living with heart disease and offers peer-to-peer support programs for hospital visits, online support materials, and phone contact.

6.

An older patient became very confused, climbed out of bed, and slipped on the floor, fracturing a hip. The patient's family is meeting with personnel from risk management. The primary purpose of risk management is to:

settle issues out of court.

assess the degree of a problem.

offer solutions to problems that arise.

anticipate problems and resolve them.

Explanation:

The primary purpose of risk management is to anticipate problems (such as potential civil suits related to negligence or malpractice) and to resolve them. Risk management evaluates and prioritizes risks as well as addresses them with the ultimate aim of reducing liability to an organization. If the potential for liability is present (such as if a patient falls and is injured), then personnel may meet with the family directly. Risk management is also active in planning insurance needs and ensuring adequate personnel, security, and safety policies.

7.

A patient in the cardiac care unit is nonresponsive and on life support, and his two daughters are in complete disagreement about his treatment. If the cardiac/vascular nurse comes into the room and finds them loudly arguing, the best response is:

"You need to take this argument elsewhere."

"How would your father feel about your arguing?"

“Let’s sit down together and talk about this.”

“You really need to make a decision about your father.”

Explanation:

If the nurse comes into a room in the cardiac care unit and finds the 2 daughters of the nonresponsive patient loudly arguing, the best response is to acknowledge there is a problem and seek to help resolve it: “Let’s sit down together and talk about this.” Sometimes, a third person acting as a mediator can help family members who are in disagreement express their feelings and concerns and arrive at a solution.

8.

The wife of a patient who has experienced a severe myocardial infarction and is doing poorly has started spending hours in the hospital chapel praying and states that she believes God will save her husband. According to Kübler-Ross’s five stages of grief, the stage of grief that the wife is probably undergoing is:

denial.

bargaining.

depression.

acceptance.

Explanation:

If the wife of a patient who is doing poorly has started spending hours in the hospital chapel praying and states that she believes God will save her husband, according to Kübler-Ross’s five stages of grief, the stage of grief that the wife is probably undergoing is bargaining. Stages:

Denial	*People resist information or seem stunned, unable to comprehend.*
Anger	*People may express anger inwardly or outwardly, blaming themselves or others.*
Bargaining	*People utilize if-then thinking processes, appeal to God, change doctors.*
Depression	*People become tearful, sad, and withdrawn.*
Acceptance	*People can accept the outcome with less pain and less preoccupation.*

9.

Although a Spanish-speaking Hispanic male being monitored in an outpatient clinic has set appointment times, the patient rarely arrives at the scheduled time, sometimes coming early but often arriving 1 to 2 hours late. The most likely reason is:

lack of transportation.

lack of consideration of staff.

cultural perception of time.

inadequate English skills.

Explanation:

If a Spanish-speaking Hispanic male patient being monitored in an outpatient clinic has set appointment times but rarely arrives at the scheduled time, sometimes coming early but often arriving 1 to 2 hours late, the most likely reason is a cultural perception of time that is more fluid than common in American culture. Sometimes, compliance will be better if the appointment is

associated with some marker, such as asking the patient to come immediately before lunch (being sure to ascertain meal times).

10.

If a patient who is a Jehovah's Witness is to undergo emergent angiography and angioplasty, the most important religion-related question to ask the patient is if she:

wants a minister called.

will accept blood products.

will take medications.

wants a faith healer called.

Explanation:

If a patient who is a Jehovah's Witness is to undergo emergent angiography and angioplasty, the most important religion-related question to ask the patient is if she will accept blood products. While it is generally against the beliefs of the Jehovah's Witnesses to accept blood products, this does not necessarily hold true for all members. According to their religious beliefs, Jehovah's Witnesses can undergo surgery, take medications, and take fractions derived from blood, such as albumin and immune globulins.

11.

The approach most commonly used for transcatheter aortic valve replacement (TAVR) is:

transfemoral.

transaortic.

transapical.

transradial.

Explanation:

The approach most commonly used for transcatheter aortic valve replacement (TAVR) is transfemoral. This procedure is generally limited to patients who are at high operable risk or are not candidates for traditional open-heart approaches. The bovine valve, supported by a metal stent, is inserted via a balloon catheter and guided into the heart and positioned inside of the aortic valve. Then the balloon is inflated, securing the valve. The transapical and transaortic approaches both require external incisions and may be utilized for patients with peripheral arterial disease that precludes the transfemoral approach.

12.

The physician has reviewed the consent forms with a patient and the patient has signed prior to surgery, but the patient appears to believe he is having a noninvasive procedure rather than the open-heart procedure scheduled. The nurse should:

tell the patient that he is wrong.

report the physician to administration.

call the physician and report the patient's misconception.

notify surgery to cancel the procedure.

Explanation:

While informed consent is critical, even when a patient has been fully apprised of a procedure and all of the elements required for informed consent, the patient still may not cognitively process the information, especially if the patient is confused, weak, or frightened. The nurse should immediately call the physician and report the patient's misconception so that the physician can ensure that the patient is informed and fully understands the procedure.

13.

Which of the following tests is the best marker for ventricular dysfunction and heart failure?

Atrial natriuretic peptide.

C-reactive protein.

B-type natriuretic peptide.

Homocysteine.

Explanation:

B-type natriuretic peptide (BNP) is the best marker for ventricular dysfunction and heart failure. BNP is a hormone secreted by the ventricular tissues in response to increased pressure in the ventricles and increased volume, such as may occur with heart failure. BNP promotes vasodilation and sodium excretion and may attenuate sympathetic activation, which stimulates the release of catecholamines and results in vasoconstriction. Normal values are <100 pg/mL; levels of 100 to 300 pg/mL indicate beginning heart failure. The level for mild heart failure is >300 pg/mL; moderate, >600 pg/mL; and severe, >900 pg/mL.

14.

If a patient qualifies for home health care under Medicare (Original), Medicare will pay the agency a fee based on the patient's condition for an "episode of care," which is a period of:

30 days.

60 days.

90 days.

120 days.

Explanation:

If a patient qualifies for home health care under Medicare (Original), Medicare will pay the agency a fee based on the patient's condition for an "episode of care," which is a period of 60 days. Services that Medicare will cover include part-time or intermittent skilled nursing care, physical therapy, occupational therapy, speech-language pathology services, medical social services, and medical supplies, such as dressing supplies. Durable medical equipment is paid for separately by Medicare (usually 80% of approved cost).

15.

The purpose of Home and Community-Based Services (HCBS) programs provided through Medicaid is to:

maintain patients in their home environments rather than nursing homes.

reduce the overall cost of caring for patients.

place patients into appropriate nursing homes for care.

provide home health care for patients recently hospitalized.

Explanation:

The purpose of Home and Community-Based Services (HCBS) programs provided through Medicaid is to maintain patients in their home environments rather than nursing homes for as long as possible. Under the HCBS services, patients may be eligible for a number of different services, such as home health care and personal care services as well as some services that are not usually provided by Medicaid or Medicare, including adult day services, transportation assistance, and home modifications.

16.

The cardiac/vascular nurse needs to delegate personal care of a stable but anxious patient who has recently undergone open-heart surgery and still has drains and IVs in place. The available personnel include a newly graduated LVN with no experience in the unit, a CNA who has worked in the unit for 5 years, and a CNA who has worked in the unit for 6 weeks. By delegating this task to the CNA who has worked on the unit for 5 years over the new LVN with more extensive education, the nurse is demonstrating which "right" of delegation?

Right circumstance.

Right task.

Right person.

Right supervision and evaluation.

Explanation:

There are five "rights" of delegation: The right person, right task, right circumstance, right direction/communication, and right supervision. All of the individuals available are technically qualified to provide personal care, therefore the right person is not the primary consideration. In this case the decision to delegate to the CNA with 5 years of experience in the unit is an example of the right circumstance. Even though the CNA has less formal education than the LVN, the LVN has no work experience in the unit, therefore may not be able to efficiently collect the materials and provide care to an already anxious patient. Familiarity with the unit will allow the CNA with 6 years of experience to provide patient-centered care that the circumstance requires. The CNA's 5 years of actual work experience should have provided the RN with a good

estimation of the person's skills, and it is the responsibility of the RN to make a judgment about who is best suited to provide care.

17.

If the cardiac/vascular nurse believes that a procedure can be effectively shortened without any compromise in quality, the next step should be to:

ask other staff if they agree.

suggest the supervisor give the procedure a trial period.

shorten the procedure when utilizing it.

write a formal proposal for change.

Explanation:

If the cardiac/vascular nurse believes that a procedure can be effectively shortened without any compromise in quality, the next step should be to write a formal proposal for change and submit it to the appropriate authority, which may vary from one institution to another. Changing procedures is not always an easy task because procedures should be based on best evidence and are usually included in procedure manuals and training, so any change, even a minor modification, may require multiple responses—such as changing training procedures, educating staff, and changing procedure manuals.

18.

The type of coping strategy that a patient is exhibiting when the patient constantly asks questions and utilizes Internet searches to obtain information about all treatments and medications is:

being optimistic.

using social support.

accepting the situation.

trying to maintain control.

Explanation:

The type of coping strategy that a patient is exhibiting when the patient constantly asks questions and utilizes Internet searches to obtain information about all treatments and medications is trying to maintain control. In this case, knowledge is power. Other coping strategies that patients and families employ include using social support (such as family and friends), using spiritual support (prayer, meditation, spiritual advisor), accepting the situation (dealing with the situation realistically), and being optimistic (expecting the best).

19.

When users of the new electronic health record (EHR) were evaluated, the cardiac/vascular nurse was the only nurse on the unit with no errors in documentation while many others were struggling to utilize the new system correctly. Because of this, the cardiac/vascular nurse should:

suggest the other nurses ask for more training.

offer to serve as a resource person.

ask for a raise in pay.

advise the other nurses they need to be more careful.

Explanation:

If, when users of the new electronic health record (EHR) were evaluated, the cardiac/vascular nurse was the only nurse on the unit with no errors while many others were struggling to utilize the new system correctly, the cardiac/vascular nurse should offer to serve as a resource person. Assisting others in a professional capacity and ensuring that care is documented properly is part of maintaining and promoting a healthy work environment.

20.

Following a carotid endarterectomy, a patient exhibits bradycardia, weak tone of voice, and dysphagia. The most likely reason is trauma to:

vagus nerve (X) (superior laryngeal).

glossopharyngeal nerve (IX).

spinal accessory nerve (XI).

hypoglossal nerve (XII).

Explanation:

Following a carotid endarterectomy, if a patient exhibits bradycardia, weak tone of voice, and dysphagia, the most likely reason is trauma to the superior laryngeal vagus nerve (X), which lies very close to the carotid artery and can be easily traumatized during surgery or affected by edema. Bradycardia must be treated promptly because it can lead to cerebral ischemia and neurological impairment. Vagal stimulation may also result in reflex hypotension in the first few hours after surgery.

21.

When assessing cardiovascular function, the two most important symptoms to question the patient about are:

pain and edema.

pain and shortness of breath.

weight gain and pain.

pain and palpitations.

Explanation:

When assessing cardiovascular function, the 2 most important symptoms to question the patient about are pain and shortness of breath. If the patient has pain, it is important to determine where the pain occurs and whether it radiates, precipitating factors, pain characteristics (burning, tight, sharp, dull), and factors that relieve the pain. If the patient has shortness of breath, the cardiac/vascular nurse should ask when it begins, how long it persists, if it occurs at night, and if the patient has also experienced coughing.

22.

Which of the following tasks can be delegated to unlicensed assistive personnel?

Determining interventions needed in the plan of care.

Checking a patient's vital signs during an episode of chest pain.

Identifying goals related to the nursing diagnosis.

Emptying a urinary catheter bag and measuring the urine.

Explanation:

The task that can be delegated to unlicensed assistive personnel (UAP) is emptying a urinary catheter bag and measuring the urine. Some tasks can only be completed by registered nurses, and these include determining interventions needed in the plan of care, checking a patient's vital signs during an episode of chest pain (although UAP may take routine vital signs), and identifying goals related to the nursing diagnosis. Only RNs may develop nursing diagnoses, validate assessment data, and evaluate the effectiveness of care.

23.

Which type of defense mechanism is a patient utilizing when the patient refuses to get out of bed or attend to any self-care and leaves decision-making to the patient's spouse?

Dissociation.

Denial.

Regression.

Assertiveness.

Explanation:

The type of defense mechanism that a patient is utilizing when the patient refuses to get out of bed or attend to any self-care (e.g., bathing, brushing teeth) and leaves decision-making to the patient's spouse is regression, which is reverting to an earlier developmental stage when trying to cope with stress. During periods of regression, patients may seem unable to make decisions or tell someone else to make the decisions for them. Patients may seem withdrawn and depressed.

24.

When using the SMART format to develop targeted goals, these goals should be (S) specific, (M) measurable, (A) attainable, (R) realistic, and (T):

timely.

temporary.

topical.

tested.

Explanation:

When using the SMART format to develop targeted goals, these goals should be:

- *(S) Specific: should clearly outline what is to be accomplished, by whom, and the timeline.*
- *(M) Measurable: should include concrete measurements that help the patient to stay focused on the goal and to observe progress.*
- *Attainable: should be reasonable and within the capacity of the patient.*
- *(R) Realistic: should represent a goal that the patient is willing to work toward.*
- *(T) Timely: should include a firm time frame so that the patient can measure achievement against time.*

25.

If the cardiac/vascular nurse is caring for a close friend of a nurse on another unit and the nurse asks about the results of the patient's laboratory tests, the best response is:

"I'm sorry, I can't give you that information."

"You should know that's a HIPAA violation."

"They were within normal range, so don't worry."

"I'll get you a copy of the results."

Explanation:

If the cardiac/vascular nurse is caring for a close friend of a nurse on another unit and the nurse asks about the results of the patient's laboratory tests, the best response is, "I'm sorry, I can't give you that information." Most nurses are aware of HIPAA regulations, so reminding the nurse is probably not necessary, but sometimes nurses want others to overlook the regulations when they are seeking information; however, only those involved in the patient's care can legally have access to the patient's records.

26.

According to the Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, a 62-year-old patient should be treated for hypertension with medications if their blood pressure is:

120/90 mm Hg or higher.

130/90 mm Hg or higher.

140/90 mm Hg or higher.

150/90 mm Hg or higher.

Explanation:

According to the Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, blood pressure should be treated pharmacologically in the general population when blood pressure is 140/90 mmHg or higher in patients younger than 60, and when blood pressure is 150/90 mmHg or higher when the patient

is 60 and older. If the patient has diabetes in addition to hypertension, pharmacologic treatment should begin when blood pressure is 140/90 mmHg or higher in any age.

27.

A patient's nursing diagnoses include (1) risk for fluid volume excess related to heart failure, (2) risk for ineffective coping related to change in status, and (3) imbalanced nutrition, more than body requirements related to poor food choices and knowledge deficit, and (4) acute pain related to myocardial infarction, The diagnoses should be prioritized (first to last) for interventions in the following order:

acute pain, risk for fluid volume excess, imbalanced nutrition, and ineffective coping.

risk for fluid volume excess, ineffective coping, imbalanced nutrition, and acute pain.

risk for fluid volume excess, acute pain, imbalanced nutrition, and ineffective coping.

acute pain, risk for fluid volume excess, ineffective coping, and imbalanced nutrition.

Explanation:

The diagnoses should be prioritized (first to last) in the following order for interventions:

1. *Acute pain related to myocardial infarction. This has first priority because pain control is a physiological need and can be usually be treated rapidly with appropriate analgesia.*
2. *Risk for fluid volume excess related to heart failure. This is also a physiological need but requires observation over a more extended period of time.*
3. *Imbalanced nutrition, more than body requirements. This is not an acute need because it requires dietary assessment and counseling and well as lifestyle changes.*
4. *Risk for ineffective coping is a security need that requires assessment and education over an extended period of time.*

28.

A patient with chronic heart failure and reduced cardiac output has an ejection fraction (EF) of 33%. An appropriate expected outcome of treatment is:

EF ≥35%.

EF ≥40%.

EF ≥60%.

EF ≥65%.

Explanation:

A normal ejection fraction (EF), which is dependent on cardiac output, is 55% to 70%, representing the percentage of blood expelled from the ventricles during a contraction. Because this patient's EF is quite low at 33%, a realistic outcome for treatment is to improve the EF to at least 40%, which is still below normal but poses less risk to the patient. An EF below 35% increases the risk of potentially life-threatening dysrhythmias and cardiac arrest and may require an implantable cardioverter defibrillator.

29.

If a patient has been prescribed simvastatin or atorvastatin for high cholesterol, which of the following foods/drinks should be limited?

Cranberry juice.

Black licorice.

Milk.

Grapefruit juice.

Explanation:

If a patient has been prescribed simvastatin, lovastatin, or atorvastatin for high cholesterol, grapefruit juice should be limited to less than 1 quart daily. Grapefruit juice can result in increased blood levels of the drugs and increased adverse effects. Licorice should be avoided with digoxin because the combination may result in digoxin toxicity. Cranberry products should not be taken while on warfarin. Milk does not pose a problem with cardiovascular medications.

30.

Patients taking loop and/or thiazide diuretics should be routinely monitored for:

calcium level.

vitamin D level.

potassium level.

sodium level.

Explanation:

Patients taking loop and/or thiazide diuretics should be routinely monitored for potassium level because both types of diuretics increase the secretion of potassium because they inhibit sodium and chloride reabsorption. Normal potassium value is 3.5 to 5.5 mEq/L; hypokalemia is serum potassium less than 3.5 mEq/L. The critical value is less than 2.5 mEq/L. Symptoms of hypokalemia include weakness, lethargy, nausea and vomiting, paresthesia, muscle cramps, tetany, hypotension, and dysrhythmias. ECG changes include PVCs and flattened T waves.

31.

Which of the follow comorbidities precludes the use of a beta-blocker for treatment of heart disease?

Severe asthma.

Cancer.

Rheumatoid arthritis.

Osteoporosis.

Explanation:

Beta-blockers should not be used for treatment for patients with severe asthma. Some of the newer classes of beta-blockers (such as metoprolol) are specific to beta-1 adrenergic receptors and may be utilized for patients with mild to moderate asthma if they do not respond adequately to other classes of medication, but they should be monitored closely. Beta-blockers may cause cough-variant asthma in patients without previous history of asthma. Patients on beta-blockers should be cautioned to never abruptly stop the medication as it may result in angina, dysrhythmias, or heart attack.

32.

A patient receiving digoxin 0.25 mg daily had a recent a digoxin level of 1.8 ng/mL (normal therapeutic level 0.5 to 2 ng/mL) but is exhibiting pulse rate of 56 bpm with occasional dysrhythmia. The cardiac/vascular nurse should:

administer the digoxin.

withhold the digoxin.

withhold the digoxin and begin ECG monitoring.

administer the digoxin and begin ECG monitoring.

Explanation:

If a patient receiving digoxin 0.25 mg daily had a recent a serum digoxin level of 1.8 ng/mL (normal therapeutic level 0.5 to 2 ng/mL) but is exhibiting pulse rate of 56 with occasional dysrhythmia, the cardiac/vascular nurse should withhold the medication (pulse below 60) and begin ECG monitoring (dysrhythmia). Patients may develop digoxin toxicity even with serum digoxin levels within normal range. The serum digoxin level and potassium levels should be checked, and potassium administered if hypokalemia is present. Anti-dysrhythmic medications and digoxin immune Fab may be administered depending on the patient's condition.

33.

The Unna boot is contraindicated for patients who have:

pitting edema.

venous ulcers.

venous insufficiency.

nonambulatory status.

Explanation:

The Unna boot is contraindicated for patients who have nonambulatory status. Because the boot depends on the pumping action of the muscles to reduce edema, the boot must be removed if the patient is unable to ambulate. The Unna boot is used to treat venous stasis and venous ulcers but is contraindicated if the ulcers are infected or if phlebitis is present. The Unna boot is a gauze wrap impregnated with zinc oxide, glycerin, or gelatin. The gauze should be

applied distally to proximally without tension and be left open to dry or covered with self-adherent wrap. The Unna boot may be changed twice weekly to every other week.

34.

The primary reason for beginning cardiac rehabilitation while the patient is still in the acute hospital is to:

begin adaptive training.

prevent negative results of deconditioning.

prepare the patient psychologically for recovery.

prevent further cardiac events.

Explanation:

The primary reason to begin cardiac rehabilitation while the patient is still in the acute hospital is to prevent the negative results of deconditioning. Ideally, rehabilitation should begin 3 to 5 days after an MI or cardiac surgery and should include educating the patient about her condition and diagnostic tests, as well as outlining the type of cardiac rehabilitation she will undergo and any limitations she will have on discharge. The patient should be introduced to the behavior modification (such as smoking cessation, diet, and exercise) that will be needed.

35.

When a patient is faced with a serious illness, the most effective initial intervention to assist the patient with coping skills is to:

provide a list of coping strategies.

use a calm and reassuring approach.

ask the patient about past coping behavior.

provide factual information about the disease.

Explanation:

When a patient is faced with a serious illness, the most effective initial intervention to assist the patient with coping skills is to use a calm and reassuring approach as this can help the patient to stay focused and to avoid panic. When the patient is receptive, the nurse can ask about past coping skills and discuss techniques for coping, such as relaxation exercises. Providing factual information about the disease can often help allay concerns.

36.

In an older adult, key indications of coronary artery disease are:

chest and neck pain.

chest pain and nausea.

epigastric discomfort and fatigue.

fatigue and dyspnea.

Explanation:

In an older adult, key indications of coronary artery disease are fatigue and dyspnea. While adults often experience angina, the sympathetic response in older adults may be muted, so they may be essentially asymptomatic or complain of general malaise. Additionally, as patients

begin to experience fatigue and dyspnea, they often moderate their activities so that they are less likely to have overt symptoms. Lack of angina in older adults should not rule out the possibility of coronary artery disease.

37.

A patient with hypertrophic cardiomyopathy is especially at risk for:

ascites.

anemia.

sudden cardiac death.

hepatosplenomegaly.

Explanation:

A patient with hypertrophic cardiomyopathy (also known as idiopathic cardiomyopathy) is especially at risk for sudden cardiac death. Hypertrophic cardiomyopathy is characterized by hypertrophy of the left ventricle and thickening of the left side of the intraventricular septum. The left ventricle becomes increasingly noncompliant and cannot relax during filling, so left atrial and pulmonary venous pressures increase, resulting in dyspnea. Complications include pulmonary hypertension, heart failure, ventricular arrhythmias, and sudden cardiac death.

38.

The ECG changes that are common to myocardial injury and myocardial infarction include:

ST-segment elevation and T-wave inversion.

ST-segment depression and T-wave inversion.

prolonged QT segment with T-wave inversion.

T-wave inversion and absent P wave.

Explanation:

The ECG changes that are common to myocardial injury and myocardial infarction include ST-segment elevation and T-wave inversion, so onset of these changes should signal the need for further testing, such as cardiac enzymes and proteins. With myocardial ischemia, the first stage of heart damage, ST-segment depression and T-wave inversion are common. In the second stage, when the ischemia is prolonged and damage occurs, then ST-segment elevation is evident. In the third stage, myocardial infarction, the first change may be tall T waves, but these become inverted and ST-segment elevation occurs as the hours pass.

39.

Which of the following is an absolute contraindication to thrombolytic use for a myocardial infarction?

Current anticoagulation therapy with warfarin (INR at least 2 to 3).

Internal bleeding within 2 to 4 weeks.

Suspected aortic dissection.

History of chronic severe poorly controlled hypertension.

Explanation:

An absolute contraindication to thrombolytic use for a myocardial infarction is suspected aortic dissection. Other absolute contraindications include previous intracranial hemorrhage, vascular cerebral lesions, malignant intracranial neoplasm, ischemic stroke within 3 months, active bleeding (other than menses), history of significant head trauma or surgery in the preceding 3 months, intracranial/intraspinal surgery within 2 months, and severe hypertension (uncontrolled and unresponsive). Relative contraindications include internal bleeding within 2 to 4 weeks, current anticoagulation therapy with warfarin (INR at least 2 to 3), and history of chronic, severe poorly controlled hypertension.

40.

When reviewing a patient's list of medication, the cardiac/vascular nurse notes that, in addition to apixaban, the patient takes paroxetine, levothyroxine, dioctyl sodium sulfosuccinate (DSS or docusate sodium), and hydrochlorothiazide. Which of these drugs may interact with apixaban to increase the risk of bleeding?

Paroxetine.

Levothyroxine.

DSS.

Hydrochlorothiazide.

Explanation:

Apixaban is an anticoagulant (direct factor Xa inhibitor) that is used to prevent clots with atrial fibrillation. Apixaban interacts with a number of different drugs, so a patient's medications should be scrutinized to make sure they are safe to use with the drug. In this case, paroxetine (an SSRI) may increase the risk of bleeding if taken with apixaban. Other drugs that should be avoided are SNRIs, aspirin, NSAIDs, azole antifungals (such as ketoconazole), phenobarbital, phenytoin, and St. John's wort.

41.

According to the AHA/ACC/HRS guideline for the management of patients with atrial fibrillation, the recommended antithrombotic therapy for patients with mechanical heart valves and atrial fibrillation is:

unfractionated heparin.

warfarin.

aspirin.

rivaroxaban.

Explanation:

According to the AHA/ACC/HRS guideline for the management of patients with atrial fibrillation, the recommended antithrombotic therapy for patients with mechanical heart valves and atrial fibrillation is warfarin. The target INR should be maintained at 2 to 3 or 2.5 to 3.5, depending on the type of prosthesis and the location. The INR should be monitored weekly during initiation of treatment and at least monthly when the INR has stabilized.

42.

If the corrected QT (cQT) interval is 0.42 seconds at a standardized heart rate of 60 bpm, approximately what is the estimated expected cQT for a patient with a heart rate of 90 bpm?

0.48 seconds.

0.46 seconds.

0.38 seconds.

0.36 seconds.

Explanation:

While various formulas and computerized calculations are used to accurately calculate the corrected QT (cQT) interval, which is the interval between the beginning of the Q wave and the end of the T wave. One method to estimate the cQT is based on the standardized cQT: ≤0.42 seconds at 60 bpm. In order to estimate, 0.02 seconds is subtracted from 0.42 seconds for every 10 bpm that the patient's heart rate exceeds 60. Since the patient's heart rate is 90 (30 beats higher), then 0.02 X 3 = 0.06 seconds less, or 0.36 seconds.

43.

When using a radial pressure device to promote hemostasis after an arterial blood draw, once the pressure device is applied, it should be left in place initially for:

5 minutes.

10 minutes.

20 minutes.

30 minutes.

Explanation:

When using a radial pressure device to promote hemostasis after an arterial blood draw, once the pressure device is applied, it should be left in place initially for 30 minutes to ensure that bleeding does not occur. It's important when applying the device to ensure that the compression pad (and gauze pad if used) is positioned directly over the puncture site, that the minimal pressure needed to achieve hemostasis is utilized, and that the radial pulse distal to the compression pad is palpable.

44.

If a patient must have an IV inserted and blood tests but states that she is terrified of needles and may faint, the best course of action is to:

ask the patient what might help relieve her anxiety.

suggest the physician order an antianxiety medication.

advise the patient to take deep breaths and try to relax.

reassure the patient that the procedures will not be painful.

Explanation:

If a patient must have an IV inserted and blood tests but states that she is terrified of needles and may faint, the best course of action is to ask the patient what might help to relieve her anxiety before deciding on any other intervention. In some cases, a patient with a phobic fear of needles may be comforted by having a family member present. Patients are not often reassured by being told the procedure is not painful because it is not necessarily the pain that they are afraid of, and they may be too tense to take deep breaths and relax. If time permits, antianxiety medications may help patients to cope better.

45.

According to the AHA/ACC/HRS guideline for the management of patients with atrial fibrillation, in order to successfully maintain sinus rhythm after cardioversion for atrial fibrillation, the atrial fibrillation should have had a duration of:

<1 month.

<3 months.

<6 months.

<12 months.

Explanation:

According to the AHA/ACC/HRS guideline for the management of patients with atrial fibrillation, in order to successfully maintain sinus rhythm after cardioversion for atrial fibrillation, the atrial fibrillation should have had a duration of less than 6 months. Over time, the frequency of episodes of atrial fibrillation tends to progress from paroxysmal atrial fibrillation/tachycardia to persistent as remodeling of the heart's electrical system occurs. When fibrillation/tachycardia is persistent, it is more difficult to treat.

46.

The cardiac care supervisor is considering switching from 8-hour work schedules to 12-hour, with some staff members adamantly in favor and some adamantly opposed. During a meeting called to discuss the issue, the first step in resolving the conflict should be to:

allow both sides to present their opinions.

encourage cooperation.

provide reasons for the change.

state that the supervisor will make the decision.

Explanation:

If a unit supervisor is considering a switch in policy that affects staff members and a meeting is called to discuss the issues, the first step in resolving the conflict should be to allow both sides to present their opinions about the issue, keeping the focus on the issue rather than individuals.

The discussion should generate pro and con lists so that each side of the conflict has a clear understanding of the issues involved to determine if a consensus can be reached.

47.

When a patient is undergoing cardiac rehabilitation, a measure that may be used for the behavioral outcome domain is:

percent of body fat.

exercise regimen.

mortality.

patient satisfaction.

Explanation:

When a patient is undergoing cardiac rehabilitation, a measure that may be used for the behavioral outcome domain is the exercises regimen, including the frequency and the type of exercises. The clinical domain would measure heart rate, percent of body fat, body weight, and other clinical data, such as oxygen saturation. The health domain would measure the quality of life as well as morbidity and mortality. The service domain would measure satisfaction of stakeholders (patients, clinicians), and the economic outcome domain would measure things related to costs, such as length of stay, number of emergency visits, and costs of care.

48.

First-degree relatives of patients with familial dilated cardiomyopathy should be screened for the disorders with:

ECGs every year.

CTA and physical exam yearly.

serial echocardiography every 3 to 5 years.

serial echocardiography every year.

Explanation:

First-degree relatives of patients with familial dilated cardiomyopathy should be screened for the disorder with serial echocardiography every 3 to 5 years so that LV function and size and be evaluated. Patients and family members may also consider genetic testing and counseling. Up to 35% of patients diagnosed with idiopathic dilated cardiomyopathy actually have the familial type, so patients diagnosed with idiopathic cardiomyopathy should tell first-degree relatives so they can discuss the need for testing with their clinicians.

49.

When assessing the cardiovascular system of an older adult, the cardiac/vascular nurse should expect:

posterior displacement of the apical pulse.

narrowed pulse pressure.

amplified heart sounds.

decreased systolic blood pressure.

Explanation:

When assessing the cardiovascular system of an older adult, the cardiac/vascular nurse should expect posterior displacement of the apical pulse because of cardiac hypertrophy. Other differences include altered landmarks for assessment and distant heart sounds related to kyphosis. Because of increasing rigidity of the valves associated with calcification or stenosis, aortic or mitral systolic murmurs may be present without cardiovascular pathology. Systolic BP tends in increase in older adults while the diastolic pressure may increase or decrease, and widened pulse pressure may be observed.

50.

When assessing a patient, the cardiac/vascular nurse notes central cyanosis. What does this likely indicate?

Reduction in blood flow.

Reduction in body temperature.

Reduction in RBC count.

Reduction in oxygen saturation.

Explanation:

If, when assessing a patient, the cardiac/vascular nurse notes central cyanosis, this likely indicates a reduction in oxygen saturation, usually associated with inadequate oxygenation of the blood because of cardiopulmonary disease, such as congenital defect or chronic obstructive pulmonary disease (COPD). A reduction in blood flow may result in peripheral cyanosis as well as cyanosis of the ears and nose. If clubbed fingers are observed, these usually result from prolonged reduction in oxygen saturation.

51.

If a patient is having a pharmacologic echocardiogram with IV dipyridamole and develops shortness of breath and dizziness, which of the following medications should the cardiac/vascular nurse

expect to administer to relieve the adverse effects?

Dobutamine.

Aminophylline.

Compazine.

Corticosteroid.

Explanation:

If a patient is having a pharmacologic echocardiogram with IV dipyridamole and develops shortness of breath and dizziness, the medication the cardiac/vascular nurse should expect to administer to relieve the adverse effects is aminophylline. The medication should be available during the procedure, which involves giving increasing dosages of dipyridamole at 5-minute intervals. The patient's vital signs should be monitored during the test and after until they return to baseline, and the patient should be observed for signs of distress.

52.

How many calories per day is the DASH eating plan to control hypertension based on?

1000 calories.

1400 calories.

1600 calories.

2000 calories.

Explanation:

The DASH eating plan to control hypertension is based on about 2000 calories per day, so patients who are overweight or obese may need to modify the diet to lower caloric intake. The daily diet includes 6 to 8 servings of grains, 4 to 5 servings of vegetable, 4 to 5 servings of fruit, 2 to 3 servings of low/fat-free milk products, 6 ounces or less of protein source (lean meat, poultry, eggs), and 2 to 3 servings of fat and oils. In addition, patients should have 4 to 5 servings of nuts, seed, and legumes per week and 5 or fewer servings of sweets and added sugars.

53.

A patient is prescribed metoprolol for control of supraventricular tachycardia and hypertension. The cardiac/vascular nurse should advise the patient to:

take the mediation with food.

take the medication in the evening.

avoid abruptly stopping the medication.

avoid taking the medication with milk.

Explanation:

If a patient is prescribed metoprolol for control of supraventricular tachycardia and hypertension, the cardiac/vascular nurse should advise the patient to avoid abruptly stopping the medication as this can lead to rebound hypertension and worsen symptoms of ischemic heart disease—and may even cause a myocardial infarction. If the patient must discontinue the medication, the patient needs to decrease the dosages slowly under the advice of a physician.

Beta-blockers may be less effective for African Americans than for those of other ethnic backgrounds.

54.

For health promotion, a primary prevention of hypertension includes:

a public campaign to promote exercise.

screening patients for high blood pressure.

cardiac rehabilitation program.

support group for patients with cardiovascular disease.

Explanation:

For health promotion, primary, secondary, and tertiary prevention methods are needed:

- *Primary: aims to prevent a disease before it actually occurs, often through public campaigns, such as those that encourage exercise, smoking cessation, and a healthy diet.*
- *Secondary: aims to prevent further deterioration for those who already have a disease, such as by early detection through screening programs or advising low-dose aspirin for those at risk.*
- *Tertiary: aims to help patients control their disease and manage disease effectively through such interventions as cardiac rehabilitation programs and support groups.*

55.

If a patient shows nonverbal indications of pain (tense, withdrawn, frowning, holding her chest) as well as increased respiratory and heart rate but describes pain on a 1-to-10 scale as "2," the cardiac/vascular nurse should:

assume the patient is not in acute pain.

ask the patient about pain in another way.

assume the patient is stoic and simply denying pain.

explain the 1-to-10 scale again.

Explanation:

If a patient shows nonverbal indications of pain (e.g., tense, withdrawn, frowning, holding her chest) as well as increased respiratory and heart rate but describes pain on a 1-to-10 scale as "2," the cardiac/vascular nurse should ask the patient about pain in another way, such as "mild, moderate, or severe." Although the use of the 1-to-10 scale is ubiquitous in health care, it is not commonly used or understood in some cultures, and many people are unsure how to rate pain.

56.

A 70-year-old man is undergoing cardiac rehabilitation after a severe myocardial infarction but is very anxious about the change in his physical condition and lacks family and social support. The most applicable nursing diagnosis is:

risk of ineffective coping.

ineffective protection

deficient knowledge.

risk for spiritual distress.

Explanation:

Patients may exhibit ineffective coping in response to serious illness, recent changes in health status, or personal vulnerability. Patients may exhibit ineffective coping in a number of ways, such as by the inability to make decisions, poor concentration, emotional tension, general irritability, or chronic depression. Interventions include establishing a trusting relationship, allowing the patient to express concerns, exploring the patient's feelings about physical changes, assessing the patient's problem-solving skills, and assisting the patient to recognize personal strengths.

57.

Which of the following troponin I levels indicate cardiac injury?

<0.35 mg/L.

>0.35 mg/L.

<1 mg/L.

>2 mg/L.

Explanation:

The troponin I level that indicates cardiac injury is >2 mcg/L. The normal level is 0 to 0.35 mcg/L (may vary according to reference lab). Troponin I levels increase about 3 to 6 hours after damage to the myocardium and peak in 14 to 20 hours, returning to the baseline rate within about 7 to 10 days. Troponin T, which is less specific, remains elevated for longer periods, up to about 2 weeks, so the troponins are preferred for early detection of MI as well as late detection.

58.

If a fellow nurse for whom the cardiac/vascular nurse is serving as a mentor gave a patient the wrong dose of a medication, the best response for the mentor is:

"You are lucky you didn't get fired!"

"I hope you learned how important double-checking is."

"What did you learn from this experience?"

"You poor thing! You must be so upset."

Explanation:

If a fellow nurse for whom the cardiac/vascular nurse is serving as a mentor gave a patient the wrong dose of a medication, the best response is, "What did you learn from this experience?" This response helps the nurse to focus on avoiding future errors. Medication errors, while they can have serious consequences, are rarely the result of intentional negligence, and a punitive approach ("You are lucky you didn't get fired!") or lecturing ("I hope you learned how important double-checking is") serves little purpose. The mentor should also avoid excessive sympathy ("You poor thing. . .").

59.

According to the ACCF/AHA heart failure guideline, the most important intervention for treatment of stage A heart failure is:

reduction in obesity.

treatment of dyslipidemia.

control of hypertension.

control of hyperglycemia.

Explanation:

According to the American College of Cardiology Foundation (ACCF)/American Heart Association (AHA) heart failure guideline, the most important intervention for the treatment of stage A heart failure is control of hypertension with long-term treatment of both systolic and diastolic hypertension cutting the risk of heart failure in half. First-line treatment is diuretics, which are well tolerated by most patients. Other acceptable treatments, depending on the patient's condition, include beta-blockers, ACE inhibitors, and ARBs. Treatment of dyslipidemia is also considered of primary importance. Other recommendations include reduction in obesity and control of hyperglycemia in diabetic patients

60.

In the design of the delivery system under the Chronic Care Model of disease management, patients should be provided care that:

focuses on patient and family needs.

focuses on lifestyle changes.

is affordable and flexible.

is understandable and culturally appropriate.

Explanation:

In the design of the delivery system under the Chronic Care Model of disease management, patients should be provided care that is understandable and culturally appropriate. The Chronic Care Model is proactive in that the goal is to prevent complications and maintain the patient in optimum health. Patient needs should be identified and interventions should be evidence-

based. Patients should receive case management and regular follow-up by team members, who have defined roles.

61.

When utilizing the $CHADS_2$ stratification score to estimate stroke risk for patients with nonvalvular atrial fibrillation, each increase of 1 point on the scale increases risk of stroke by approximately:

1%.

2%.

3%.

4%.

Explanation:

When utilizing the $CHADS_2$ stratification score to estimate stroke risk for patients with nonvalvular atrial fibrillation, each increase of 1 point in the scale increases risk of stroke by approximately 2 percent, although this estimate holds better for patients on the lower end of the scale than the upper as the risk increases more at scores of 5 and 6. The $CHADS_2$ score assigns points for conditions that increase risk, with scores ranging from 0 (1.9% risk) to 6 (18.2%)

- *Congestive heart failure: 1*
- *Hypertension: 1*
- *Age ≥75: 1*
- *Stroke/transient ischemic attack (TIA)/thromboembolism (TE): 2*

62.

Which of the following signs is associated with peripheral venous insufficiency?

Pitting edema.

Rubor on dependency.

Ulcerations on toes.

Pale, shiny skin.

Explanation:

Pitting edema (moderate to severe) is associated with peripheral venous insufficiency. Other indications of peripheral venous insufficiency include irregular-shaped ulcerations of the medial or lateral malleolus and the anterior tibial area. Pedal pulses are present but may be difficult to palpate if the edema is severe, and the patient may complain of aching and cramping of the legs. Brownish discoloration (hemosiderosis) is often evident around the ankles and anterior tibial areas. Patients may exhibit varicosities.

63.

The PQRST method of angina assessment includes (P) precipitating factors, (Q) quality of pain, (R) radiation of pain, (S) severity of pain, and (T):

trend.

tolerance.

tiredness.

timing.

Explanation:

The PQRST method of angina assessment includes:

- *(P) Precipitating factors: events that preceded the episode of pain, such as exercise, eating, or arguing.*
- *(Q) Quality of pain: dull, aching, sharp, tight, heavy, or squeezing.*
- *(R) Radiation of pain: location of pain and radiation to outside of the chest (neck, arms, back, jaw, or shoulder).*
- *(T) Timing: onset of pain, persistence, first-time pain or recurrent.*

64.

A patient is brought to the ED after collapsing at a public event and is believed to have had a myocardial infarction, but the patient adamantly refuses all care because she is a Christian Scientist. The best response of the nurse is:

"You could die without treatment."

"Let's talk about lifestyle changes that may help."

"Is your religion more important than your life?"

"You really need treatment because your heart has been damaged."

Explanation:

If a patient is brought to the ED after collapsing at a public event and is believed to have had a myocardial infarction, but the patient adamantly refuses all care because she is a Christian Scientist, the best response of the nurse is, "Let's talk about lifestyle changes that may help." Patients have the right to refuse any and all treatments even though that refusal may lead to their deaths, and religious beliefs can be very strong, so the cardiac/vascular nurse should focus on what the patient may agree to, such as smoking cessation, limiting activity, and diet modification.

65.

The key component of health promotion is:

personal responsibility.

nutritional awareness.

stress reduction techniques/management.

physical fitness.

Explanation:

The key component of health promotion is personal responsibility because the individual is ultimately responsible for making the necessary lifestyle changes. Encouraging people to take responsibility may include educational programs, although education alone is often not adequate to change behavior, especially if patients lack motivation. Some patients may respond to a rewards program or to the personal rewards that come from making changes. Research shows that no one type of program works better than any other because of individual factors.

66.

The cardiac/vascular nurse is demonstrating dressing change procedures to a patient before discharge, but the patient seems confused about the procedure and asks repeatedly, "Can I take notes?" According to VARK classification, the patient's preferred learning style is probably:

visual.

aural.

read/write.

kinesthetic.

Explanation:

If a patient repeatedly asks, "Can I take notes?" during a demonstration of a dressing change procedure, the patient's preferred learning style is probably read-write. VARK classification:

- *Visual: prefers visual illustrations, such as pictures, videos, and flowcharts, which outline directions step by step.*
- *Aural: prefers to listen to directions and to discuss the steps to a procedure.*
- *Read-write: prefers to learn by reading and may rely on extensive note-taking during instructions in order to stay focused on the material.*
- *Kinesthetic: prefers hands-on techniques that allow the person to manipulate supplies and carry out the steps to a procedure with minimal instruction.*

67.

With the ARCS model of motivational design, which aspect focuses on the learner's experience?

Attention.

Relevance.

Confidence.

Satisfaction.

Explanation:

In the ARCS model of motivational design (Keller), the aspect that focuses on the learner's experience is relevance:

- *Attention: focuses on methods to gain attention, such as encouraging active participation, giving variable presentations, introducing opposing positions/controversies, utilizing humor, and providing specific examples.*
- *Relevance: focuses on ways the learner can use the material by connecting it to previous experience, presenting the value and usefulness, matching it to the learner's needs, and modeling (guest speakers, videos).*
- *Confidence: focuses on assisting the learner to believe in successful learning by providing objective and learning criteria, providing feedback, and promoting autonomy.*
- *Satisfaction: focuses on the rewards of learning without being patronizing.*

68.

When conducting a motivational interview, the initial assessment should be related to:

cognitive variables.

affective variables.

physiological variables.

environmental variables.

Explanation:

When conducting a motivational interview, the initial assessment should be related to cognitive variables, which include the patient's capacity to learn (intellectual ability) and mental readiness (desire, curiosity). Other variables include affective variables (level of anxiety, emotional state), physiological variables (physical abilities and/or limitations), experiential variables (previous experiences), environmental variables (setting, family/social support), and the relationship between the patient and the nurse (positive or negative). Subjective measurement of a patient's motivation depends on self-report and observation. Objective measurement is indirect and relates to quantifying observations.

69.

After completing a dietary assessment with the Fat-Related Diet Habits Questionnaire, the cardiac/vascular nurse asks the patient to maintain a food diary. The optimal period for a food diary is usually:

24 hours.

2 days.

3 days.

1 week.

Explanation:

Food diaries are commonly used to assess patient's diets. The Fat-Related Diet Habits Questionnaire asks questions about food intake over the previous 1-month period, but recall is often impaired, so a food diary is a valuable addition. The food diary should include at least 1 leisure (not at work) day because food consumption may change depending on work status. Studies have shown that the reliability of reporting decreases after 3 days because the act of reporting may alter eating habits.

70.

When planning an educational program about lifestyle changes for a program of cardiac rehabilitation, the cardiac/vascular nurse recognizes that most adult learners are:

passive learners.

self-directed.

unmotivated learners.

anxious learners.

Explanation:

When planning an educational program about lifestyle changes for a cardiac rehabilitation program, the cardiac/vascular nurse recognizes that most adult learners are self-directed. Because they are used to being autonomous, the nurse should allow adult learners as much autonomy as possible, emphasizing their control over the learning process. Adults also often prefer a problem-oriented approach as opposed to a subject-oriented approach. Adults may have experiential learning that allows them to reason at an advanced level.

71.

When assessing a patient's readiness to learn, which of the following is an aspect of experiential readiness?

Developmental stage.

Task complexity.

Learning style.

Previous coping mechanism.

Explanation:

When assessing a patient's readiness to learn, an example of experiential learning is a previous coping mechanism. Readiness factors:

- *Physical: gender, health status, physical abilities/disabilities, effects of the environment, and the skills needed for the complexity of the task.*
- *Emotional: the patient's anxiety level, support system, motivation, attitude, developmental stage, and evidence of risk taking (drinking, drug use, gambling, extreme sports).*
- *Experiential: includes not only past coping mechanisms but the patient's experiences based on cultural background and orientation and the patient's degree of control.*

- *Knowledge: cognitive ability, learning style, knowledge base, and learning disabilities (such as dyslexia).*

72.

If a patient with suspected hypertensive crisis presents with BP 200/125 mm Hg, the patient's mean arterial pressure (MAP) is:

325 mm Hg.

75 mm Hg.

130 mm Hg.

150 mm Hg.

Explanation:

If a patient with suspected hypertensive crisis presents with BP 200/125, the patient's mean arterial pressure (MAP) is 150. The formula for MAP is:

$$MAP = \frac{Diastole \times 2 + Systole}{3} = \frac{125 \times 2 + 200}{3} = \frac{450}{3} = 150$$

During treatment for hypertensive crisis, the MAP is often used instead of the BP to guide therapy with the initial goal to decrease MAP by no more than 25% within minutes to an hour because too rapid decrease in BP can result in decreased cerebral, renal, and coronary perfusion, and could cause a stroke.

73.

Which of the following complementary/alternative therapies may decrease LDL, triglycerides, and total cholesterol?

Garlic.

Omega-3 fatty acids.

Red yeast rice.

Plant sterols

Explanation:

Red yeast rice is a complementary/alternative therapy that scientific studies show may decrease LDL, triglycerides, and total cholesterol, as it is a natural statin (although in lower doses than prescribed medications, and dosages are not standardized, so effects may vary). Garlic, despite anecdotal reports, does not affect cholesterol levels. Omega-3 fatty acids may reduce triglyceride levels. Plant sterols may reduce total cholesterol.

74.

When teaching a patient with coronary artery disease to control angina, the first step is to:

determine what precipitates episodes.

stress the importance of taking medications correctly.

encourage patient to maintain a healthy diet.

advise patient to engage in regular exercise to tolerance.

Explanation:

When teaching a patient with coronary artery disease to control angina, the first step is to determine what precipitates episodes because patients may not have made a correlation between activity and pain, and in some cases, patients need to modify their work or lifestyle in order to prevent angina from occurring. Other important things to discuss include coping mechanisms, taking medications correcting, maintaining a healthy diet, and engaging in regular exercises to tolerance (under the guidance of a physician).

75.

When a patient has an implantable cardioverter-defibrillator, *overdrive pacing* is utilized for:

- **ventricular tachycardia.**
- bradycardia.
- atrial fibrillation.
- atrial flutter.

Explanation:

When a patient has an implantable cardioverter-defibrillator, overdrive pacing is utilized for ventricular tachycardia. ICDs monitors heart rate and rhythm. About 25 seconds after a lethal dysrhythmia is detected, the ICD delivers a shock to the patient's heart and then a second shock if the first is not successful. Additionally, the ICD contains pacemakers for bradycardia and tachycardia, so when supraventricular or ventricular tachycardias occur, the overdrive pacing takes over to prevent the need for the shock.

76.

When charged with educating patients about self-care after they have undergone outpatient cardiac procedures, the factor that is most likely to be a barrier to learning is:

patient stress.

environment.

time constraints.

low health literacy.

Explanation:

When charged with educating patients about self-care after they have undergone outpatient cardiac procedures, the factor that is most likely to be a barrier to learning is time constraints. Patients often arrive shortly before the scheduled procedure, and there is little time for education during preparation. Following the procedure, when the patient has recovered enough to be receptive to learning, the patient is usually preparing for discharge, so discharge instructions are too often reviewed very quickly or simply given to the patient in written form. For this reason, follow-up after discharge is important.

77.

When a patient with dilated cardiomyopathy is to be discharged, family members should be advised to:

monitor the patient's medications.

take a CPR course.

avoid leaving the patient alone.

remove all alcohol.

Explanation:

When a patient with dilated cardiomyopathy (or any type of cardiomyopathy) is to be discharged, family members should be advised to take a CPR course because cardiomyopathy places the patient at increased risk of sudden cardiac death. The family should also be advised when to call 9-1-1. Dilated cardiomyopathy is the result of damage to muscle fibers of the heart, interfering with myocardial metabolism and resulting in dilation of all heart chambers. Prognosis is poor because the condition is usually advanced before symptoms are evident.

78.

Which of the following is an example of a well-written measurable objective?

Following 3 classes, the patient will understand weight-loss principles.

The patient will be able to prepare low-calories foods.

After self-directed study, the patient will have knowledge of various weight-loss programs and lose weight.

Following one-on-one instruction about weight loss, the patient will be able to list 4 strategies for weight loss.

Explanation:

An example of a well-written measurable objective is: "Following one-on-one instruction about weight loss, the patient will be able to list 4 strategies for weight loss." The 4-part method is often used to write effective specific objectives, which are not only prescriptive but also measurable:

1. *Condition/Testing circumstance: "Following one-on-one instruction about weight loss"*
2. *Learner: "the patient"*
3. *Performance: "will be able to list"*

4. Criterion: "4 strategies for weight loss."

79.

Following a patient's hospitalization for coronary artery bypass grafting (CABG), the primary concern for discharge planning should be:

care and service needs.

equipment needs.

transportation needs.

social needs.

Explanation:

While all of these needs are important, the primary concern for discharge planning should be care and service needs. Patients are usually discharged on statins and beta-blockers, and, if exhibiting prolonged abnormal heart rhythm after coming off of bypass, warfarin. Patients need to be educated about the medications, including possible adverse reactions. They may need to monitor their heart rate and blood pressure, weight, exercise, and diet, and these multiple demands may be overwhelming to patients. Some patients may require home health care after discharge until their conditions are more stable.

80.

A 62-year-old male patient with supraventricular tachycardia (SVT) exhibits a pulse rate between 75 and 85 bpm on metoprolol 200 mg daily (100 mg twice daily), but the patient's blood pressure still ranges from 140 to 150/90 to 100 mm Hg. The risk factor that most needs modification is the patient's:

drinking 2 to 3 glasses of wine daily.

smoking 1 pack of cigarettes daily.

walking 30 minutes 4 times weekly.

drinking 2 cups of caffeinated tea each morning.

Explanation:

For a 62-year-old man with supraventricular tachycardia (SVT) exhibiting a normal pulse rate on metoprolol but elevated blood pressure, the risk factor that most needs modification is the patient's smoking 1 pack of cigarettes daily because smoking poses the greatest potential for harm. The patient should limit wine to 1 to 2 glasses daily and should increase exercise to 150 minutes per week. While patients with SVT are usually advised to avoid caffeine, tea has lower levels of caffeine than coffee, but the patient should switch to decaffeinated tea.

81.

According to American Heart Association guidelines for exercise, the target heart rate for a patient who is 65 years old and engaging in moderate exercise is:

100 to 170 bpm.

95 to 162 bpm.

90 to 153 bpm.

78 to 132 bpm.

Explanation:

According to the American Heart Association guidelines for exercise, the target heart rate for a patient who is 65 years old and engaging in moderate exercises is 78 to 132 bpm, depending on the patient's pulse at rest (average is 60 to 100 for older adults). The average maximum heart rate for a patient this age is 155 bpm, and the target should be to attain 50% to 85% of that rate during exercise. (Using the formula of 220 minus the person's age provides an estimation of maximum heart rate for age.)

82.

A patient with paroxysmal supraventricular tachycardia is to have mobile cardiac event monitoring for a 1-month period with 3 leads connected to a transmitter that sends a message to a cellphone that transmits ECGs to the company. What is the maximum distance that the patient should be from the cellphone?

2 feet.

4 feet.

6 feet.

10 feet.

Explanation:

If a patient with paroxysmal SVT is to have mobile cardiac event monitoring for a 1-month period with 3 leads connected to a transmitter that sends a message to a cellphone that transmits ECGs to the company, the maximum distance that the patient should be from the cellphone is 10 feet. The patient should attach both the transmitter and the cellphone to her waist or carry the phone in a pocket or purse.

83.

The most important factor in interdisciplinary communication is:

clarity.

timeliness.

respect.

knowledge.

Explanation:

While clarity, timeliness, and knowledge are all important, the most important factor in interdisciplinary communication is respect and the ability to demonstrate appreciation for the contributions of others. All health care providers involved in a patient's care have important yet different roles. When problems arise, it is not uncommon for one department to lay blame on another department, but this approach is nonproductive, as it can result in impaired communication and further problems.

84.

If the cardiac/vascular nurse is interested in advocating for the advancement of nursing practice, the most effective method is to:

network with other nurses in the same field.

write letters to political authorities.

obtain advanced education in the nursing field.

become involved in national organizations.

Explanation:

If the cardiac/vascular nurse is interested in advocating for the advancement of nursing practice, the most effective method is to become involved in national organizations, such as the American Nurses Association (ANA) and Preventive Cardiovascular Nurses Association (PCNA), as these organizations are often active in lobbying political bodies and developing guidelines for health care. Organizations often have many committees on which a nurse can serve. The cardiac/vascular nurse can also make presentations at conferences at the local, state, and national levels.

85.

Which of the following activities would be classified as a moderate-energy activity (3 to 6 metabolic equivalents [METs])?

Washing the face and hands.

Ascending a flight of stairs.

Using a bedside commode.

Eating.

Explanation:

Using a bedside commode is a moderate-energy activity (3 to 6 METs). Activity classifications:

- *Low energy (<3 METs): simple activities such as eating and washing the face and hands or resting.*
- *Moderate energy (3-6 METs): using a bedside commode, taking a shower, walking at 3-4 miles per hour, and using a bedpan.*
- *High energy (6-8 METs): walking 5 miles per hour and ascending a flight of stairs.*

- *Very high energy (≥9 METs): running or other strenuous physical activity.*

86.

A 58-year-old female patient whose blood pressure had been well controlled during acute and convalescent hospitalization has shown increasing blood pressure readings for the past few weeks since discharge. When questioned about medications, the patient gives vague responses and states, "I have the directions written down at home." The cardiac/vascular nurse should address which of the following potential problems first?

Nonadherence.

Inadequate response to medication.

Incorrect blood pressure readings.

Impaired cognitive ability.

Explanation:

If a 58-year-old female patient whose blood pressure had been well controlled during acute and convalescent hospitalization has shown increasing blood pressure readings for the past few weeks since discharge and gives vague responses about the medication, the cardiac/vascular nurse should first address nonadherence. After several weeks, the patient should know what medications she is taking, but her statement ("I have the directions written down at home") suggests that she does not and may need more education and supervision.

87.

If a patient cannot be weaned off of cardiopulmonary bypass (CPB) after severe acute myocardial injury, the intervention most indicated is:

continued CPB.

intra-aortic balloon pump (IABP).

left ventricular assist device (LVAD).

discontinuation of treatments.

Explanation:

If a patient cannot be weaned off of cardiopulmonary bypass (CPB) after severe acute myocardial injury, the intervention most indicated is a left ventricular assist device (LVAD). If the patient stays on CPB for prolonged periods, the patient may develop severe coagulopathy, so the decision to transition to LVAD must be made quickly. The LVAD decreases the work of the LV and maintains systolic blood pressure while giving the LV time to heal, but recovery should begin within 30 hours or risk of death is high.

88.

A woman from Saudi Arabia has undergone open-heart surgery and is to return to her country for follow-up treatment but will need wound care and dressing changes. The patient was accompanied by her spouse, children (adolescent daughter and son), and mother. The person to whom the nurse should direct instructions about patient care is the:

spouse.

mother.

son.

daughter.

Explanation:

In traditional Islamic culture, such as that of Saudi Arabia, the man makes decisions, so a woman would defer decisions to her husband; however, when it comes to personal care, such as attending to a wound or changing dressings, these tasks would be the responsibility of a woman. In this case, the patient's mother would likely be responsible for providing wound care unless she is unable to do so, and then the duty would fall to the adolescent daughter.

89.

A patient has an electrically powered LVAD with a portable battery pack to use when moving about. If the patient wants to increase activity level, the patient should:

adjust activity to pump speed.

decrease the pump speed.

increase the pump speed.

avoid increasing activity level.

Explanation:

If a patient has an electrically powered LVAD with a portable battery pack to use when moving about and wants to increase activity level, the patient should increase the pump speed to compensate for the increased activity, but the patient should receive instruction about adjusting the pump speed and should practice under supervised conditions before discharge, and the patient should be apprised of limitations to activities to prevent increased demand on the heart.

90.

A patient who has minimal chest pain on exertion but none at rest and whose coronary angiography shows 90% blockage of the left main coronary artery would be classified according to the NYHA functional classification for heart failure as:

functional capacity 2, objective assessment D.

functional capacity 1, objective assessment D.

functional capacity 4, objective assessment A.

functional capacity 1, objective assessment A.

Explanation:

A patient who has minimal chest pain on exertion but none at rest and whose coronary angiography shows 90% blockage of the left main coronary artery would be classified according to the NYHA functional classification for heart failure as functional capacity 2, objective assessment D. Functional capacity is categorized as class (1) no problem with activity, (2) minimal symptoms with activity, (3) markedly limited physical ability, and (4) symptoms at rest. Objective assessment includes (A) no evidence of disease, (B) evidence of minimal disease, (C) evidence of moderately severe disease, and (D) evidence of severe disease.

91.

Which of the following weight gains may indicate heart failure?

2 pounds in a week.

1 pound in 1 day.

3 pounds in 1 week.

2 pounds in 1 day.

Explanation:

The weight gains that may indicate heart failure are 1 to 3 pounds in 1 day or 5 pounds in 1 week. Patients with heart failure should keep daily weights, usually each morning at the same time, and should notify the clinician if weight gain suggests heart failure because sudden weight gain may be life-threatening, especially if pulmonary edema develops. Patients may develop peripheral edema, decreased frequency of urination, dyspnea, and cough as well as increased weakness.

92.

According to the AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation, if a patient has atrial fibrillation or flutter that has lasted 48 hours or longer with duration known, how long should the patient receive treatment with warfarin prior to cardioversion?

No warfarin is recommended before cardioversion.

2 weeks.

3 weeks.

4 weeks.

Explanation:

According to the AHA/ACC/HRS guideline for the management of patients with atrial fibrillation, if a patient has atrial fibrillation or flutter that has lasted 48 hours or longer with duration known, the patient should receive treatment with warfarin for at least 3 weeks prior to cardioversion

(target INR of 2 to 3) and should continue on warfarin for 4 weeks after cardioversion to reduce the risk of heart attack or stroke resulting from an embolism.

93.

The cardiac/vascular nurse has completed patient education about managing a patient's heart condition and wants to ensure that the patient has good retention. The best method to use is to:

give a written quiz.

utilize teach-back.

ask if the patient has any questions.

provide written instructions.

Explanation:

The best method to use to ensure that a patient has good retention after completing patient education is to utilize the teach-back method. For this method, the nurse goes through the information slowly, and upon completion asks a question to prompt the patient to teach back the information: "How would you explain what you need to do to your family?" This allows the nurse to assess the patient's retention and understanding and to identify areas that need reinforcement.

94.

An older adult is to be discharged after having a heart attack but is at risk for impaired mobility and falls. When conducting a gait assessment as part of functional status, the cardiac/vascular nurse should be aware that the gait speed that is predictive of limitations is:

<0.6 meters/second.

<0.8 meters/second.

<1 meter/second.

<1.5 meters/second.

Explanation:

When conducting a gait assessment as part of functional status, the cardiac/vascular nurse should be aware that the gait speed that is predictive of limitations is less than 0.6 meters/second. For the test, the patient should be observed while walking for 5 meters in a previously measured area and a stopwatch used to note the time. Functional assessment may also include the timed up and go (TUG) test and performance-oriented mobility assessment (POMA).

95.

According to the AHA/AACVPR Core Components of Cardiac Rehabilitation, the 6-month minimum goal of weight loss for patients with BMI more than 25 and/or waist circumference more than 40 inches for males or more than 35 inches for females is:

≥20%.

≥15%.

≥10%.

≥5%.

Explanation:

According to the AHA/AACVPR Core Components of Cardiac Rehabilitation, the 6-month minimal goal of weight loss for patients with BMI more than 25 and/or waist circumference more than 40 inches for males or more than 35 inches for females is at least 5%, although more than 10% is the optimal goal. Weight loss should result from a combination of diet, exercise, and behavioral modifications. Expected short-term outcome is that the patient's progress will be evaluated and program modifications made as needed. The expected long-term outcome is continued adherence to the program.

96.

If percutaneous coronary intervention (PCI), such as coronary angioplasty, is to be used to treat a patient with an acute MI with an occluded coronary artery, the PCI should be performed within:

10 hours.

6 hours.

3 hours.

90 minutes.

Explanation:

If PCI, such as coronary angioplasty, is to be used to treat a patient with an acute MI with occluded coronary artery, the PCI should be performed within 90 minutes. If PCI is carried out within a short period of time after the cardiac event by experienced clinicians, the results are comparable with results achieved with thrombolysis. Complications can include subacute occlusion of stents, restenosis (usually late-occurring), hematoma formation at catheter insertion site, arterial thrombosis, and local and/or systemic infection.

97.

Patients from which of the following ethnic/racial backgrounds are at the highest risk for cardiovascular disease?

Asian.

Hispanics.

African Americans.

Caucasians.

Explanation:

African-American patients are at the highest risk for cardiovascular disease with rates of heart failure occurring before age 50 twenty times higher than for Caucasians. Even young children show increased cholesterol levels and excessive weight. Cardiovascular disease is the leading cause of death among both male and female African Americans, and statistics show that the rates of cardiovascular disease among African Americans who are age 20 and older range from 44% (male) to 49% (female).

98.

A widowed 70-year-old patient with vision impairment and rheumatoid arthritis lives alone and is being discharged from the hospital after an acute myocardial infarction and a prolonged stay. Which of the following is likely the most appropriate referral?

Telehealth service.

Faith community nurse.

Health navigator.

Home health agency.

Explanation:

The most appropriate referral for a widowed 70-year-old patient with vision impairment and rheumatoid arthritis who lives alone and is being discharged from the hospital after an acute myocardial infarction and a prolonged stay is likely the home health agency. The home health agency can provide nursing services to monitor the patient's condition and a home health aide to assist with personal care. Because the patient's condition should render the patient essentially homebound, the patient qualifies for coverage under Medicare.

99.

The purpose of a health navigator is to help patients:

through the continuum of care.

choose a health coverage option.

choose an appropriate physician.

understand different treatment options.

Explanation:

The purpose of a health navigator is to help patients choose a health coverage option from the Health Insurance Marketplace. A health navigator may be an individual or an organization, but the navigator must be trained in assisting individuals and must be able to help them complete eligibility and enrollment forms. There is no charge for the health navigator service, which is provided as part of the Affordable Care Act.

100.

If the patient's telemetry shows a sinus rhythm with depressed ST-segment and T-wave inversion, the cardiac/vascular nurse should suspect:

myocardial ischemia.

myocardial injury.

myocardial infarction.

congenital abnormality.

Explanation:

If the patient's telemetry shows a sinus rhythm with depressed ST segment and T-wave inversion, the cardiac/vascular nurse should suspect myocardial ischemia resulting from impaired coronary artery circulation. If the ST segment becomes elevated, then this indicates myocardial damage and possible myocardial infarction. With ischemia, the patient may complain of angina or pain in the neck, jaw, shoulder, or arms. Older adults may complain of increased fatigue or shortness of breath.

101.

Under the Healthy People 2030 initiatives, the target mean total cholesterol level for people 20 years and older is:

200 mg/dL.

197.7 mg/dL.

177.9 mg/dL.

186.4 mg/dL.

Explanation:

Under the Healthy People 2030 initiatives, the target mean total cholesterol level for people age 20 and older is 186.4 mg/dL, which represents a 2.3% reduction from the 2013-2016 mean level of 190.9 mg/dL. Another initiative that focuses on cholesterol calls for an increase in the percentage of adults (at least 21 years of age) who have received treatment for high cholesterol to 54.9% from 44.9%.

102.

For screening for cardiovascular risk in asymptomatic adults, which of the following is recommended or considered reasonable?

Genotype testing.

Lipid parameters (lipoproteins, apolipoproteins, particle size, density).

Resting ECG.

Echocardiogram.

Explanation:

For screening for cardiovascular risk in asymptomatic adults, a resting ECG is considered reasonable, and a fasting lipid profile (but not lipid parameters) is recommended. An echocardiogram may be considered for adults with hypertension but shows no benefit for nonhypertensive individuals. Genotype testing is not recommended. Another measure that is

reasonable in asymptomatic adults is testing of HbA_{1C}. The ankle-brachial index may be used to assess asymptomatic adults with intermediate risk factors.

103.

When utilizing the Health Belief Model to help people to change behavior in order to manage chronic disease, the focus is on:

negative consequences of current behavior.

positive outcomes from changes.

evaluating attitudes toward health.

the power of emotions to bring about change.

Explanation:

When utilizing the Health Belief Model to help people to change behavior in order to manage chronic disease, the focus is on negative consequences of current behavior. Thus, if the goal is smoking cessation, the study materials may include pictures of blackened lungs and information about the adverse effects of smoking, such as increased risk of heart attack, stroke, and COPD. According to this theory, people will take action if they believe they can prevent negative consequences.

104.

A patient has received an automatic implantable cardioverter defibrillator (AICD) in the left chest. Instructions in the postoperative period should include to:

call emergency medical services (EMS) for any shock even if no ill effects.

avoid lifting the left arm above the shoulder for 4 weeks.

avoid walking for 6 weeks.

avoid airports and building security systems.

Explanation:

If a patient has received an automatic implantable cardioverter-defibrillator (AICD) in the left chest, instructions in the postoperative period should include avoiding lifting the left arm above the shoulder for 4 weeks as well as avoiding lifting more than 5 pounds with the arm; however, the arm can be used for daily activities. Although upper body exercises are usually restricted for up to 6 weeks, walking is acceptable unless otherwise contraindicated. Patients are usually advised only to call the physician with 1 shock if no ill effects are present, but to call EMS for more than 1 shock or if ill effects occur.

105.

The primary purpose of wearing a LifeVest is to:

provide support of mid-sternal surgical incision.

treat sudden cardiac arrest.

monitor the heart rate and rhythm.

monitor the effects of cardiac medications.

Explanation:

The primary purpose of wearing a LifeVest is to treat sudden cardiac arrest through defibrillation. The LifeVest, a wearable defibrillator, contains electrodes that monitor the heart rate and rhythm and detect abnormalities that lead to cardiac arrest. When cardiac arrest occurs, therapy pads in the back release electrode gel to promote effectiveness of shocks and to prevent burns, and then the pads provide a treatment shock, which may be repeated if the heart does not resume function.

106.

Which of the following is the strongest predictor of a person's health status?

Literacy skills.

Age.

Employment status.

Income.

Explanation:

The strongest predictor of a person' health status is literacy skills, with those with low literacy skills at increased risk of poor health outcomes. People with low literacy skills tend to be less knowledgeable about health issues and have higher rates of disease and hospitalization. Almost half of adults in the United States are classified as having low literacy or moderate literacy skills and this translates into low health literacy. Because of this, most educational material should be written at the fourth- to sixth-grade level.

107.

If telemetry shows a regular heart rate of 64 bpm with normal P-wave, normal QRS complex, and PR interval of 0.25 seconds, the heart rhythm would be classified as exhibiting:

normal sinus rhythm.

first-degree AV block.

sinus bradycardia.

second-degree AV block, type II.

Explanation:

If telemetry shows a regular heart rate of 64 with normal P wave, normal QRS complex, and PR interval of 0.25 seconds, the heart rhythm would be classified as exhibiting first-degree AV block because of the prolonged PR interval (>0.2 second). With first-degree AV block, all impulses are transmitted to the ventricles, but the duration of the conduction is longer than normal. No treatment other than monitoring or adjusting causative agents (such as medications) is indicated.

108.

If using the Modified Borg Scale for Perceived Dyspnea to evaluate endurance, severe shortness of breath is indicated by a score of:

2.

5.

7.

10.

Explanation:

If using the Modified Borg Scale for Perceived Dyspnea to evaluate endurance, severe dyspnea is indicated by a score of 7. Scale:

0: No dyspnea at all.

0.5: Very, very slight dyspnea.

1: Very mild dyspnea.

2: Mild dyspnea.

3: Moderate dyspnea and difficulty breathing.

4: Somewhat severe dyspnea.

6: Stronger or harder breathing.

7: Severe dyspnea.

8: More severe dyspnea.

9: Extremely severe dyspnea.

10: Dyspnea so severe unable to continue activity.

109.

When conducting the 6-minute walk test, which of the following is an indication that the test should be stopped immediately?

Patient exhibits moderate shortness of breath.

Patient complains of leg cramps.

Patient's face becomes flushed.

Patient begins to perspire slightly.

Explanation:

When conducting the 6-minute walk test, an indication that the test should be stopped immediately is if the patient complains of leg cramps. Other indications for stopping the test include severe dyspnea (although some mild to moderate dyspnea is tolerable), chest pain, staggering gait (risk of fall), and diaphoresis (some increased perspiration is not cause for concern). The test should also be immediately discontinued if the patient appears ashen and pale (increasing risk of fainting).

110.

When administering the NIH Stroke Scale to a patient, the cardiac/vascular nurse should:

conduct the test in the order items are listed.

assess motor activity before cognitive.

coach the patient through each section to optimize score.

skip questions if the patient does not respond appropriately and then redo later.

Explanation:

When administering the NIH stroke scale to a patient, the cardiac/vascular nurse should conduct the test in the order items are listed, skipping no sections and scoring while

administering the test. The nurse should not go back and reassess items or adjust scoring, being sure to score what the patient is actually able to do rather than what the nurse believes the patient is capable of doing. Except for those items that require directions to the patient, the patient should not be coached in any way, such as by encouraging the patient to "try again."

111.

The ankle-brachial index (ABI) of a patient is 0.85. This score indicates:

severe peripheral arterial disease (PAD).

calcified vessel (noncompressible).

normal reading.

peripheral arterial disease (PAD).

Explanation:

An ankle-brachial index (ABI) of 0.85 (less than 0.9 is diagnostic) indicates peripheral arterial disease (PAD) with a score of 0.5 to 0.8 indicating moderate PAD and less than 0.5 severe. The normal range is from 1.0 to 1.4 with scores higher than that indicating non-compressible calcification, most common in older adults or those with diabetes. The ABI should be calculated (to 2 decimal places) separately for the right and left sides as circulatory impairment may be more pronounced on one side.

112.

The Pain Assessment in Advanced Dementia (PAINAD) scale evaluates 5 parameters: (1) respirations, (2) vocalization, (3) facial expression, (4) body language, and (5):

combativeness.

responsiveness.

consolability.

cardiac rate.

Explanation:

The Pain Assessment in Advanced Dementia (PAINAD) scale evaluates 5 parameters: (1) respirations (rapid, labored hyperventilation, Cheyne-Stokes), (2) vocalization (quiet speech, moaning, crying), (3) facial expression (grimace, sad, frightened), (4) body language (tense, fetal position, pacing, fidgeting), and (5) consolability. The PAINAD scale is indicated for patients with impaired cognitive ability or the inability to verbalize the extent of pain. The patient should be observed carefully for nonverbal behaviors that are indicative of discomfort.

113.

According to the ACC/AHA guidelines on the assessment of cardiac risk, the primary focus is on the lifetime risk for:

myocardial infarction.

atherosclerotic cardiovascular disease (ASCVD).

heart failure.

any type of cardiac disease.

Explanation:

According to the ACC/AHA guidelines on the assessment of cardiac risk, the primary focus is on the lifetime risk for atherosclerotic cardiovascular disease (ASCVD). ASCVD is assessed based on the patient's age, gender, ethnic/racial background, systolic blood pressure, use of antihypertensives, diabetic status, smoking status, total cholesterol, and HDL cholesterol. Preventive measures for those at risk focus on blood cholesterol levels, obesity, and lifestyle management.

114.

The Quality of Well-Being scale, Self-Administered (QWB-SA) assesses a period of:

24 hours.

48 hours.

3 days.

6 days.

Explanation:

The Quality of Well-Being Scale-Self Administered (QWB-SA) scale assesses a period of 3 days (the days prior to the test) rather than the 6 days in the original QWB in order to improve patient recall. The QWB-SA comprises 5 sections: chronic health problems, acute physical and mental symptoms, mobility, physical activity, and social activity. While the test is self-administered and can be completed in about 10 minutes, the scoring is weighted and somewhat complicated.

115.

Out of the 15 questions posed on the Short-Form Geriatric Depression Scale (GDS), what is the minimum number of "yes" answers that indicates the patient is experiencing depression?

6.

7.

8.

10.

Explanation:

Out of the 15 questions posed on the Short-Form Geriatric Depression Scale (GDS) the minimum number of "yes" answers that indicate the patient is experiencing depression is 6 (more than 5). The GDS is self-administered and appropriate for older adults with normal cognition; however, the questionnaire may also be administered verbally to patients with mild to moderate cognitive impairment as long as they are aware enough to understand and respond to the questions.

116.

Which of the following complementary therapies is likely to be the most effective for a patient with sinus tachycardia?

Acupuncture.

Aromatherapy.

Herbal medicine.

Meditation.

Explanation:

The complementary therapy that is likely to be the most effective for a patient with sinus tachycardia is meditation. Sinus tachycardia is often associated with stress and anxiety; methods that help the patient to relax, such as meditation, relaxation, and visualization exercises and even yoga, may prove helpful. Some people find aromatherapy relaxing, but herbal medicines should be avoided as some may have adverse effects or may not be compatible with medications.

117.

The apex of the heart can usually be auscultated at the left:

third intercostal space.

fourth intercostal space.

fifth intercostal space.

sixth intercostal space.

Explanation:

The apex of the heart, the point of maximum impulse, can usually be auscultated at the left fifth intercostal space, about 8 to 9 cm lateral to the mid-sternal line or slightly medial to the mid-clavicular line. The normal adult heart is approximately 12.5 cm in length and 9 cm at its widest point but may enlarge with cardiomyopathy or heart failure. The top of the heart lies at the second intercostal space with the heart extending downward to the fifth intercostal space.

118.

A patient who has been hospitalized for heart failure has been encouraged to ambulate and complains of discomfort in the right posterior thigh area with tenderness to palpation but no visible erythema. What change in the plan of care is immediately indicated?

Bedrest.

Fluid restriction.

Low-sodium diet.

Physical therapy.

Explanation:

Because the patient's symptoms (pain and tenderness in the right posterior thigh) are consistent with deep vein thrombosis (DVT) (probably provoked by hospitalization), the patient should immediately be placed on bedrest and the leg elevated until radiologic diagnostic tests are completed. Treatment usually includes warm, moist compresses as well as rest and elevation, but the primary treatment is anticoagulation, especially for proximal DVT of the upper leg because proximal DVTs carry higher mortality rates than distal.

119.

The first phase of the normal cardiac cycle is:

ventricular ejection.

ventricular filling.

atrial systole.

isovolumetric ventricular contraction.

Explanation:

Isovolumetric ventricular contraction. Five phases of the normal cardiac cycle:

1. *Isovolumetric ventricular contraction: Ventricular depolarization results in increased ventricular tension, causing the mitral and tricuspid valves and the aortic and pulmonic valves to remain closed.*
2. *Ventricular ejection: Aortic and pulmonic valves open and ventricles eject blood.*
3. *Isovolumetric relaxation: All valves are closed, and the atria fill with blood (atrial diastole).*
4. *Ventricular filling: Pressure in the atria causes the mitral and tricuspid valves to open, filling the ventricles (70% capacity).*
5. *Atrial systole: Atrial systole and late ventricular diastole supply the remaining 30% of the blood.*

120.

The four key functions of cardiac cells are (1) automaticity, (2) excitability, (3) conductivity, and (4):

contractility.

recovery.

repolarization.

transmission.

Explanation:

The four key functions of cardiac cells are:

- *Automaticity (electrical property): Cells (pacemaker) are able to generate an electrical impulse. This is the most important function related to the cardiac rhythm.*
- *Excitability (electrical property): Cells are able to respond to the electrical impulse.*
- *Conductivity (electrical property): Cells are able to transmit the electrical impulse to other cells.*

- *Contractility (mechanical property): Cells are able to contract in response to an electrical impulse.*

121.

According to the Society for Vascular nursing clinical practice guideline for carotid artery stenting, which antiplatelet therapy is recommended pre-surgically?

Aspirin.

Aspirin and clopidogrel

Ticlopidine.

Prasugrel.

Explanation:

According to the Society for Vascular Nursing clinical practice guideline for carotid artery stenting, the antiplatelet therapy that is recommended presurgically is a combination of aspirin and clopidogrel. Both drugs should be administered to the patient for at least 24 hours prior to surgery and should continue up to 5 days after surgery. These drugs have different mechanisms of blocking activation of platelets, which is induced by the surgical procedure, so the antiplatelet therapy is critical to maintain patency of the stent.

122.

When conducting a physical examination, the cardiac/vascular nurse finds the patient's blood pressure is elevated to 170/88 mm Hg and pulse is 92 bpm. The nurse should:

notify the physician immediately.

take an ECG.

repeat the BP and P in 5 minutes.

complete the physical exam.

Explanation:

If, when conducting a physical examination, the cardiac/vascular nurse finds the patient's BP is elevated to 170/88 and P is 92, the nurse should repeat the BP and P in 5 minutes to determine if the spike is due to "white coat" anxiety, a common situation. The BP and P often decrease after the patient has had a period of time to relax. BP should also be taken on both arms.

123.

An S3 heart sound that occurs immediately after S2 over the mitral area is an indication of:

systolic hypertension.

aortic stenosis.

left ventricular noncompliance.

right ventricular noncompliance.

Explanation:

An S3 heart sound that occurs immediately after S2 over the mitral area is an indication of left ventricular noncompliance. The S3 heart sound, also referred to as a ventricular gallop, is a low-pitched heart sound that follows the rhythm of the word "Kentucky." The sound is most often heard during early to mid-diastole. If the right ventricle is noncompliant, the sound occurs in the

tricuspid area. The S3 sound may be a normal variation in a child or adult younger than 30 years, but it is usually associated with a disorder for those older than 30 years.

124.

The normal range for a patient's pulse pressure is:

10-20 mm Hg.

30-50 mm Hg.

50-70 mm Hg.

70-80 mm Hg.

Explanation:

The normal range for a patient's pulse pressure is 30 to 50 mm Hg. The pulse pressure is calculated from the patient's blood pressure. The diastolic value is subtracted from the systolic value. Thus, if the BP is 140/90, 140 minus 90 equals 50 mm Hg. Increased pulse pressure may occur with increased stroke volume and decreased peripheral vascular resistance. Decreased pulse pressure may occur with mitral or aortic stenosis, peripheral vascular constriction, and decreased stroke volume.

125.

When assessing a patient's peripheral perfusion with the patient lying flat in supine position, before assisting the patient to sit up and dangle the legs, the nurse should:

elevate one of the patient's legs 12 inches above the heart for 60 seconds.

encourage the patient to take deep breaths and relax.

elevate one of the patient's legs 6 inches off of the table for 60 seconds.

ask the patient to flex and extend both feet for 30 seconds.

Explanation:

When assessing a patient's peripheral perfusion with the patient lying flat in supine position, before assisting the patient to sit up and dangle the legs, the nurse should elevate one of the patient's legs 12 inches above the heart for 60 seconds. As soon as the patient sits up, the nurse should compare the color of the legs. The leg that was elevated should appear slightly paler than the other, but color should return in about 10 seconds with venous refill in about 15 seconds. With arterial insufficiency, the return of color and venous refilling may be delayed or the return color may appear mottled.

126.

Capillary refill time of the finger nailbeds should not take more than:

1 second.

2 seconds.

3 seconds.

4 seconds.

Explanation:

Capillary refill time of the finger nailbeds should not take more than 2 seconds. To assess capillary refill time, the nailbed should be firmly compressed for 5 seconds and then released and observed for return to color, noting the time required in seconds. If the capillary refill is delayed, this indicates impaired circulation, which may indicate low cardiac output and/or arterial insufficiency. The capillary refill time should be assessed on both the right and the left sides.

127.

When assessing for jugular venous distention, the patient should be positioned:

flat and supine.

elevated to 45° and in lateral position.

elevated to 90° and supine.

elevated to 45° and supine.

Explanation:

When assessing jugular venous distention, the patient should be positioned with the head elevated to about 45° while lying supine because, in a normal patient, jugular venous distention only occurs when the patient is lying flat. The nurse should locate the internal jugular vein, using care to distinguish it from the carotid artery. The nurse should note the highest point where pulsations can be observed. The distance in centimeters from the sternal notch to the highest point should be recorded. Jugular venous distention is present if the distance is more than 3 to 4 cm.

128.

On physical examination, the cardiac/vascular nurse observes that the capillary refill time in the patient's finger is 7 seconds, and blanching of finger is followed by cyanosis and then erythema before normal color returns. These findings are consistent with:

Raynaud syndrome.

hypothermia.

cardiogenic shock.

acute arterial occlusion.

Explanation:

If a patient's finger capillary refill time is 7 seconds (prolonged), and blanching of the finger is followed by cyanosis and then erythema (red, white, and blue signs) before the color returns to normal, these findings are consistent with Raynaud syndrome, which results in vasoconstriction of the arterioles of the hands and/or feet. Initially, often only 1 or 2 fingertips are involved in the disease, but eventually all of the fingers and the distal palm are affected. Patients must avoid exposure to cold and smoking, as these may trigger vasoconstriction.

129.

As part of the US Department of Health and Human Services' 5 A's (ask, advise, assess, assist, and arrange follow-up) Guidelines for Smoking Cessation, during the "assist" stage, patients should be asked to establish a target date for quitting that is within:

4 days.

7 days.

14 days.

21 days.

Explanation:

As part of the US Department of Health and Human Services' 5 A's (ask, advise, assess, assist, and arrange follow-up) guidelines for smoking cessation, during the "assist" stage, patients should be asked to establish a target date for quitting that is within 14 days because if the target date is further away, the patient is less likely to follow through. The cardiac/vascular nurse should assist the patient to make a plan for quitting that includes removing all cigarettes and asking family and friends to assist. The need for abstinence rather than trying to slowly withdraw cigarettes should be stressed.

130.

A patient with jugular venous distention that is more pronounced on inspiration and who complains of chest pain and exhibits hepatosplenomegaly, ascites, and peripheral edema should be assessed for:

muffled heart sounds.

pulsus paradoxus.

pericardial friction rub.

ventricular gallop.

Explanation:

A patient with jugular venous distention that is more pronounced on inspiration and who complains of chest pain and exhibits hepatosplenomegaly, ascites, and peripheral edema should be assessed for pericardial friction rub because these signs and symptoms are associated with chronic constrictive pericarditis, which results in fibrosis of the pericardium. This fibrosis restricts ventricular filling, decreasing both cardiac output and stroke volume.

Venous congestion is generally present systemically, resulting in peripheral edema, ascites, and hepatosplenomegaly.

131.

The cardiac enzyme or protein that is most specific to myocardial damage is:

myoglobin.

troponin I.

troponin T.

creatine kinase-MB.

Explanation:

The cardiac protein that is most specific to myocardial damage is troponin I because it is found only in the myocardium. Troponin T is also found in the myocardium but is found in skeletal muscle as well, so levels may elevate with muscle damage. Likewise, myoglobin is found in both skeletal muscle and the myocardium. Creatine kinase-MB is also found specifically in the myocardium but it is less specific to myocardial damage than troponin I.

132.

The cardiac enzyme or protein that the cardiac/vascular nurse would expect to elevate first after an acute myocardial infarction is:

myoglobin.

troponin I.

troponin T.

creatine kinase-MB.

Explanation:

The cardiac protein that is expected to elevate first after an acute myocardial infarction is myoglobin, which is found in both skeletal muscle and the myocardium, so it is not specific to the heart (resulting in false positives). Following an MI, the myoglobin level increases in 2 to 4 hours, peaking in 8 to 12 hours, and returning to normal value (undetectable) within 12 to 30 hours (usually 24 to 30). Myoglobin level may be used to determine the advisability of thrombolytic therapy or emergent angioplasty within 6 hours of an MI.

133.

The PLAC and LDL tests are used to:

predict the risk of heart failure.

assess the degree of cardiac injury.

predict the risk of coronary artery disease.

evaluate response to statin therapy.

Explanation:

The PLAC and LDL tests are used to predict the risk of coronary artery disease. When heart disease is present, macrophages increase production of lipoprotein-associated phospholipase

A_2, and the PLAC test measures this enzyme. If the PLAC test shows increased levels and the LDL test is less than 130 mg/dL, then the individual has up to 3 times the risk of those without these findings. The higher the PLAC test and the lower the LDL level, the higher the risk of coronary artery disease.

134.

If a patient has impaired kidney function and is receiving low-molecular-weight heparin (LMWH), which of the following tests is most indicated to monitor heparin therapy?

INR.

PT.

aPTT.

Anti-Xa.

Explanation:

If a patient has impaired kidney function and is receiving low-molecular-weight heparin (LMWH), the test most indicated to monitor heparin therapy is anti-Xa. While LMWH does not usually require monitoring, in the presence of kidney disease, levels may increase because of impaired excretion. Anti-Xa can be used to monitor both LMWH and unfractionated heparin, although the activated partial thromboplastin time (aPTT) is more commonly used for unfractionated heparin.

135.

Following a cardiac arrest, which of the following treatments is best indicated to prevent neurological injury in unconscious survivors?

Intubation and ventilation.

Therapeutic hypothermia.

Frequent physical stimulation.

Administration of steroids.

Explanation:

Following a cardiac arrest, the treatment most indicated to prevent neurological injury in unconscious survivors is therapeutic hypothermia. The patient should be placed in therapeutic hypothermia as soon as possible (within 2 hours of return of spontaneous circulation) and cooled to 32°C to 34°C and kept at this temperature for 12 to 24 hours before slowly being raised to normal body temperature. Studies indicate that survival rates are higher for patients receiving therapeutic hypothermia, and neurological impairment is less severe.

136.

According to Bandura, self-efficacy is the most important factor in adherence. Which of the 4 sources of self-efficacy is most important?

Learning from modeling.

Experience with mastery.

Physiologic cues.

Verbal/Social persuasion.

Explanation:

According to Bandura, self-efficacy is the most important factor in adherence, and experience with mastery, previous success at achieving goals, is the most important source of that self-efficacy. Patients who believe they can be successful are more likely to adhere to treatment regimens because they see the value in persistence. Other sources include learning from modeling (seeing others perform tasks successfully), physiologic cues (symptoms), and verbal/social persuasion (convincing others that they can be successful).

137.

Following a patient's myocardial infarction, the cardiac/vascular nurse needs to help the patient and family members understand (1) limitations, (2) improvement potential, and (3):

precautions.

emotional changes.

complications.

support systems.

Explanation:

Following a patient's myocardial infarction, the cardiac/vascular nurse needs to help the patient and family members understand:

- *Limitations: physical activity/mobility parameters, pacing of activities.*
- *Improvement potential: short-term and long-term expectations regarding return to health and previous level of activities.*
- *Precautions: activities to avoid; signs and symptoms that require intervention; the correct method for taking medications (such as nitroglycerin).*

The cardiac/vascular nurse should review these factors before the patient begins an activity program.

138.

The responsibility for being a change agent in an organization should fall on:

the administration.

the nursing supervisors.

nurse educators.

all personnel.

Explanation:

The responsibility for being a change agent in an organization should fall on all personnel because all staff members may be able to identify positive changes within their jobs or scopes of practice that will improve services or processes. Too often, staff members expect change to occur from the top down, but change from the bottom up is often more meaningful because it derives from those who are better able to assess the need for change.

139.

In the role of preceptor for a graduate student, the cardiac/vascular nurse should expect the primary preceptor role to be to:

supervise and guide the student.

meet occasionally with the student.

provide encouragement to the student.

grade the student on achievement.

Explanation:

In the role of preceptor for a graduate student, the cardiac/vascular nurse should expect the primary preceptor role to be to supervise and guide the student. Preceptorship is usually a time-limited arrangement, often lasting for a semester or for a student's rotation through a unit rather than an ongoing relationship, such as occurs with mentoring. The preceptor may only observe the student or may participate in care, depending on the established model, but it is important that the preceptor plan enough time in his work schedule to accommodate the student's needs.

140.

The intensity of a heart murmur that is loud and accompanied by a thrill would be classified as grade:

I/VI.

II/VI.

III/VI.

IV/VI.

Explanation:

The intensity of a heart murmur that is loud and accompanied by a thrill would be classified as grade III/VI. Grades range from I to VI (always expressed in Roman numerals) and notation is written as "(finding)/VI." Grades:

1. *Barely detectible.*
2. *Soft and quiet.*
3. *Loud with a thrill.*
4. *Very loud with thrust or thrill.*