

M_PTQ_NICNurse (900+ Questions) - Quiz Questions with Answers

1.

Which of the following is NOT a physical sign of cold stress in a neonate?

Bradycardia

Hypertonia

Lethargy

Explanation:

Hypertonia is not present in an infant experiencing cold stress. An infant can actually become hypotonic with lax muscle tone during cold stress situations—especially premature infants who may already exhibit some degree of hypotonia due to their immaturity. Hypotonia can also be seen in hypoxia, so it is important to determine the cause and correct it if possible. If an infant exhibits symptoms of hypertonia, investigation as to its cause and subsequent management is warranted.

2.

Which of the following is an indication for total parenteral nutrition?

Short-gut syndrome

Transient diarrhea

Vomiting

Explanation:

Total parenteral nutrition (TPN) is a means of providing essential nutrients to the patient while bypassing the GI tract. Since this often requires long-term IV access, it is considered appropriate only when complete bowel rest is called for. In the neonate, this might include short-gut syndrome, gastroschisis, bowel obstruction, or prolonged diarrhea. TPN administration carries many risks, and must therefore be used only when medically necessary.

3.

What are the most common symptoms of sudden withdrawal of a beta-blocker medication?

Hypertension, increased heart rate, cardiac dysrhythmias, tremors, and sweating

Hypotension, decreased heart rate, fatigue, and lethargy

Hallucinations, seizures, and irritability

Explanation:

Therapeutic drugs can cause withdrawal symptoms when they are stopped suddenly, especially if the patient has been taking them for a long period of time. The primary mechanism of action of beta-blockers is to decrease heart rate, thereby decreasing blood pressure, and decreasing the risk of developing a cardiac dysrhythmia. When the medication is stopped suddenly, the opposite effect is seen with a significant response. This includes high blood pressure, elevated heart rate, increased risk of cardiac dysrhythmia, tremors, and sweating.

4.

An infant in the NICU is being treated for meningitis with ampicillin. The dosage is 400 mg/kg/day divided over every 8 hours. The infant being cared for weighs 6 pounds 8 ounces. How many milligrams should be given with each dose?

300 mg

325 mg

393 mg

Explanation:

To calculate the correct dosage, the first step will be to convert the weight to kilograms. 6 pounds 8 ounces, or 6.5 pounds, is divided by 2.2 to convert the weight to 2.95 kg. The dosage is 400 mg/kg/day so in a full day, the infant should receive 1,180 mg in a full day ($400 \times 2.95 = 1,180$). The dosage is spaced three times a day, every 8 hours, so each dosage should be 393 mg ($1,180/3 = 393$).

5.

A newborn with congenital cytomegalovirus infection is being treated with IV ganciclovir. When giving this intravenously, over what time period should it be infused?

30 minutes

60 minutes

90 minutes

Explanation:

Ganciclovir should be given over a 60-minute time period when given intravenously. It is used primarily for immunodeficient patients with CMV retinitis. It is a very cytotoxic drug and its cytotoxic effects are increased if given over a shorter period of time than 60 minutes. These

adverse effects include thrombocytopenia, granulocytopenia, and anemia. In male patients, it may cause aspermatogenesis.

6.

Which of the following medications is NOT indicated for use in the infant in respiratory distress?

Formoterol (Perforomist)

Albuterol

Dexamethasone

Explanation:

Perforomist, a formoterol inhalation treatment, is not indicated for use in children. It is indicated for treatment of COPD symptoms in adults. Albuterol is a beta-2 agonist that works to relieve respiratory symptoms by dilating the airway. Dexamethasone is a steroid that can decrease inflammation within the airway.

7.

A pediatric patient in the NICU is receiving an infusion of dopamine. Once it is completed, the effects from the medication should be gone

within 10 minutes

within 1 hour

within 4 hours

Explanation:

The half-life of dopamine is less than 2 minutes, so the total time in which the effects from the medication are seen is around 10 minutes. Dopamine is used to improve heart function, increase blood pressure, and increase renal perfusion.

8.

Which of the following routes is NOT recommended when administering naloxone (Narcan) to infants?

Intravenous

Intramuscular

Endotracheal

Explanation:

When given, the preferred route for administering Narcan in the infant is IV or IM. It should not be given via endotracheal administration. Narcan is not used as a first line drug in the infant with respiratory depression. Normal color and pulse must first be present before it is considered. It may cause seizures if given to the infant of an opioid-addicted mother.

9.

A newborn in the NICU turns his head towards the sound of a monitor alarm sounding. This sound is heard multiple times during the day, and after a while, he no longer responds to it. What is this lack of reaction called?

Habituation

Nature vs. nurture

Deconditioning

Explanation:

Habituation is the process by which repeated exposure to some type of stimuli eventually fails to elicit a response. In this example, the newborn becomes accustomed to hearing the monitor alarms several times daily, so he no longer turns his head toward it. This has also been called the "Get Used To It" concept.

10.

Which of the following is an autonomic response to stress?

Stable vital signs

Appropriate response to reflex testing

Flushing

Explanation:

Autonomic responses to stressful stimuli occur involuntarily. These can include flushing, pallor, or cyanosis. The vital signs can change in response to stress, resulting in an elevated heart rate, elevated blood pressure, increase in respiratory rate, or a decrease in oxygen saturation. Visceral responses can also occur, resulting in nausea, vomiting, diarrhea, or constipation.

11.

Studies have shown that having cycled light in the NICU (bright during the day and dim at night), can result in

an increased amount of time requiring mechanical ventilation

infants being able to feed sooner

a disruption in the normal circadian rhythm

Explanation:

Positive effects have been seen in the NICU when the lighting is in a cyclical pattern. Bright lights during the day and dim at night has been shown to contribute to infants feeding sooner, establishing "normal" sleep patterns, increasing the rate of weight gain while in the NICU, and decreasing the amount of time on a ventilator. The cyclical lighting helps to promote a regular circadian rhythm within the body to establish a regular sleep and wake cycle, which promotes improved overall health.

12.

A preterm infant in the NICU is receiving tube feedings until he is able to attempt oral feedings. What activity can help him with the transition from tube to oral feedings?

Playing soft music during tube feedings

Give him a pacifier to suck on during the tube feedings

Gently rub his stomach during tube feedings

Explanation:

Non-nutritive sucking is having an infant suck on something that does not give them milk. For infants who are tube fed, it can trigger an association with them between having a full stomach and sucking, which can help when transitioning to oral feedings. The sucking activity is also

helpful in strengthening the oral muscles needed to suck, as well as being soothing and calming for the infant.

13.

Which of the following provides the appropriate daily caloric intake for the associated infant?

Healthy 2500 g infant receiving 55 cc expressed human milk by gavage every 3 hours

Healthy 3400 g infant receiving 3.5 oz fortified preterm formula by bottle every 4 hours

Post-surgical 2800 g infant receiving 60cc half-strength formula by bottle every 3 hours

Explanation:

The total daily calorie requirement for a normal, growing preterm infant is between 105-120 kcal/kg/day for enteral feedings. Human milk and regular formula contain 20 kcal/oz. Fortified preterm formulas contain 22-24 kcal/oz. Half-strength human milk or formula contains 10 kcal/oz. Parenteral nutritional requirements are about 20% less at 85-100 kcal/kg/day. Many factors come into play when determining appropriate caloric intake for an infant, including activity, body temperature, and stress level of the infant. Infants under more stress (like those who have just had surgery) will require more calories/day.

14.

Which activity has been found to decrease apneic episodes in newborns?

Rocking movement

Softly singing

Large feedings

Explanation:

Studies have shown that a rhythmic rocking motion can decrease apneic episodes in the newborn. Rocking also helps to stimulate the vestibular sense, which maintains a sense of balance and equilibrium. It can assist with further developing visual and auditory tracking. It is thought that rocking helps infants to shift their focus on external stimuli.

15.

The nurse is assessing a newborn and notices some faint perioral cyanosis. The first response should be to

initiate oxygen via a mask

activate the facility's Code Blue protocol

assess the rest of their body to see if there is any cyanosis present in the extremities or if the infant is exhibiting any retractions or other signs of respiratory distress

Explanation:

The first step should be to assess the rest of the infant to see if this is truly cyanosis. It is not uncommon for the face to undergo some trauma while passing through the birth canal, which can cause some areas of bruising. It can be differentiated from cyanosis by assessing whether it is present in the distal extremities or if the infant is showing any signs of respiratory distress. Facial bruising may take several days to gradually fade.

16.

What is a patent ductus arteriosus?

A widening of the mitral valve resulting in mitral regurgitation

An opening in the septal wall between the left and right ventricles

An opening between the pulmonary and aortic arteries

Explanation:

Before a baby is born, its blood is oxygenated by the mother through the placenta. A vessel is formed connecting the pulmonary and aortic arteries, the ductus arteriosus. Shortly after birth, this vessel closes off so that the infant's blood can then receive oxygen from its own lungs. A PDA results when the ductus arteriosus remains open and oxygen-rich blood from the aorta mixes with the blood lacking oxygen from the pulmonary artery. If the rest of the heart is functioning normal, the baby is monitored and the PDA is allowed to repair itself. If this does not happen, the defect can be surgically corrected.

17.

Surfactant should be administered

as a first line therapy for respiratory distress in infants

to infants in severe respiratory distress that did not respond to CPAP

if the infant is requiring FiO₂ of 30% to maintain an oxygen saturation above 90% while on CPAP

Explanation:

According to the American Academy of Pediatrics and the European Consensus Guidelines recommendations, CPAP should initially be applied to all respiratory distressed infants. Infants in severe respiratory distress that, with CPAP, are still requiring FiO₂ of greater than 40% in order to maintain an oxygen saturation greater than 90%, or infants that are apneic, should then be intubated and administered surfactant. Infants requiring a FiO₂ of less than 40% to maintain

appropriate oxygen saturation should remain on CPAP and have an ABG drawn to determine next intervention steps.

18.

What is a common cause of a cardiac tamponade in the newborn?

Incorrect location of a central venous catheter tip

Chest wall trauma during passage through the birth canal

Chest compressions in the event of cardiac arrest

Explanation:

Cardiac tamponade occurs when fluid accumulates with the pericardial sac, causing pressure on the outside of the heart. It is treated by inserting a needle through the chest wall, into the pericardium, and withdrawing the fluid. While cardiac tamponade is rare in neonates, it can occur in the newborn when a central venous catheter is in an incorrect position, applying pressure at the juncture of the inferior vena cava and the right atrium. Ensuring correct placement of the catheter is imperative to prevent this life-threatening complication.

19.

If left untreated, coarctation of the aorta can lead to

congestive heart failure

patent ductus arteriosus

tetralogy of Fallot

Explanation:

Coarctation of the aorta occurs when there is narrowing in the aorta. It is a congenital condition that may not cause any symptoms in the newborn and may not be known to be present until adulthood. If symptomatic, the common symptoms are pallor, difficulty breathing, and poor feeding due to difficulty breathing. If it is left untreated, it can lead to congestive heart failure or even death.

20.

Which of the following heart conditions will cause weak peripheral pulses and cool extremities?

Patent ductus arteriosus

Hypoplastic left heart syndrome

Pulmonary stenosis

Explanation:

Hypoplastic left heart syndrome is a congenital heart defect that results in the left side of the heart being smaller than normal. This decreases the amount of oxygenated blood that can be delivered through the body. It will result in decreased peripheral pulses due to the left ventricular dysfunction. Peripheral cyanosis will also occur due to the decreased in oxygen being sent to the extremities. Patent ductus arteriosus and pulmonary stenosis do not result in peripheral cyanosis.

21.

Transposition of the great vessels can involve the superior and inferior vena cava, the pulmonary artery and pulmonary veins, or the

femoral artery

tricuspid valve

aorta

Explanation:

Transposition of the great vessels can involve any of the great vessels of the body: the superior or inferior vena cava, the pulmonary artery or pulmonary veins, or the aorta. It usually involves a “swap” between the locations of the vessels and can result in poorly oxygenated blood or poor delivery of blood to the body. If the pulmonary artery and aorta are involved, the condition is called a transposition of the great arteries.

22.

With which genetic condition is the NICU nurse likely to see an atrioventricular septal defect, or a ventricular septal defect in less severe cases?

Cerebral palsy

Down syndrome

Cystic fibrosis

Explanation:

Approximately one-half of all children born with Down syndrome have a heart defect. The most common type of heart defect in these children is an atrioventricular septal defect, or a ventricular septal defect in less severe cases. This occurs when the septum between either the atria and ventricles, or just the ventricles, is not fully formed. This allows oxygenated blood and

deoxygenated blood to mix, which can cause the heart to work harder to transport oxygenated blood throughout the body.

23.

Which of the following congenital heart defects is considered a cyanotic condition?

Tetralogy of Fallot

Aortic stenosis

Atrial septal defect

Explanation:

There are two congenital heart defects that are considered cyanotic conditions: Tetralogy of Fallot and transposition of the great vessels. They both interfere with the delivery of oxygenated blood through the peripheral circulation, resulting in peripheral cyanosis. Other congenital heart defects are considered acyanotic because they are not likely to result in peripheral cyanosis.

24.

Which of the following findings are associated with fetal alcohol syndrome?

I. Large head

II. Cardiac defects

III. SGA (small for gestational age)

IV. Delayed development

I, III, IV

I, II, III, IV

II, III, IV

Explanation:

Fetal alcohol syndrome (FAS) is characterized by cardiac defects (atrial or ventricular septal defects), small head, growth restriction, developmental delays, and facial abnormalities (small upper jaw, thin upper lip, small eyes with epicanthal folds). Most infants with FAS do not have normal brain development and will require work with many varied health care providers over the course of their life.

25.

The nurse is checking the blood pressure of a newborn. It is 64/40. What should the next step be?

Begin monitoring it very closely, at least once every 10 minutes, to assess for changes

Activate the Code Blue protocol for the facility

Record the blood pressure as a normal reading and continue the assessment of the newborn

Explanation:

A normal newborn blood pressure is 64/40. This usually rises to 95/58 around the first month of age. Premature infants will have even lower blood pressures unless their medical condition results in an elevation in blood pressure. In this situation, the nurse should record the reading and continue with the newborn assessment.

26.

A premature infant in the NICU has a G-tube and the nurse is starting his scheduled feeding. The formula is backing up in the tube and not flowing smoothly. The next intervention would be to

contact the neonatologist on call for further instructions

flush the tube with 20 cc of a carbonated soft drink

flush the tube with 5-10 cc warm water and try aspirating and flushing if there is resistance

Explanation:

A G-tube should be flushed with warm water before and after all feedings to ensure patency and remove any build-up of formula within the tube itself. Air should not be flushed into the tube and nothing should ever be forcibly pushed through the tube.

27.

The nurse is evaluating a newborn. The infant is having retractions with respirations and a low, grunting sound can be heard with his rapid breathing. The most likely diagnosis is

neonatal sepsis

meconium aspiration syndrome

cystic fibrosis

Explanation:

Meconium aspiration syndrome occurs when the infant inhales meconium during the labor and delivery process. It presents as labored or rapid breathing with retractions and grunting sounds with each breath. The infant may begin to appear cyanotic as this condition progresses. To treat this condition, surfactant may be given which has proven to be helpful. A laryngoscope may be inserted to perform suction below the level of the vocal cords. Mortality rates are higher for

these infants than others and there may be some residual respiratory problems for the first 5-10 years of life.

28.

What is the most common cause of respiratory distress syndrome in the newborn?

Forceps-assisted delivery

Transient tachypnea of the newborn

High birth weight

Explanation:

Transient tachypnea of the newborn is the most common cause of respiratory distress in the newborn. It is triggered by excessive fluid in the lungs and usually resolves on its own. It occurs shortly after delivery. Supportive care with oxygen or CPAP may be necessary until the symptoms resolve. It is most common in babies born via Cesarean section.

29.

What is the ideal timeframe in which surfactant should be given to the newborn with respiratory distress?

Within 1 hour of birth

At 12 hours of birth

At least 24 hours after birth

Explanation:

Surfactant should be given as soon as the diagnosis of respiratory distress syndrome is made, preferably within 1 hour of birth. A repeat dose is then given 4-12 hours after birth as long as the infant is still intubated and requiring 30-40% oxygen. Surfactant is administered through the endotracheal tube over the course of a few minutes.

30.

During the first few months of life, the newborn is only able to digest those proteins found in

formula or human milk

formula, human milk, or cow's milk

there are no limitations to which proteins the newborn is able to digest

Explanation:

The digestive system of the newborn begins maturing soon after birth. For the first few months, however, the only proteins it is able to digest are those found in formula or human milk. That is why it is advised that cow's milk not be given to babies within the first year of life. The GI tract has also not fully matured with the necessary microorganisms that aid in digestion. Development and maturation of the GI tract continues for the first 2 years of life.

31.

The nurse is caring for an infant in the NICU. The newborn has not had a bowel movement in the first 48 hours of his life and has vomited whenever oral feedings are attempted. What is one of the problems that may be present?

Short gut syndrome

Colitis

Hirschsprung's disease

Explanation:

Hirschsprung's disease is a congenital condition in which nerve cells are absent from the lower part of the GI tract. This prevents the normal peristaltic movement to occur in the intestines, which pushes waste material through, resulting in a BM. The infant will usually have a distended abdomen and vomiting with this disease. It is treated with surgery to remove the affected part of the colon.

32.

A newborn has an NG tube in place due to an intestinal obstruction. In order to prevent aspiration of saliva, it is very important

to perform continuous oral suction

that the aspirate should drain into a drainage bag and the stomach contents should be aspirated at least every 30 minutes

to administer feeds at a trickle pace until the obstruction has resolved

Explanation:

There is an increased risk of death by aspiration in newborns that have an NG tube. This is due to aspiration of saliva. Because of this, a drainage bag should be attached to collect the aspirate. The stomach contents should also be aspirated at least every 30 minutes to decrease this risk. Feedings are contraindicated in this patient due to the intestinal obstruction, and only increase aspiration risks.

33.

An intestinal disorder that can occur as a result of malrotation is

ulcerative colitis

meconium ileus

volvulus

Explanation:

Around the 10th week of gestation, the intestines are forming and settle within the abdominal cavity. As the large intestine begins to further develop, it repositions itself above and on either side of the small intestine, which is centrally located in the abdomen. With malrotation, the large intestine remains positioned on the left side of the abdomen and the small intestine remains on the right. This can result in a twisting of the intestine, or a volvulus, which can cause ischemia of the area affected and even result in death if not treated. Surgical intervention is often necessary to correct this condition.

34.

Which of the following infants is most likely to develop necrotizing enterocolitis?

A premature infant being fed human milk pumped by his mother

A premature infant being formula fed

A full-term infant being formula fed

Explanation:

Necrotizing enterocolitis is most common in premature infants who are being formula fed rather than breastfed. With lung prematurity in the premature infant, there is an increased risk of decreased oxygenation to the lining of the intestines. Formula fed infants are not receiving any of the immune mediators that are helpful in fighting infection and which help to build up the normal protective microorganisms in the intestines. This can result in a necrotizing infection in the intestines that can lead to intestinal rupture and even death. This condition affects 10% of premature infants, but is rare in full-term infants.

35.

What is a serious sequela regarding meconium aspiration in the infant?

Cardiac anomalies

Gastroschisis

PPHN (persistent pulmonary hypertension of the newborn)

Explanation:

The presence of meconium in the amniotic fluid can have dire consequences in the neonate if the neonate inhaled the meconium-stained fluid while in utero or during delivery. Meconium aspiration can negatively impact an infant's lung function severely, and can cause a pneumothorax or PPHN. The symptoms of meconium aspiration may include cyanosis, respiratory distress with labored/rapid breathing, slow heartbeat, and a barrel-shaped chest.

36.

What is the difference between an omphalocele and a gastroschisis?

An omphalocele is a fluid collection in the abdomen, while a gastroschisis is a decrease in fluid in the abdomen

An omphalocele occurs when the abdominal contents protrude through the umbilicus, but a gastroschisis occurs when there is no membrane covering the abdominal organs

An omphalocele occurs when the brain ventricles are dilated, while a gastroschisis occurs when loops of bowel are dilated

Explanation:

Omphalocele is a condition in which there is an opening at the umbilicus through which the abdominal organs can protrude. A gastroschisis occurs when all of the abdominal organs are exposed because the outer membrane does not form over the abdomen to cover them. Both of these are congenital defects that occur early in development. The abdominal organs usually form outside the abdomen, but then return to the abdomen during development. There is no definitive known cause for either condition.

37.

Parents of a newborn have opted to not have their son circumcised. When providing them with care instructions, they will need to know that

the child should receive an annual exam by a urologist to evaluate the uncircumcised penis

the foreskin should be completely retracted for cleaning and the area should be dried well

though the circumcision was not done in the hospital, they will need to follow-up with their pediatrician so it can be done before age 2

Explanation:

Full retraction of the foreskin with cleaning, and keeping the area complete dry after washing, helps to prevent any infections. Bacteria, fungus, and moisture can be trapped within the foreskin, which can lead to a painful infection. Infections can become severe enough to cause

significant swelling of the foreskin, which can prevent it from being able to be retracted down over the penis.

38.

When administering blood or blood products, the following statement is true

A patient with A- blood can receive blood from a donor who is O- or O+

A patient with A+ blood can receive blood from a donor who is AB+

A patient with AB+ blood can receive blood from a donor of any blood type

Explanation:

A person with AB+ blood is considered a universal recipient because they can receive blood or blood products of any type. A universal donor would be a person with type O- blood. The most restricted recipient blood type is O- because those patients can only receive O- blood or blood products.

39.

The nurse is administering blood to a premature infant who is anemic. A possible transfusion reaction may be occurring if the patient develops

dysuria

the hiccups

tenderness at the IV site

Explanation:

One of the first signs that an acute intravascular hemolytic reaction is occurring is pain at the IV site. Other early signs include fever, chills, elevated heart rate, nausea, and dyspnea. This potentially life-threatening reaction usually occurs within 10 minutes of the beginning of the infusion of blood or blood products.

40.

The most common cause of ambiguous genitalia in a genetic female newborn is

at least one of the birth parents is transgender or homosexual

congenital adrenal hyperplasia

developmental anomaly of having only one ovary

Explanation:

In newborns that are genetically female, the most common cause of ambiguous genitalia is congenital adrenal hyperplasia. Ambiguous genitalia result in genital characteristics that are not wholly female or wholly male. There can be features of both, externally and internally. Congenital adrenal hyperplasia results in the overproduction of male hormones, which causes the genitalia to take on both male and female features during development. This condition can result in a great deal of stress for the parents. Genetic testing is usually done to determine if the infant is genetically a male or female.

41.

A newborn has been diagnosed with neonatal testicular torsion that has left one testicle unsalvageable. The other testicle is not affected. The parents are asking if their son will have fertility problems when he is older because of this. The most appropriate answer is

there is a very low chance of this causing any fertility issues long-term

he will need to see an endocrinologist for hormone testing to determine the long-term effects on fertility

there is usually an approximately 50% chance that he will be infertile

Explanation:

Unilateral neonatal testicular torsion generally has little, if any, effect on future fertility. Bilateral torsion can result in bilateral testicular dysfunction, which can involve deficiencies in sex steroid hormones. Those patients should be seen by an endocrinologist to determine what sex steroid hormone replacement therapy will be necessary for normal development.

42.

Clinical symptoms of neonatal renal vein thrombosis include

leukocytosis

Bence-Jones protein in the urine

thrombocytopenia

Explanation:

Clinical symptoms of renal vein thrombosis in the newborn include thrombocytopenia, hypertension, hematuria, proteinuria, and renal insufficiency. This condition is rare, but can occur in infants born to mothers with a history of diabetes mellitus. This is not an infectious condition, so you would not expect to see leukocytosis. Bence-Jones proteins in the urine are specific to multiple myeloma.

43.

What is the difference between measuring a total bilirubin and a direct bilirubin?

Total bilirubin is the amount of direct and indirect bilirubin while direct bilirubin is the unbound amount of bilirubin that normally passes from the liver to the small intestine

Total bilirubin is the amount of bilirubin bound to albumin while direct bilirubin is the total amount of bound and unbound bilirubin

Total bilirubin is a measure of the bilirubin excreted through the urine while direct bilirubin is amount of protein-bound bilirubin stored in the liver

Explanation:

Bilirubin is measured as direct, indirect, or total. Direct bilirubin is the amount of bilirubin that is not bound to protein that passes from the liver to the small intestines. A small amount passes through the urine to give it a yellow color. The indirect bilirubin is bilirubin that is bound to albumin. The total bilirubin is the measure of both direct and indirect bilirubin combined.

44.

In which of the following scenarios would the Kleihauer Betke test be useful?

A 36-year-old pregnant female at 38 weeks gestation, contractions 2 minutes apart

An 18-year-old pregnant female at 37 weeks gestation, having Braxton-Hicks contractions

A 29-year-old pregnant female at 26 weeks gestation having abdominal pain following a fall down a steep flight of stairs

Explanation:

The Kleihauer Betke test is a blood test used following maternal trauma, such as a bad fall down stairs or a car accident. It checks the maternal blood sample for fetal hemoglobin mixed

with maternal blood. This occurs when there is trauma that results in a breach to the placental barrier, allowing fetal and maternal blood to mix in the mother's circulation. This can be fatal to the mother, and the fetus, if there is an Rh incompatibility between the two blood types.

45.

What is the most common cause of direct hyperbilirubinemia in the newborn?

Trauma during passage through the birth canal

Liver immaturity

Congenital kidney disease

Explanation:

Direct hyperbilirubinemia is also known as jaundice, yellow discoloration of the skin and sclera. The most common cause in newborns is due to the liver being immature and not being able to breakdown bilirubin. It is fairly common and most often responds to phototherapy for a few days.

46.

What is the function of pulmonary surfactant in the neonate?

Prevents bronchoconstriction of the smooth bronchial muscles

Prevents alveolar collapse

Increases surface tension in lungs to provide more structure

Explanation:

Pulmonary surfactant is composed of proteins and phospholipids. It is a substance that is produced and secreted by the lungs. It reduces surface tension and acts as a lubrication of the alveolar surfaces. This prevents the walls of alveoli from sticking together during exhalation, preventing alveolar collapse. Preterm infants less than 32 weeks' gestation are at greater risk for having surfactant deficiencies, since adequate surfactant production usually occurs later in gestation. The leading cause of respiratory distress syndrome in neonates is pulmonary surfactant insufficiency.

47.

What condition can occur in the newborn as a result of Rh incompatibility?

Hydrops fetalis

Sick sinus syndrome

Sickle cell anemia

Explanation:

Hydrops fetalis occurs as a result of Rh incompatibility between the newborn and the mother. The Rh incompatibility results in a large number of red blood cells in the infant to be destroyed. This causes severe edema. Approximately half of newborns with hydrops fetalis will not survive. This can be prevented if prenatal testing is done on the mother to determine her Rh status. If she is Rh negative, an injection can be given during the first trimester of her pregnancy to prevent this reaction from occurring.

48.

In which group is hypoxic ischemic encephalopathy more common?

All infants, regardless of age, are at equal risk

Premature infants

Full-term infants

Explanation:

Hypoxic ischemic encephalopathy is more common in full-term infants than premature infants. This condition results in damage or death to brain tissue due to lack of oxygen to the brain. It can occur when there is any condition, maternal or fetal, that results in a disruption in oxygenation of brain tissue. This can include a prolapsed cord, placental abruption, maternal hypotension, and others. This is the leading cause of impairment in newborns, though severity of the impairment may not be determined until 3 or 4 years of age.

49.

The nurse is caring for a newborn with spina bifida. The mother expresses concern that a fall she had 2 weeks before delivery could have caused the birth defect. The best response is

spina bifida is due to trauma during labor and delivery, not due to her fall

there is a chance that trauma during pregnancy may have caused the abnormality

spina bifida develops during the first month of pregnancy and her fall did not cause this

Explanation:

Spina bifida is classified as a neural tube defect and it develops during the first month of pregnancy, when development of the spinal column occurs. Other neural tube defects include anencephaly and development of a Chiari malformation. With spina bifida, the spinal column does not completely close, resulting in at least some paralysis of the lower extremities. There is no cure for this condition and any nerve damage present at birth is permanent.

50.

The mildest form of an intraventricular hemorrhage of the brain in a newborn is also called

normal pressure hydrocephalus

a germinal matrix hemorrhage

elevated pressure hydrocephalus

Explanation:

An intraventricular hemorrhage in a newborn is classified into grades, depending upon the severity of the bleeding. Grade I, the mildest form, is also called a germinal matrix hemorrhage. Those infants most at risk for developing an intraventricular hemorrhage are those who are premature, at least 10 weeks preterm. This occurs because the blood vessels in the brain are very weak in the premature infant and can easily rupture, causing a brain bleed. Less than half of infants with a mild bleed will have long-term effects from it. Up to one-third of those with severe bleeds may die.

51.

Periventricular leukomalacia is often the cause of which chronic condition?

Acute lymphocytic leukemia

Cerebral palsy

Systolic ejection murmurs

Explanation:

Periventricular leukomalacia often causes cerebral palsy in the affected child. It has also been associated with an increased chance of epilepsy. Periventricular leukomalacia occurs when there is necrosis of the white matter in the brain near the lateral ventricles. Premature infants are at greatest risk for developing this condition due to the risk of neonatal encephalopathy.

52.

The nurse has received a lab report on the CSF of a newborn who underwent a lumbar puncture. The lab report shows the glucose level in the sample is 100 mg/dL. This value is interpreted to mean

the newborn is most likely diabetic

the newborn likely has meningitis

the newborn has a normal CSF glucose level

Explanation:

The normal glucose level in cerebrospinal fluid in a newborn is 35-120 mg/dL. A value of 100 would be normal for this infant. Diabetes mellitus may cause CSF glucose levels to be elevated. Meningitis can cause CSF glucose to be normal with viral meningitis, low with bacterial meningitis, and normal to low in fungal meningitis.

53.

Which of the following is used to test for congenital cytomegalovirus infection?

Saliva

Feces

Nasal swab

Explanation:

A congenital cytomegalovirus (CMV) infection can be diagnosed using saliva, urine, or blood specimens. Testing must be done within the first 2-3 weeks following birth. A mother who has CMV can pass this infection to the fetus through the placenta. Most infants will never develop any symptoms from the virus, but approximately 20% can develop hearing loss, vision loss, intellectual disabilities, seizures, or muscle weakness.

54.

The feces of house cats can cause a parasitic infection called

toxoplasmosis

shigella

giardia

Explanation:

Cat feces can contain a parasite called toxoplasmosis. A pregnant woman may contract this parasite and then pass it onto the fetus through the placenta. For this reason, pregnant women should avoid contact with cat feces, such as when cleaning a litter box. Most pregnant women who become infected will not be aware of the infection. It can cause prematurity in about half of those infants who contract the parasite in utero. The infection can cause damage to the eyes, ears, nervous system, and skin in infants.

55.

Early onset group B strep infection in the newborn is most likely to cause

meningitis

malabsorption syndromes

sepsis

Explanation:

Early onset group B strep infection in the newborn is most likely to cause sepsis. It can also cause pneumonia. Meningitis can occur with early onset group B strep, but it is not as common as sepsis. Meningitis is more likely to occur with late onset of the infection. Group B strep infection is passed from the mother to the fetus. Screening pregnant women for group B strep is routine so that it can be treated with antibiotics to prevent transmission during pregnancy and birth.

56.

A child with late congenital syphilis will generally show symptoms

within the first month life

within the first year of life

after the second year of life

Explanation:

Late congenital syphilis will reveal symptoms after a child is at least 2-years-old. This is transmitted to the newborn by a mother with syphilis. Early onset of the disease (less than 2 years of age) may cause a chronic runny nose, enlarged liver or spleen, skeletal abnormalities,

or a bullous skin condition. Late onset can cause eye and ear problems, and skeletal abnormalities.

57.

What is the most common cause of pneumothorax in a neonate?

Atrial/septal defects

RDS (respiratory distress syndrome)

Shock

Explanation:

Respiratory distress syndrome is a serious and fairly common problem for preterm neonates due to the lack of pulmonary surfactant needed to maintain alveolar integrity. When RDS is severe, the infant may require mechanical ventilation which significantly increases the air pressure in the neonatal lungs. It is trauma from this increased air pressure on already-compromised and noncompliant alveoli that can cause them to rupture, thus causing pneumothoraxes in the neonate.

58.

Which of the following infections is the most common in the newborn?

Polio virus

Varicella virus

Enterovirus

Explanation:

Enterovirus is a very common cause of infections. It often creates no symptoms in the infant, but can be very serious if it occurs in the first 2 weeks of life. Enterovirus infections are usually transmitted from the mother to the infant. They can cause cold symptoms, or be so severe that sepsis, meningitis, or respiratory failure develops. Enterovirus infections are most common in the summer and fall.

59.

The parents of a newborn are asking the nurse what PKU is and if it is really necessary to have this tested as part of the newborn screening process. The best response is

the PKU screen is not a necessary test and can be eliminated from the tests to be performed

PKU can be a fatal illness and it is highly recommended that this be performed

the test can be postponed until the newborn is a few months old

Explanation:

PKU, or phenylketonuria, is a metabolic disorder in which the body is not able to break down some of the amino acids in proteins. This leads to poor brain development and intellectual disabilities. It is highly recommended that this test be performed on all newborns so that treatment can be started and the devastating effects of this illness can be avoided.

60.

The new parents of a child with Down syndrome tell the nurse that they want to have more children in the future, but they are concerned about the risk of having another child with this condition. The most appropriate response is

there is no chance to have this happen again because it is not hereditary

the chance of that happening is very low, about 1 out of 100 pregnancies

there is a 50% chance they will have another child with Down syndrome

Explanation:

The risk of having a child with Down syndrome is approximately 1 in 100 pregnancies. Advanced maternal age is more of a risk factor for having the genetic mutation that causes this condition. Having one child with this condition does not increase the chances that any future children will also have Down syndrome.

61.

Due to a family history of sickle cell anemia, a newborn has been screened for and diagnosed with sickle cell disease. His mother is concerned about him participating in normal sports activities when he gets older. The most appropriate response to this is

he can participate, but needs to be careful to avoid dehydration or overly strenuous exercise

he will not be able to participate in any organized sports

there are no limitations to physical activity with sickle cell disease

Explanation:

For this patient, overly strenuous exercise may lead to a sickle cell crisis. Before children with sickle cell participate in exercise, they should hydrate well and continue to drink water frequently. Sports drinks and caffeinated energy drinks should be avoided. Of course, if any pain or shortness of breath should develop, they should stop and rest immediately.

62.

Which of the following electrolytes can help to reduce the incidence of neurological deficits in premature infants?

Magnesium

Calcium

Phosphorous

Explanation:

Studies have shown that maintaining a higher serum magnesium level can help to reduce the incidence of neurological developmental delay. It has been found to be helpful with advancing brain development in premature infants, and to some degree, in term infants who have suffered from asphyxia during labor and delivery. It is thought that magnesium can serve a neuroprotective role in early brain development.

63.

An infant has been identified as having galactosemia. The mother wants to know if she can still breastfeed him. The best response is:

she should pump until the infant is well enough to begin breastfeeding again.

he will not be able to breastfeed because of the risk of ingesting galactose in the milk.

he will not be able to breastfeed, but he can drink regular cow's milk without difficulty.

Explanation:

Infants with galactosemia are not able to be breastfed at all and must be bottle-fed with a galactose-free formula. Galactosemia is a hereditary condition in which the infant is deficient in the enzyme that breaks down galactose, the sugar found in milk. Those infants affected will begin with vomiting and diarrhea shortly after ingesting any milk containing this sugar. It can go on to affect the brain, eyes, liver, and kidneys.

64.

The syndrome affecting almost half of the infants of diabetic mothers is

cleft lip and palate

hydrocephalus

fetal macrosomia

Explanation:

Fetal macrosomia occurs in up to 45% of infants of diabetic mothers. They are large babies that weigh more than 4000 g at term birth. These infants are puffy, fat, ruddy, and often hypotonic. These infants are also more likely to have periods of hypoglycemia shortly after birth and during the first few days of life.

65.

An example of an autosomal recessive disease is

Down syndrome

Edward's syndrome

cystic fibrosis

Explanation:

An autosomal recessive disease is one that requires 2 copies of the gene in order for the disease or trait to occur. For example, both the mother and father of an infant would need to pass on a copy of the gene for cystic fibrosis in order for their child to develop the disease. Down syndrome and Edward's syndrome are both genetic mutations that occur during fetal development and are not genetically inherited conditions.

66.

What does it mean if a disease is autosomal dominant?

Both parents need to pass on the gene for the disease to occur

One parent needs to pass on the gene for the disease to occur

Neither parent passes on the gene for the disease to occur; it is a genetic mutation that occurs during fetal development

Explanation:

An autosomal dominant disorder only requires one parent to pass on the gene for a disease to occur. Examples of autosomal dominant conditions including Huntington's disease, polycystic kidney disease, and neurofibromatosis. Often, one of the parents will have the disease and can pass it onto their children.

67.

A defect in chromosome 22 is also called

DiGeorge syndrome

Trisomy 13

Trisomy 18

Explanation:

DiGeorge syndrome occurs when there is a mutation to chromosome 22 during fetal development. It results in an immunodeficiency disorder that affects the thymus gland and the production of T-lymphocyte cells. This results in frequent infections, congenital heart defects, and hypocalcemia. This syndrome also causes characteristic facial features with an underdeveloped chin, heavy eyelids, ears that are rotated back, and small upper ear lobes.

68.

A neonate presents with cyanotic legs and toes but upper extremities and head are pink. Respiratory rate is 55/min and heart rate is 120/min with a loud murmur. What is the likely type of cyanosis that is exhibited?

Central cardiac cyanosis

Central pulmonary cyanosis

Differential cyanosis

Explanation:

There are three main types of cyanosis—central, peripheral, and differential. In differential cyanosis, the infant's lower extremities are usually cyanotic while the upper extremities and head remain pink. The main cause of differential cyanosis (DC) is the presence of a PDA (patent ductus arteriosus). DC occurs when unoxygenated blood is shunted through the PDA opening in the heart and is pumped out into the descending aorta to the lower extremities causing

cyanosis in only the lower extremities. Large PDAs can cause very loud, mechanical-sounding murmurs.

69.

Is Turner's syndrome more commonly seen in male or female newborns?

It affects both genders equally

It affects males only

It affects females only

Explanation:

Turner's syndrome is seen in female newborns only, because this condition only affects females. It occurs as a result of a genetic mutation in which the female receives only one X chromosome. This results in females who are short in stature, have delayed puberty, often suffer from infertility problems, and may have learning disabilities. In some cases, it may cause heart defects. Women who want to become pregnant will need to take hormone treatments, but are often unsuccessful at conceiving.

70.

A condition that prevents a newborn from being able to breathe after birth is

polycythemia

candidiasis

bilateral choanal atresia

Explanation:

Bilateral choanal atresia occurs when the backs of the nasal passages are blocked, preventing a newborn from being able to breathe. This occurs due to a bony or soft tissue abnormality during development in utero. The back of the nasal passages fails to open, resulting in the inability to pass air. Infants are obligatory nasal breathers and immediate airway assistance is usually necessary at birth. This condition can be surgically corrected, but may require additional surgeries to widen the opening as the child matures.

71.

In the 1940s and 1950s, the leading cause of blindness in children in the United States was

amblyopia

myopia

retinopathy of prematurity

Explanation:

Retinopathy of prematurity was a leading cause of blindness in children in the 1940s and 1950s due to high levels of oxygen given to premature infants in incubators. This condition occurs in premature infants, usually those at less than 31 weeks gestation. The eye, optic nerve, and blood vessels begin to develop around the 16th week of pregnancy. The last 12 weeks of pregnancy sees a rapid development in the blood vessels. Children before that gestation time often do not fully develop the blood vessels to the retina, causing retinopathy and possibly blindness.

72.

The nurse is assessing a newborn diagnosed with tracheomalacia. An exam finding that may be seen is

expiratory stridor

a webbed neck

polydactyly

Explanation:

Tracheomalacia is a softening of the cartilage in the trachea. It results in partial or total collapse of the airway during expiration, often resulting in expiratory stridor. Depending upon the severity of the condition, mechanical ventilation, CPAP, or BiPAP therapy may be necessary. In severe cases, surgical correction may be necessary to reinforce the airway so that it can remain open.

73.

A medical emergency that can lead to hypovolemic shock in the newborn is

cephalohematoma

subgaleal hemorrhage

micrognathia

Explanation:

A subgaleal hemorrhage can be massive and may lead to hypovolemic shock. This condition occurs when there is bleeding in the loose connective tissue of the subgaleal space. The subgaleal space is composed of loose connective tissue that allows the scalp to slide easily on the cranium. There is an increased risk of a subgaleal hemorrhage with vacuum and forceps

use during delivery. The trauma to the scalp results in rupture of the blood vessels in this space. This usually develops over several hours to several days with the first clinical sign being an increase in head circumference.

74.

During pregnancy, a suspicious finding on ultrasound that may indicate an esophageal atresia is

a fetus that is large for gestational age.

polyhydramnios.

oligohydramnios.

Explanation:

Polyhydramnios is an abnormal finding on ultrasound that may indicate the presence of an esophageal atresia. During normal development, the esophagus and trachea form side by side. An abnormality in development in utero may result in the esophagus not fully developing all the way to the stomach. This results in a closed-ended esophagus. The fetus drinks amniotic fluid while in the womb, so if they are not able to do this, polyhydramnios, or an increased volume of amniotic fluid, can occur. Occasionally, a fistula may form between the esophagus and the trachea, resulting in any intake of liquids being bypassed directly into the trachea and lungs.

75.

What is the purpose for CCHD screening in newborns?

To identify infants with severe congenital heart disease

To identify infants born with a cleft lip or palate

To identify infants born with fetal alcohol syndrome

Explanation:

The CCHD screening identifies those infants who may have a critical congenital heart defect that requires early surgical intervention. This screening is performed using pulse oximetry in the newborn nursery to measure the oxygen saturation in the blood of infants. This screening decreases the risk of overlooking a critical congenital heart defect that may require early intervention.

76.

When the nurse is teaching tracheostomy care at home, it is important the caregivers understand

cleaning and changing the trach tube must be done under sterile conditions

the trach tube can be reused after it has been cleaned properly

the trach tube can only be changed by a Respiratory Therapist who will come to the home

Explanation:

Tracheostomy care can be taught to caregivers so this can be performed at home without having a Respiratory Therapist come to the home each day. The trach tube can be reused at home once it has been cleaned with soap and water and mucus inside the tube has been cleaned out. In the hospital setting, trach care is done using aseptic technique to prevent contamination, but it is done under "clean" conditions at home.

77.

Parents of a newborn in the NICU are concerned about their baby having an IV placed in their scalp. To reassure them, the nurse explains that

there are no mature nerve endings in the scalp and it is not painful for the infant to have the IV in that location

the peripheral veins are not yet mature enough to handle IV therapy

the IV needs to be in an area with less fat so the vein can be clearly visualized

Explanation:

Though not the first choice for an IV site, the scalp is used once other sites in the hands and feet have already been used. The scalp is a good site because there is very little fat under the skin so the veins are easily visible.

78.

One of the main advantages to using the Teach-Back system for educating patients and their families is

improving education documentation in the patient's medical record

to ensure that information that is taught is fully understood

to limit the number of people involved in the patient's care

Explanation:

The Teach-Back system is a method used to improve patient and family understanding of the plan of care. After teaching a patient and/or family about an illness or treatment, they are then asked to repeat or demonstrate what was reviewed. This ensures that there is full understanding of the treatment plan, which improves patient compliance and decreases potential complications.

79.

What conditions exist in Tetralogy of Fallot?

I. Left ventricular hypertrophy

II. Pulmonary stenosis

III. Atrial septal defect

IV. Overriding aorta

I, III

I, III, IV

II, IV

Explanation:

Tetralogy of Fallot (ToF) is a congenital cardiac defect that occurs in approximately 1:2000 live births. It is characterized by the presence of four structural defects within and surrounding the heart. The four components are right ventricular hypertrophy, pulmonary stenosis, ventricular septal defect, and overriding aorta. ToF is the major cause of the so-called "blue baby syndrome."

80.

When communicating with a non-English speaking patient and her family, it is best to

have another family member interpret if possible

improvise with using pictures and video to teach

arrange to have an interpreter familiar with medical terminology present

Explanation:

Whenever possible, have an interpreter present in these types of situations who has undergone some training in medical terminology. Using a family member is not ensuring that any medical training or terms will be correctly translated. Online software may not be accurate and there is no way to verify that the terms and concepts are being interpreted appropriately.

81.

An example of beneficence in nursing is

helping patients with their ADLs when they are not able to do them on their own

confirming that medical interventions will not harm the patient.

ensuring all patients are treated fairly regardless of their background

Explanation:

Beneficence is acting in a kind and thoughtful way in order to help someone. In nursing, this can be expressed through helping a patient with their ADLs when they are not able to do them on their own. There are many different examples of beneficence played out in nursing from providing pain medications to keep someone comfortable, to performing the nursing duties that aide in helping someone recover from an illness. The ethical principle that addresses treating patients fairly and equally regardless of background is justice. The principle ensuring that no harm is done is referred to as nonmaleficence.

82.

An example of nonmaleficence in nursing is:

letting the CNA help a patient with her ADLs rather than doing it yourself.

waiting until a patient has had pain medication before performing wound care.

being truthful and honest regarding patient condition and care options.

Explanation:

Nonmaleficence is performing actions to reach a beneficial outcome, but doing so in a manner that will cause the least amount of harm possible. For example, a patient will benefit by having wound care performed to help heal, but ensuring they have had pain medication beforehand will make the procedure less uncomfortable for them. This is often confused with beneficence, which is the act of helping someone. Truth and honesty refer to the ethical principle of justice.

83.

The nurse accidentally administers the wrong dosage of medication to an infant in the NICU, resulting in a poor outcome. This is an example of

medical negligence

medical malpractice

slander

Explanation:

Medical negligence is any action that results in a bad outcome for a patient as a result of carelessness or medical error. This is not an intentional act, but occurs as a result of the actions of the healthcare provider. On the other hand, medical malpractice occurs when the standard

norms or accepted standards of practice are not followed, resulting in an injury or bad outcome for the patient.

84.

The purpose of quality improvement is to

improve employee satisfaction

monitor the leadership skills of the administration of a healthcare facility

implement specific changes, which have a measurable improvement for a group of patients

Explanation:

Quality improvement is instrumental in improving the way healthcare services are provided, while continually measuring the effect those changes have on the health status of the patients served. This is often measured through patient satisfaction information.

85.

The nurse receives a phone call from the grandmother of a patient. She has not been able to reach the child's parents because they have been staying at his bedside, but she is asking for a status update about his condition. The best response is to

tell her how he has been doing

explain that, in order to speak with her, she will need to submit a release of information form signed by the parents

tell her you are not able to give her any information, but that you will let the parents know she called and ask them to contact her

Explanation:

HIPAA regulations prohibit the release of any patient information to someone who has not been authorized to receive this information. In this case, the child's parents would need to give written permission indicating the child's grandmother is someone who can receive this information. The best response would be to let the parents know so they can contact their family member.

86.

Being an ethical and responsible nurse requires which of the following?

Keeping knowledge and skills current

Making decisions independently

Subjective charting

Explanation:

In an ever-evolving field such as neonatology, it is vitally important to keep current on one's skills and knowledge base as new technologies and treatment modalities are continually being improved upon. It is also crucial to base charting on objective data that can be measured and quantified. Feelings are an important part of nursing, but they do not belong in the charting. Although it is beneficial that a nurse be able to work independently without requiring constant supervision, a nurse should always consult other colleagues in the decision-making process.

87.

Which of the following could be considered possible signs and symptoms of grief in the parents of an ill neonate?

I. Palpitations, syncope, and vertigo

II. Guilt and shame

III. Nightmares, insomnia, and other sleep disturbances

IV. Withdrawal from interpersonal relationships

V. Hostility and agitation

I, III, IV

I, II, III, IV, V

II, IV, V

Explanation:

Grief can manifest itself in many diverse ways. It is important to understand that grief can be expressed directly, come out "sideways," or be suppressed or turned inwardly. When grief is turned inward, it can have profound psycho-physiological effects that can manifest themselves in cardiac, respiratory, neuromuscular, or other somatic symptoms. When grief is expressed outwardly, significant changes in behavior and personality can be observed. It's important to help parents identify and acknowledge their grief so that they might work through it in more positive ways.

88.

Hyperthermia is defined as a core body temperature above what temperature?

37.5 °C

38 °C

39 °C

Explanation:

Normal body temperature range for a neonate is 36.5-37.5 °C (97.7-99.5 °F). According to the World Health Organization, hyperthermia is stated as being a core body temperature greater than 37.5°C. The other answers do indicate a hyperthermic state, but they are not the reference point for determining hyperthermia.

89.

A baby was born at 30 weeks' gestation. She is going home on room air. She does well with bottle feedings and has successfully nursed twice in the NICU. The mother wants to continue breastfeeding at home. Which of the following topics would be important to include in the discharge planning/teaching at this time?

Lactation consult

Physical therapy

Special equipment needs

Explanation:

When discharging any infant whose mother plans on breastfeeding at home, it is always good practice to coordinate a lactation consult. This will ensure the best chance for successful home breastfeeding by providing a professional/competent source of evaluation, encouragement, training, and troubleshooting. Since this child is not going home with any special equipment, and is not exhibiting any physical problems that require therapy, it is not necessary to plan for physical/occupational therapy or additional durable medical equipment at this time. It is, however, important to teach the parents/caregivers about the potential developmental challenges associated with prematurity. Encourage the parents to call their health-care provider if they develop any questions or concerns.

90.

Which of the following statements regarding anticipatory grieving is FALSE?

It is common for parents to have feelings of guilt, shame, and remorse toward their malformed infant.

It is normal for parents to display emotional withdrawal from a critically ill infant.

It is normal for parents to exhibit persistent emotional detachment from their infant far beyond the time that the infant is showing signs of improvement or survival.

Explanation:

After delivery of a critically ill or malformed infant, parents often exhibit emotional withdrawal or detachment from the infant. This is a normal coping mechanism in which the parents are attempting (subconsciously) to shield themselves from feelings of sadness, guilt, disappointment, or shame. This behavior becomes pathologic and dysfunctional when it persists despite improvement in the infant's condition and subsequent imminent survival of the infant.

91.

Which of the following does NOT usually present a barrier to parent/infant interaction?

Adolescent parents

Involved, large extended family

Well-educated parents

Explanation:

Being well educated does not seem to negatively affect the parent/child interaction. In fact, it is the opposite that is the case. In parents who are of low-education levels (especially if the parents are also of a low intelligence level), a general lack of knowledge or decreased capacity for learning can cause significant problems with healthy parent/child interaction. The same holds true for young parents or parents with very large, overly involved families. The intentions of these families may be good, but often times can hinder appropriate parent/child interactions.

92.

Which of the following genetic diseases is the common name for trisomy 18?

Down syndrome

Edwards syndrome

Patau syndrome

Explanation:

Edwards syndrome is a fairly common genetic condition that occurs in about 1:5000 live births. It is not an inherited disease. The chance of having a child with Edwards syndrome increases as the mother's age increases. Most children with Edwards syndrome are female (at a ratio of about 3:1). Trisomy 18 is a devastating condition in which about 50% of all infants die in utero. Of those who survive, 95% die within the first year. It causes significant and devastating malformations and failures in multiple organ systems.

93.

What is the leading cause of hearing loss in infants?

Congenital cytomegalovirus infection

Intraventricular hemorrhage

Side effect from maternal medication ingestion

Explanation:

Congenital cytomegalovirus (CMV) occurs when an infected mother transmits the disease to her fetus. It is estimated that the transmission rate from primarily infected mothers to their fetus is between 30-50%. Of those infants born with congenital CMV, the vast majority will be asymptomatic and will not suffer any problems related to CMV later in their life. However, 10-15% of infants will exhibit symptoms that may include seizures, hepatosplenomegaly, hearing loss, and microcephaly.

94.

A boy was born at 35 weeks' gestation an hour ago. His mother was in labor for 26 hours and was running a fever of 38.5 °C during labor. During labor the mother had an intrauterine fetal monitoring device in place. The baby now has respiratory distress, cyanosis, a core body temperature of 36 °C, and is very lethargic. Which of the following is the most likely cause of his condition?

Candidiasis

Group B streptococcus

MRSA (methicillin-resistant *Staphylococcus aureus*)

Explanation:

Many factors put an infant at risk for developing group B Strep infections including a maternal fever greater than 38 °C, prolonged labor lasting over 18 hours, use of internal fetal monitoring devices, prematurity, and a mother who is positive for group B Strep. Mothers are now routinely screened for group B Strep between 37+0 to 37+6 weeks gestation. Treatment for group B Strep includes antibiotics, respiratory/ventilatory support, IV fluids, and oxygen therapy.

95.

Which of the following statements is usually associated with neonatal abstinence syndrome (NAS)?

NAS can be caused by iatrogenic exposure of opiates to the neonate for the purpose of sedation and/or analgesia.

Lethargy, hypotonia, and decreased reflexes are hallmark signs of NAS.

Symptoms of withdrawal always appear immediately after birth and last 1-3 days.

Explanation:

There are two causes of NAS: passive exposure to opioids and non-opioids in utero from a "using" mother through the placenta and iatrogenic exposure by the direct administration of opiates to the neonate. When the umbilical cord is cut, passive exposure immediately ends. Withdrawal symptoms can occur within hours after birth to up to 2 weeks of age. The majority of symptoms occur within 72 hours. NAS causes a host of symptoms including CNS hyperirritability, GI dysfunction, respiratory distress, increased and exaggerated reflexes, marked sleep disturbance, tremors, and restlessness.

96.

Physiologic signs of pain in the neonate

I. include increased heart rate.

II. include increased oxygenation.

III. include changes in muscle tone.

IV. are different from those of adults.

V. include feeding difficulties.

I, II, IV

I, II, III

I, III, V

Explanation:

Physiologic signs of pain in the neonate are the same as they are in adults. Pain causes an increase in many metabolic processes including heart rate, blood pressure, ICP, and respiratory rate. It causes a decrease in oxygenation. It can manifest as hyper- or hypotonicity and can cause disturbances in sleeping and feeding patterns.

97.

What nonpharmacologic methods can be effective in reducing pain in the neonate?

I. Swaddling

II. Placing neonate in tucked, flexed, side lying position for procedures

III. Subdued lighting

IV. Music

V. Use of white noise

I, III

I, II, V

I, II, III, IV, V

Explanation:

There are many nonpharmacologic interventions that can lessen the severity of pain in the neonate. Comfort measures play an important role in pain management and may prevent the intensification of pain in the neonate. Comfort measures are effective in the alleviation of mild

pain but, alone, they may be inadequate in cases of moderate to severe pain. Controlling the neonate's environment to decrease sensory stimulation is a major component in providing effective comfort measures.

98.

What is the proper placement position of the neonate in kangaroo care?

Swaddled tightly, cradled on caregiver's chest

Unclothed (diaper is acceptable), placed vertically on caregiver's bare chest

Unclothed, cradled on caregiver's lap

Explanation:

Kangaroo care is a method of providing noninvasive, non-painful touch that is not associated with caregiving activities. Its purpose is to promote social contact between caregiver and neonate by providing a positive touch experience. This can help prevent the neonate from developing touch aversion. In kangaroo care, the infant is naked (with or without diaper) and is placed vertically on the bare chest of the caregiver between his/her breasts. This provides skin-to-skin full body contact which can have marked calming effects of the neonate. It may also promote parent/child bonding.

99.

A 29-week neonate presents with the following arterial blood gas values:

- pH – 7.36
- pCO₂ – 52
- HCO₃ – 30

These values would indicate which of the following?

Compensated metabolic acidosis

Compensated respiratory acidosis

Uncompensated respiratory acidosis

Explanation:

In this scenario, although the pH is WNL (within normal limits), this does not mean this is a normal blood gas. All measurements must be taken into consideration for proper interpretation. Acidosis or alkalosis has one of three causes: respiratory, metabolic, or mixed. Usually, in an otherwise healthy premature neonate, the cause of an abnormal blood gas due to underdeveloped lungs which leads to a buildup of CO₂ in the bloodstream. The indicator for a respiratory imbalance is pCO₂. High pCO₂ usually indicates a case of respiratory acidosis. When coupled with a high level of HCO₃ (bicarbonate—which is base), it is an indication of the body trying to compensate for the high CO₂ in the bloodstream. Whether an imbalance is compensated or uncompensated is determined solely by the pH. If the pH is within normal range, the state is compensated.

100.

A 6-day-old boy was born at 36 weeks' gestation. He weighs 6 lbs. He just underwent circumcision. What is the most appropriate dose of acetaminophen for pain control?

1 cc pediatric acetaminophen liquid, orally every 6 hours

½ of a 120 mg acetaminophen suppository, per rectum every 8 hours

0.3 cc concentrated infant acetaminophen drops, orally every 6 hours

Explanation:

FDA guidelines recommend a dose of 10-15mg/kg of acetaminophen every 6 hours for neonates. For the infant in the given scenario, the dose range would be 27-41 mg. Using partial suppositories is not recommended because the exact dosing cannot be accurately determined. Though answer C is also correct, the FDA has pulled the concentrated infant drops (80 mg/0.8 cc) off the market as of 2011. It is no longer available and has been replaced by pediatric-strength (160 mg/5 cc) liquid.

101.

Which of the following characteristics are most common in the average infant abductor?

- I. Female
- II. Criminal record
- III. Visits the nursery prior to the abduction
- IV. Appears suspicious and paranoid
- V. Desires to replace a lost infant or is unable to conceive

I, II, V

I, III, IV

I, III, V

Explanation:

Infant abductors are usually women around 30 years of age. They are often overweight with low self-esteem. Most have no prior criminal records. The majority of them exhibit normal behavior and will often visit the nursery prior to the abduction in order to learn about the security measures that are in place and to choose their target/targets. The motive for many of these abductors stems from wanting to either replace a child they've lost or because they are not able to conceive.

102.

What is one of the purposes of HIPAA regulations?

Ensure patient confidentiality

Provide a safe working environment for hospital employees

Regulate hospital policies and procedures

Explanation:

HIPAA is an acronym that stands for Health Insurance Portability and Accountability Act. It was established in 1996. Part 1 of the act protects the health care insurance coverage of workers and their families when they change job statuses. Part 2 of the act addresses many areas regarding the security and privacy of health information and data.

103.

Which of the following factors have been linked to SIDS?

I. Prematurity

II. Sleeping in prone position

III. Being born to an older (over 35 years) mother

IV. Exposure to cigarette smoke while in the womb and after birth

V. Hard mattresses

I, II, IV

I, II, III, V

II, III, V

Explanation:

According to the American Academy of Pediatrics, there are several known precipitating or contributing factors which have been linked with sudden infant death syndrome (SIDS). In addition to the factors listed, others include being born to a teenage mother, living in poverty conditions, soft bedding/mattresses, multiple birth babies (twins, triplets, etc.), the absence of prenatal care, and sleeping in the same bed as parents. It is important for the neonatal nurse to not only know these factors, but also for nurses to teach these to new parents.

104.

A couple expecting their first child seeks genetic counseling for a maternal family history of cystic fibrosis. The woman is a carrier of the cystic fibrosis gene but the man is not. What are the chances that their child will have cystic fibrosis disease?

1:2

25%

0%

Explanation:

Cystic fibrosis (CF) is an autosomal recessive disease. This means that both parents must have the CF gene in order to possibly pass it on to their children. If only one parent possesses the CF gene, the chance that their child will have the disease is 0. The chance that their child will be a carrier of the CF gene is 1:2. The chance that their child will be completely normal is also 1:2.

105.

Which of the following symptoms are associated with an infant of a diabetic mother (IDM)?

I. LGA

II. Hyperglycemia

III. Hypoglycemia

IV. SGA

V. Jaundice

I, II, III

I, III, V

I, IV, V

Explanation:

The hallmark sign of an infant of a diabetic mother is that they are usually large for gestational age (LGA). They are also at great risk for developing hypoglycemia so it is important to monitor all IDM for hypoglycemia regardless of whether they are exhibiting symptoms or not. Newborn jaundice is also a common complication of IDM.

106.

An infant girl was born at 38 weeks by NSVD. Shortly after birth she presents with retractions and cyanosis at rest, but these symptoms resolve when she cries vigorously. She is also unable to nurse. What is a likely cause of this?

Aspiration pneumonia

Choanal atresia

Respiratory distress syndrome

Explanation:

Choanal atresia is a congenital condition in which the nasal passages are extremely narrowed or completely blocked by tissue. Since babies are obligate nose-breathers, they will attempt breathing through their nose. When this is not possible, retractions and cyanosis will ensue as

the baby attempts nose-breathing. Because of the size/configuration of the infant tongue and soft palate, the oral airway is easily obstructed when the infant is at rest. When the infant cries, the palate raises and the tongue moves enough to temporarily open the airway. Bilateral choanal atresia can be life-threatening. It can be corrected surgically through the insertion of nasal stints.

107.

What are common risks associated with post-term infants?

I. Meconium aspiration

II. Cord compression

III. Shoulder dystocia

IV. Transient hypoglycemia

V. Seizures

I, III, IV

I, II

I, II, III, IV, V

Explanation:

Post-term infants (born at greater than 41 weeks' gestation) are at risk for developing a host of problems. First and foremost, they are at risk for meconium aspiration since a large number of post-term infants pass meconium in utero. Umbilical cord compression is a potentially serious problem as a result of oligohydramnios, which can occur post-term. Since most post-term babies are large, there is the possibility for macrosomia-related problems and subsequent birth injuries. Other potential problems include hypoglycemia, seizures, and respiratory insufficiency.

108.

What is the recommended dose of naloxone in neonates who are exhibiting moderate respiratory depression?

0.01 mg/kg

0.1mg/kg

1 mg/kg

Explanation:

The usual dose of naloxone in an infant who is showing moderate respiratory depression from exposure to narcotic analgesics is 0.01mg/kg given IM, IV, or SC. If the infant is in severe respiratory distress and requires mechanical ventilation from a narcotic overdose, a high dose of naloxone (0.1 mg/kg) is indicated.

109.

With regard to resuscitation, chest compressions (cardiac massage) should be initiated in a neonate when heart rate dips below what value (assuming adequate and effective ventilation is in place)?

60 bpm

90 bpm

120 bpm

Explanation:

Per the American Heart Association, the current recommendation is that external chest compressions be given if the heart rate is sustained below 60 bpm if adequate assisted

ventilation with oxygen is in place. The rate of compressions should be about 90/min with 30 coordinated breaths per minute.

110.

What is the most common complication of ECMO (extra corporeal membrane oxygenation)?

Bleeding

Infection

Thrombosis

Explanation:

Bleeding is the most common complication of ECMO, probably due to the large amounts of heparin that are used to prevent the blood from clotting in the mechanical process. Bleeding can be seen in any internal organ, but is most concerning when it occurs in the brain. For this reason, infants on ECMO are frequently and regularly evaluated for intracranial hemorrhages.

111.

What is the Kleihauer-Betke test used to determine?

Apnea of prematurity

Fetal blood loss

Respiratory insufficiency

Explanation:

The Kleihauer-Betke test is a blood test that determines the presence and quantity of fetal hemoglobin in the mother's bloodstream. Fetal hemoglobin retains its red staining while adult hemoglobin becomes very pale after fixing. The presence of 10 fetal hemoglobin cells per microscope field is equivalent to approximately 1 cc of fetal blood. This is an effective method in determining the extent of fetal blood loss.

112.

Which pathogen is responsible for most nosocomial infections in the NICU?

Group B *Streptococci*

Rotavirus

Staphylococcus aureus

Explanation:

Methicillin-resistant Staphylococcus aureus (MRSA) is the primary strain of bacteria that is responsible for most cases of hospital-acquired infection/illness. MRSA has become the most prevalent and potentially dangerous pathogen found in hospitals today. It has evolved to the point where it has become resistant to many, if not most, antibiotics.

113.

Which of the following is NOT an effective method in preventing nosocomial infections in the NICU?

Frequent handwashing

Keeping infants on ventilators as long as possible to maintain a closed sterile system of

ventilation

Starting enteral feedings as soon as possible

Explanation:

Hospital-acquired pneumonia is a common nosocomial infection in the NICU. By rapidly weaning infants off mechanical ventilators as quickly as is medically safe, the risk for developing nosocomial pneumonia is greatly reduced because the pathogen's method of entry into the host is eliminated at the time of extubation.

114.

Which of the following factors would interfere with the measurement of oxygen saturation (SpO₂)?

I. Bright ambient lights

II. Shivering

III. Cold extremities

IV. Vasodilation

V. Placing probe on lower extremities

I, II, III

I, II, IV

I, II, V

Explanation:

SpO₂ is the percent of hemoglobin that is saturated with oxygen. The pulse oximeter is a device used to measure SpO₂. The pulse oximeter uses a noninvasive probe that is attached to a finger or toe. It works by emitting light and calculating the absorption of specific wavelengths of light to determine how much of the hemoglobin is saturated. Because the machine utilizes a light

source, any bright external light could potentially interfere with its functioning. Factors like vasoconstriction or shivering can interfere with the probe's ability to accurately measure the hemoglobin. This is why it's important to make certain the patient's peripheral perfusion is adequate and that the patient is kept calm and still if possible.

115.

Which of the following initial stabilization measures should be instituted during the delivery of an infant with a known omphalocele in the NICU?

- I. Place infant in supine position.
- II. Cover exposed organs with saline-soaked gauze.
- III. Insert orogastric tube.
- IV. Insert UAC/UVC lines.
- V. Closely monitor temperature and urine output.

I, II, III, V

II, III, V

II, IV, V

Explanation:

Initial stabilization practices for the infant with an abdominal wall defect (either gastroschisis, or omphalocele) involve measures aimed at protecting the exposed organs and minimizing their trauma. This can be obtained by covering the exposed organs with warm saline-soaked gauze with some form of evaporative barrier (even plastic wrap would work) to keep them from drying out. It is recommended to place the infant in a side-lying position with support of the exposed organs. Although IV access should immediately be established, UAC/UVC lines are absolutely contraindicated with abdominal wall defects. An orogastric tube should be inserted and placed on low-intermittent suction to aid in decompression of the stomach. Extreme vigilance should be given to monitoring the infant's temperature and urine output since the infant is at great risk for temperature instability and possible damage to the internal urinary system.

116.

What is the normal rate of urinary output for a neonate?

0.25-0.75 cc/kg/hr

1-3 cc/kg/hr

3-6 cc/kg/hr

Explanation:

Expected urinary output rate for a neonate less than 2 days old is 1-3 cc/kg/hr. It takes a day or so for newborn kidneys to reach their optimal functioning level, so a slightly lower rate of 1 cc/kg/hr is acceptable (albeit on the low side). After the infant is about 48 hours old, kidney function should increase to about 2-4 cc/kg/hr. Any deviation from this range should be investigated to determine the underlying cause.

117.

What is the L:S ratio test used to determine?

Cardiac function

Estimated gestational age

Fetal lung maturity

Explanation:

The L:S ratio test (lecithin-sphingomyelin ratio) is a marker of fetal lung maturity. Lecithin and sphingomyelin are excreted in equal proportions until about 32 weeks' gestation, at which time lecithin concentration increases dramatically while sphingomyelin levels remain the same. The

L:S ratio is measured in the amniotic fluid. Lecithin and sphingomyelin are both surfactants, but lecithin is the substance responsible for making them work more effectively thus preventing collapse of the neonate lung. A ratio of 2:1 indicates that the fetal lungs are mature, thereby decreasing the chance of the infant developing respiratory distress syndrome.

118.

Which of the following symptoms can be associated with amniotic band syndrome?

- I. Limb deformity
- II. Cleft deformity of face
- III. Chest deformity
- IV. Congenital limb amputation

I, II, III

I, III, IV

I, II, III, IV

Explanation:

Amniotic band syndrome (also known as ADAM complex, pseudoainhum, Streeter's dysplasia, amniotic band sequence) is a rare condition in which the amnion (inner layer of placenta) has been damaged and fiber-like bands of the amnion have broken off (been torn away) and become entangled and/or wrapped around the developing fetus. The bands usually get tangled around the limbs of the fetus. This reduces blood supply to the entrapped areas and cause them to develop abnormally or (in extreme cases) amputate the limb altogether. Amniotic bands can also entrap the face or chest. When this occurs, clefts of the affected area can develop.

119.

Transient tachypnea of the newborn (TTN) is more likely to occur in babies born under which of the following circumstances?

Babies born before 33 weeks' gestation

Babies delivered by C-section

SGA babies

Explanation:

TTN is a respiratory disorder that occurs shortly after delivery. It is seen in babies who are born at or near full term. In TTN, the respiratory rate is greater than 60 breaths/minute, which usually lasts less than 24 hours. Babies born by C-section are at risk due to retention of amniotic fluid in the lungs which can temporarily interfere with respiration. In a NSVD, the lungs are better drained of the amniotic fluid via the squeezing of the chest wall during vaginal delivery. The amniotic fluid is eventually reabsorbed and the condition resolves.

120.

Which of the following is an appropriate intervention for an infant with GE reflux?

Elevating head of bed

Larger, less frequent feedings

Placing infant in prone position after feeding

Explanation:

GE reflux is common in healthy infants. It is estimated that over half of all newborns exhibit signs of GE reflux within the first 3 months of life. Most cases of GE reflux resolve within the first 12 months. Since it is such a common finding in neonates, it is important to institute

measures that help reduce the risk/frequency of reflux episodes. These interventions include small, frequent feedings with frequent burping, elevating the head of the bed, placing infant in supine position, thickening feedings, and keeping the infant upright for 30 minutes after feeding.

121.

With regard to oxygen delivery, which of the following scenarios would be an appropriate indication for using a nasal cannula in an infant?

A 32-week-old, gavage-fed infant who requires 2 lpm O₂ to maintain a SpO₂ greater than 90%

A 33-week-old infant who requires FiO₂ of 0.5 (50%) to maintain SpO₂ greater than 90%

A 34-week-old infant who is bottle-feeding and requires 0.5 lpm O₂ to maintain a SpO₂ greater than 90%

Explanation:

Nasal cannulas are appropriate for infants that require less than 1 lpm (liter per minute) O₂. Cannulas will also allow for uninterrupted bottle feeding. Infant nasal cannulas will only provide an O₂ flow of less than 1 lpm. Infants that require higher flow rates or concentrations of FiO₂ greater than 0.4 (40%) will require alternate delivery methods.

122.

Which of the following statements is FALSE regarding neonatal hyperbilirubinemia?

It can be associated with breastfeeding

It is usually a benign finding

It is a serious condition that often leads to kernicterus

Explanation:

Neonatal hyperbilirubinemia (aka newborn jaundice or physiological jaundice) is a common condition in a newborn. It is usually a benign finding that is self-limiting. It can be associated with breastfeeding for one of three reasons: (a) decreased oral intake due to mother's decreased milk production, (b) infants who do not breastfeed well, or (c) due to substances in the human milk that affect bilirubin breakdown in the infant. It usually resolves on its own within the first 2-3 weeks of life. Occasionally hyperbilirubinemia requires phototherapy treatment to aid in the breakdown of bilirubin in the skin. In extremely rare cases, hyperbilirubinemia can lead to kernicterus, but this is usually associated with hyperbilirubinemia that has some other underlying cause.

123.

A pregnant mother that is 30 weeks pregnant presents with right upper quadrant pain, nausea, vomiting and hypertension. She is most likely suffering from

cholestasis

HELLP syndrome

influenza

Explanation:

HELLP syndrome is a serious liver disorder that can occur in the last trimester in pregnancy. It is characterized by hemolysis, elevated liver enzymes, and low platelets. Most women who develop HELLP syndrome also have preeclampsia, which is the greatest risk factor for developing this condition. The mother will have very high blood pressure, nausea, abdominal pain, and swelling. Treatment begins with delivery of the baby, even if it is premature. Symptomatic treatment with IV fluids, anti-hypertensives, and vasodilators are given to the mother. It can be fatal if it is not treated.

124.

A woman who is known to have hepatitis B, is delivering her first baby. Treatment of the infant should include

waiting until the infant is at least 5 years of age to administer hepatitis B immunoglobulin

hepatitis B vaccine given within the first year of life

hepatitis B vaccine and hepatitis B immunoglobulin given within 12 hours of birth

Explanation:

Hepatitis B is transmitted from the mother to the fetus during pregnancy. Approximately 40% of infants of hepatitis B positive women will develop the disease, and up to 25% of those will die from chronic liver disease. It is imperative to administer the hepatitis B vaccine and hepatitis B immunoglobulin to these infants within 12 hours of birth. Routine vaccination of all infants is usually given within 24 hours of birth.

125.

The nurse is talking to new parents whose child was born with a cleft lip and palate due to Amniotic Band Syndrome. They are concerned that this may happen to any more children they have in the future. The best response to this is that

there is no known genetic cause of Amniotic Band Syndrome and it is very rare this will happen again in future pregnancies

this is an autosomal dominant genetic trait and there is a 50% chance this could happen in future pregnancies

once one child is born with this condition, all future children will also inherit it

Explanation:

There is no known genetic risk for developing Amniotic Band Syndrome. There are also no known behaviors during pregnancy that increase the risk for this condition. It occurs when thick, fibrous bands within the amniotic fluid wrap around the limb or face of the fetus in utero. It can cut off the blood supply to the affected area and result in amputation or deformity of the affected limb. If the bands wrap around the face, it can result in cleft lip and palate. There is a greater than 30% chance that Amniotic Band Syndrome will cause a club foot deformity.

126.

What is a major risk factor for chorioamnionitis?

Premature rupture of the membranes

Maternal tobacco use during pregnancy

There are no known risk factors for chorioamnionitis

Explanation:

Chorioamnionitis is an acute infection and inflammation of the membranes and is commonly caused by a premature rupture of the membranes. This eliminates the protective barrier surrounding the fetus and increases the risk for pathogens to ascend into the uterus. Less commonly, chorioamnionitis can occur in the absence of membrane rupture. Long-term effects of this condition to the neonate include stillbirth, premature birth, sepsis, chronic lung disease, and brain injury or cerebral palsy. The mother can develop postpartum infections and sepsis.

127.

What is measured with the quad screen test?

Amniotic fluid levels, maternal fasting blood sugar, inhibin-A, and maternal HIV status

Fetal DNA testing, fetal glucose level, estriol, and alpha-fetoprotein levels

Alpha-fetoprotein, human chorionic gonadotropin, estriol, and inhibin-A

Explanation:

The quad screen is performed at 15-20 weeks of pregnancy via a blood test. It measures alpha-fetoprotein, human chorionic gonadotropin, estriol, and inhibin-A. Alpha-fetoprotein is made in the liver of the fetus and elevated levels may indicate a neural tube defect such as spina bifida. Human chorionic gonadotropin is made by the placenta and levels vary during pregnancy. Estriol is a form of estrogen made by the placenta and levels increase during pregnancy. Inhibin-A is a hormone produced by the fetus and the placenta and abnormal levels may indicate the presence of Down syndrome.

128.

When monitoring the fetal heart rate during labor, which of the following is most likely to be most dangerous to the fetus?

Early decelerations during the late stages of labor

Late decelerations without accelerations

Occasional, brief variable decelerations followed by accelerations

Explanation:

Late decelerations present as smooth decreases in the heart rate that begin at the peak of a contraction. When late decelerations occur along with tachycardia and without an acceleration, or return to normal heart rate range, it can be a sign that the fetus is not getting enough oxygen. Early decelerations begin before the contraction peaks and usually occur as the fetus passes through the birth canal and the skull is compressed. They are generally not harmful. Variable decelerations occur when the umbilical cord is temporarily compressed and are very common during labor. They are usually not harmful when they occur later in labor and are followed by an

acceleration. When variable decelerations occur early in labor, and if they are severe, emergent delivery of the baby may be necessary.

129.

Which of the following medications may be given to slow down preterm labor contractions that initiated at 30 weeks gestation?

Cytotec

Terbutaline

Pitocin

Explanation:

Tocolytics are drugs that are given to slow down or stop preterm labor. They are generally not used before 23-24 weeks of pregnancy and may be used as late as 36 weeks of pregnancy.

Terbutaline is in a class of drugs called beta-mimetics. It is used to decrease uterine contractions by relaxing the uterine musculature. It can cause nervousness, tremors, headache, and tachycardia. Cytotec is given as a pill or vaginal suppository to help soften the cervix to induce labor. Pitocin is used to increase uterine contractions and cervical dilation to induce labor.

130.

Which breech presentation at birth presents with the buttocks only passing through the birth canal first?

Frank breech

Footling breech

Complete breech

Explanation:

A complete breech presentation is one in which the legs of the fetus are extended upward so that the feet are near the head. This results in the buttocks passing through the birth canal first. A frank breech occurs when the knees of the fetus are bent so that the feet are near the buttocks. A footling breech occurs when the fetus is foot down and one or both feet present first through the birth canal.

131.

In which of the below conditions does the placenta detach from the wall of the uterus prematurely, depriving the fetus of oxygen and nutrients?

Abruptio placentae

Cord prolapse

Placenta previa

Explanation:

Abruptio placentae results in early detachment of the placenta from the wall of the uterus. The most common cause of this condition is hypertension in the mother, but trauma can also be a cause. The effects on the fetus can be critical because the oxygen and nutrient supply being disrupted. A cord prolapse occurs when the umbilical passes through the birth canal before the fetus. Placenta previa occurs when the uterus attaches to the lower portion of the uterus and covers the cervix.

132.

Maternal HELLP syndrome is characterized by which set of symptoms?

Hemolysis, elevated liver enzymes, low platelet count

Hemorrhage, episodic liver lesions, pulmonary insufficiency

Hypertension, electrolyte loss, low protein

Explanation:

HELLP syndrome is a triad of specific maternal hematologic findings, characterized by hemolysis, elevated liver enzymes, and low platelet count. It is believed that HELLP syndrome occurs in about 1:1500 normal pregnancies and is seen in as much as 20% of women who are exhibiting preeclampsia or eclampsia. The cause is unknown, and it is often misdiagnosed as other illnesses and/or conditions. The only effective treatment of HELLP syndrome is delivery of the baby; therefore, the chance for premature delivery of the infant is high.

133.

Which of the following potential side effects can occur as a result of forceps being used during delivery?

Sudden infant death

Facial palsy

Cerebral palsy

Explanation:

Forceps may be used during delivery to assist the neonate's passage through the birth canal, especially if the mother or infant is in distress. There is a risk of facial palsy (usually temporary)

and minor facial or external eye injury. Rarely, a skull fracture or bleeding within the brain can occur.

134.

Small for gestational age is defined as an infant

that was born after 37 weeks gestation and weighs 2500 grams or less

that was born before 37 weeks gestation and weighs 2500 grams or less

that was born after 37 weeks gestation and weighs less than 2000 grams

Explanation:

An infant born at 37 weeks or later who weighs 2500 grams or less is considered small for gestational age. This differs from the premature infant who is born earlier than 37 weeks gestation, though they often have a weight less than 2500 grams, also.

135.

A new mother is visiting her infant in the NICU. She expresses concern over the tiny white bumps on her child's nose and chin. The nurse explains to her that

the bumps can usually be removed by applying some pressure and pinching the bumps

a referral to dermatologist can be ordered for further evaluation of this

this is due to plugged pores in the skin and it will go away on its own

Explanation:

Milia are very common and occur when flakes of skin become trapped within pores. It is most common in newborns and occurs most often on the nose and chin. It is important to not pick or pinch these lesions because this could damage the tissue or lead to a skin infection. The lesions usually resolve on their own within a few weeks.

136.

While assessing a newborn in the NICU, the nurse notices that he has pitting edema on the right side of his scalp. The next step should be to

immediately contact the neonatologist on call and let him know of your findings

continue to monitor for any change in the symptoms

stop all IV fluids and monitor closely to see if the swelling decreases

Explanation:

Pitting edema in the soft tissues of the scalp is not uncommon after birth, due to trauma on the baby's scalp while moving through the birth canal. This condition is called caput succedaneum and is most evident immediately after birth. It usually resolves rather quickly over the first 24-48 hours following birth and just needs to be monitored for any changes.

137.

The parents of a newborn ask the nurse about the white bumps they have noticed along their baby's upper gum line. The best response is that

he is starting to develop teeth at a very young age

these are small cysts that will go away on their own within 1-2 weeks

these are skin lesions on his gums that need to be evaluated as soon as possible by a dentist

Explanation:

Whitish bumps, or cysts, along the gum or roof of the mouth are called Epstein's pearls. They are very common and occur in about 80% of newborns. These will resolve on their own within the first couple of weeks of life and do not require any treatment.

138.

The four heart defects seen with Tetralogy of Fallot are

a large ventricular septal defect, pulmonary stenosis, right ventricular hypertrophy, and an overriding aorta

a patent ductus arteriosus, pulmonary hypertension, cor pulmonale, and aortic stenosis

a thoracic aortic aneurysm, aortic stenosis, pulmonary stenosis, and a ventricular septal defect

Explanation:

Tetralogy of Fallot is a very serious congenital heart defect that includes a large ventricular septal defect, pulmonary stenosis, right ventricular hypertrophy, and an overriding aorta. Though this is a serious condition, it is treated surgically during infancy and most children with this condition will go on to live into adulthood.

139.

When the nurse is assessing a newborn's respiratory status, which would indicate the newborn is developing respiratory distress?

Nasal flaring

Pink skin color

Respiratory rate of 40 breaths per minute

Explanation:

Nasal flaring is seen in newborns as an attempt to widen the nares and take in more oxygen. Other signs of respiratory distress include retractions, tachypnea, grunting, and abnormal breath sounds. Pink skin color and a respiratory rate of 40 breaths per minute are expected findings in the neonate.

140.

The nurse is caring for a child with end stage renal disease. A sign that he may be in fluid overload is

a decrease in blood pressure

an increase in blood pressure

a red, burning rash on the legs

Explanation:

Some of the signs of fluid overload include increased blood pressure, swelling in the extremities and face, abdominal bloating, shortness of breath, and tachycardia. The nurse will monitor the patient regularly for any of these symptoms. If the patient will be discharged home, the parents and/or caregivers will also need to be educated on these symptoms.

141.

A contraindication to performing daily chlorhexidine baths on infants in the NICU is

the common infant allergy to chlorhexidine

poor skin integrity in premature infants

increased risk of respiratory compromise from noxious fumes from the chlorhexidine

Explanation:

Daily chlorhexidine baths performed on infants in the NICU have been proven to reduce the incidence of many nosocomial infections. The primary concern with some infants is that the skin does not fully mature until the last quarter of gestation, so skin integrity may be a concern. The U.S. Food and Drug Administration has not approved the use of chlorhexidine in infants less than 2 months of age, but it is still used in most hospital settings as off-label usage.

142.

When the nurse is assessing a newborn, the reflex that results in abduction and extension of the infant's arms as the hands open is the

grasp reflex

Moro reflex

asymmetrical tonic reflex

Explanation:

The Moro reflex is checked by quickly lowering the infant's head relative to the trunk and when present, results in the abduction and extension of the infant's arms as the hands open. This

reflex is present as early as 32 weeks gestation. It is no longer present by the time the infant is 6-months-old. The grasp reflex is the reflexive action of bending the fingers around an object placed in the palm. The asymmetrical tonic reflex is also called the "fencing" reflex. When the infant's head is turned to one side, the arm and leg of the side at which the face is turned extend and the arm and leg on the opposite side flex.

143.

What diseases comprise TORCH syndrome?

Toxoplasmosis, Ollier disease, rheumatic fever, chlamydia, hepatitis

Toxoplasmosis, other diseases, rubella, cytomegalovirus, herpes simplex

Toxoplasmosis, ochronosis, Rh disease, cholera, histoplasmosis

Explanation:

TORCH syndrome includes toxoplasmosis, other diseases, rubella, cytomegalovirus, and herpes simplex. The "other" category of diseases in TORCH syndrome includes syphilis, coxsackievirus, varicella-zoster, parvovirus, and HIV. TORCH syndrome can cause multiple, devastating effects on the fetus/neonate including jaundice, microcephaly, intellectual disability, deafness, eye problems, autism, and death. Prognosis varies depending of type of infection and the stage of pregnancy when contracted. If the cause is bacterial and the mother is treated early with antibiotics, the prognosis for the infant is good. However, no effective treatment is available if the cause is viral. In the case of viral TORCH syndrome, prevention by way of maternal vaccination is key.

144.

According to the American Heart Association, when should chest compressions be started in the pediatric patient?

If there is no detectable pulse

If the pulse is less than 60 beats per minute or there are signs of poor perfusion

If there is a normal pulse but signs of respiratory distress

Explanation:

According to the American Heart Association, chest compressions should be started on the pediatric patient if the pulse is less than 60 beats per minute or if there are signs of poor perfusion. If one person is performing CPR, the rate is 30 compressions followed by 2 breaths. If 2-person CPR is being performed, the cycle should be 15 compressions followed by 2 breaths.

145.

A 4-week-old infant in the NICU is taking formula orally. The baby is crying very often and acts hungry, however, she projectile vomits after she eats even a small amount of formula. The nurse notices a small lump in the infant's upper abdomen. Another symptom that would most likely be present is

a hard, rigid abdomen

waves from peristalsis across the baby's abdomen

a high fever, usually >102 degrees

Explanation:

Pyloric stenosis is a condition in which the muscle tissue in the lower stomach, at the pylorus, becomes thickened and prevents food from passing into the small intestine. This is usually evident around 3-5 weeks of age and will cause an olive-shaped mass in the upper abdomen, peristaltic waves across the abdomen, projectile vomiting, and persistent crying because the infant is hungry. It is repairable with surgery, though the infant's fluid and electrolyte balance needs to be corrected.

146.

A premature infant is in distress and has not responded to resuscitative measures. A volume expander is indicated at this time. What is the risk of giving this type of medication too quickly?

Hypercoagulability resulting in pulmonary emboli

Supraventricular tachycardia

Intraventricular hemorrhage

Explanation:

Acute volume expansion in the neonate can be accomplished with an isotonic crystalloid solution, such as lactated Ringer's solution. This increases the pressure in the intravascular space, which causes water to move from the interstitial to intravascular spaces, increasing the circulating blood volume. Crystalloids have a half-life between 30 and 60 minutes and must be given in amounts three times the volume lost. If too much is given too quickly, however, fluid overload with intraventricular hemorrhage and pulmonary edema can result.

147.

In what order should resuscitative efforts in the premature infant with hydrops fetalis and bilateral pleural effusions be performed?

Cutting of the umbilical cord, resuscitative measures, then emergency thoracentesis

Cutting of the umbilical cord, emergency thoracentesis, then resuscitative measures

Emergency thoracentesis, cutting of the umbilical cord, then resuscitative measures

Explanation:

Hydrops fetalis is a potentially life-threatening condition in which accumulating fluid is present in at least two body cavities (abdomen, pleura, or pericardium). Traditionally, this has been treated through removal of the fluid after the umbilical cord has been cut and resuscitative measures started. It has recently been found that the prognosis is improved if the neonate remains attached to the placenta via the umbilical cord so they continue to receive oxygenated blood from the mother. The fluid can be drawn off and then the cord can be clamped before resuscitative measures are started.

148.

How many calories does a preterm infant require per day?

50-100 kcal/kg/day

100-150 kcal/kg/day

150-200 kcal/kg/day

Explanation:

The preterm infant needs 100-150 kcal/kg/day in order to complete development and gain weight. A term infant generally needs 100-120 kcal/kg/day for normal growth and development. Adequate nutrition to meet the nutritional needs of the preterm infant can help to prevent poor outcomes and help to improve adequate nervous system development.

149.

An infant with a known congenital diaphragmatic hernia is born at 38 weeks gestation. He requires resuscitation shortly after delivery due to the weakening of the diaphragm from the hernia. Generally speaking, survival rate for this infant is

lower than another infant requiring resuscitation without a diaphragmatic hernia

higher than another infant requiring resuscitation without a diaphragmatic hernia

equal to that of another infant requiring resuscitation without a diaphragmatic hernia

Explanation:

The survival rate for this infant is lower than another infant requiring resuscitation without a diaphragmatic hernia. With a diaphragmatic hernia, the diaphragm becomes weakened and this can result in the stomach and other abdominal contents expending into the chest cavity. This, along with the weakened diaphragm, can result in a decreased ability to breathe. If detected in the prenatal period, assistance can standby during delivery to begin resuscitative measures promptly and improve the chances for survival.

150.

The nurse is assessing an infant with renal disease. Over the past 4 hours, he has had 100 mL of urine output. He weighs 6 lbs., or 2.73 kg. The initial interpretation of this would be

severe polyuria

severe oliguria

normal urine output for weight of the infant

Explanation:

A urine output >8 mL/kg/hr is categorized as severe polyuria. If not already present, a urinary catheter is usually inserted at this point to obtain a more accurate reading of urinary output. If this is a new change in urine output for the infant, the neonatologist on call should be contacted.

151.

Which of the following will have the greatest amount of insensible water loss?

Normal size and full-term

Small size and earlier gestational age

Small size and full-term

Explanation:

Insensible water loss is that water that passes through the skin and evaporates and the water that evaporates through the respiratory tract. Newborns have a relatively large surface area through which there can be increased amounts of insensible water loss. This loss will be at its greatest in the early gestational age infant that is smaller.

152.

At what point after birth is gut priming performed?

Within 12 hours of birth

2nd day of life

3rd day of life

Explanation:

Gut priming is the practice of giving enteral nutrition in sub-nutritional quantities in order to stimulate the GI tract to function better. It is usually done at the 3rd day of life and is only indicated in babies weighing less than 1000 g. It is usually done for 2-3 days to stimulate

hormone production, enzymes, peristalsis, and to boost the immune system. Gut priming can also help to increase the excretion of bilirubin.

153.

What method should be used to feed the preterm infant with a weak sucking reflex?

Gavage feeding

PEG tube

Thickened liquids given orally

Explanation:

Gavage feeding is used to provide nutrition to the infant with a poor sucking reflex, tachypnea, respiratory distress, impaired swallowing, or apneic spells. A nasogastric tube is placed and formula or human milk is slowly fed through the tube with a syringe. Often, the baby will be soothed or gently touched during the feeding to promote positive reinforcement with sucking. The feeding should be stopped if the baby exhibits signs of gasping or choking.

154.

Which of the following patient scenarios is NOT a candidate for mechanical ventilation?

27-week infant weighing 980 g, respiratory rate 80/min, mild retractions

34-week infant weighing 2400 g, respiratory rate 42/min, in oxyhood at FiO_2 30%

38-week infant weighing 3200 g, respiratory rate 60/min, grunting, marked retractions, in

oxyhood at FiO_2 45%, SpO_2 falling

Explanation:

Many factors contribute to the need for mechanical ventilation in a neonate. One must take into consideration all aspects of respiratory function to determine if mechanical ventilation is necessary. General guidelines include signs of impending respiratory failure (respiratory rate greater than 60/min, retractions, grunting, nasal flaring), apnea, and presence of existing respiratory failure. Other factors may also be indications for mechanical ventilation, including certain congenital anomalies that may interfere with respiration, septic infants, and infants weighing less than 1000 g.

155.

All of the following are early feeding cues EXCEPT

sucking on fingers

persistent crying

opening mouth wide when touched on the chin

Explanation:

Early feeding cues, the signs that an infant is hungry, include opening the mouth when the chin is touched, sucking on fingers, smacking or licking the lips, or fussiness. Hard crying can be a late feeding cue, but the infant is usually easily consoled when held and then fed, and the crying does not tend to be persistent. Persistent crying is more likely to be a sign that there is pain or another discomfort that is not being relieved.

156.

Oral sucrose is given to infants for

preventing dehydration

pain relief

increase in heart rate and blood pressure

Explanation:

Oral sucrose has been used in infants as a mild analgesic. It is given before minor procedures to help relax the infant and provide pain relief. The sucrose solution activates the body's mechanism to produce natural opioid-like substances, such as endorphins.

157.

A premature infant in the NICU has a nasogastric drain. The results of her arterial blood gases are as follows: pH 7.5, HCO_3^- 29, pCO_2 37. Based on these values, which acid-base disorder has this infant developed?

Respiratory alkalosis

Respiratory acidosis

Metabolic alkalosis

Explanation:

Metabolic alkalosis will cause the arterial blood pH and bicarbonate levels to increase. Conversely, metabolic acidosis will cause arterial pH and bicarbonate levels to decrease. Respiratory acidosis will increase the arterial carbon dioxide level while decreasing the pH, and respiratory alkalosis will have the opposite results with a decrease in carbon dioxide level and an increased pH.

158.

How does the protein content in colostrum compare to the protein content in mature human milk?

The protein content is lower in colostrum than mature milk

The protein content is equal in both

The protein content is higher in colostrum than mature milk

Explanation:

The first form of human milk that can be expressed is called colostrum. This is produced for the first few days, up to a week, following delivery. It has a higher protein content than mature human milk. Colostrum can contain up to 17% protein, while mature human milk contains only about 1% protein.

159.

Which of the following is an indication for parenteral nutrition in the premature infant?

Oxygen saturation less than 90%

Very low birth weight infants (less than 1500 g)

Difficulty latching on for breastfeeding

Explanation:

Parenteral nutrition is given via intravenous route. It is used when enteral feeding via a tube directly in the GI tract is not possible. This is most often due to a very low birth weight, less than 1500 g. Enteral feedings are delayed in these infants due to immature lung function requiring

intubation, hypotension, hypothermia, and infection risk. Also, the GI tract in these infants may not tolerate feedings that require digestion by normal means.

160.

Which vitamin should be given to infants at risk for bronchopulmonary dysplasia?

Vitamin C

Vitamin B

Vitamin A

Explanation:

Very low birth weight infants are at risk for developing bronchopulmonary dysplasia. Nutritional support can possibly help to decrease the development of this condition. Vitamin A helps with lung maturity, and supplementation with this vitamin may help to prevent this condition. Parenteral nutrition also helps with lung development to ensure the infant is receiving the proteins and lipids needed to help with lung maturity.

161.

Which of the following conditions may require total parenteral nutrition indefinitely?

Short bowel syndrome

Low birth weight infants

Pyloric stenosis

Explanation:

Short bowel syndrome in infants is a condition in which there are absorption problems due to a short bowel length. The short bowel may occur as a result of a birth defect affecting maturation of the bowel, an abdominal wall defect, enterocolitis, atresia, or volvulus. The goal with this condition is to eventually have the patient not rely on TPN for their nutritional needs, but sometimes it is necessary indefinitely. Low birth weight infants almost always go on to feeding regularly after the initial acute phase following delivery. Pyloric stenosis is surgically repairable and does not normally lead to permanent absorption issues that require long-term TPN.

162.

Which of the following is NOT a potential risk when using an extracorporeal membrane oxygenation (ECMO) device?

Blood clots

Bleeding

Electrolyte imbalance

Explanation:

An extracorporeal membrane oxygenation (ECMO) device is used in infants who are not able to breath or pump blood on their own. It is a type of heart-lung bypass machine that circulates blood from the infant, through an artificial lung to oxygenate the blood, and then back into the infant to circulate through the body. Some of the potential risks include the formation of blood clots, bleeding, or infection.

163.

An elevated serum lactate level in an infant in the NICU is associated with

rapid lung maturation

increased risk of death

poor GI absorption of nutrients

Explanation:

Lactic acid is increased in situations of tissue hypoxia, which can lead to severe metabolic acidosis. This can occur with sepsis, heart failure, shock, and multisystem organ failure. Studies have shown that elevations in serum lactate in the first week of life correlate with an increase in mortality rates. This risk is higher in infants born less than 1000 g.

164.

What change in arterial blood gas values would be expected in a patient with compensated respiratory acidosis?

PaCO₂ is elevated and blood pH is decreased

PaCO₂ is decreased and blood pH is normal

PaCO₂ is elevated, blood pH is normal, and serum bicarbonate (HCO₃) is elevated

Explanation:

Respiratory acidosis occurs when a person is not being adequately oxygenated. This results in an elevated PaCO₂ level and a decreased blood pH level. When the body attempts to compensate for this abnormality, the serum bicarbonate (HCO₃) level is elevated to offset the acidic level of the blood pH. This results in a continued PaCO₂, a normal blood pH level, and an elevated HCO₃ level.

165.

Which of the following infants are at LOW risk for insensible water loss?

I. 28-week-old infant in an open-bed warmer

II. 30-week-old infant in closed Isolette incubator

III. Term infant, born on way to hospital

IV. 36-week-old infant in open bassinet with respiratory rate 64/min

I

IV

II

Explanation:

Insensible water loss is defined as evaporative water loss through the skin and respiratory tract. Open-air warmers and bassinets can pose a risk for increased insensible water loss through the skin via exposure to environmental air currents. This is especially true with open warmers, as infants are either nude or just wearing a diaper, thus exposing a majority of skin to the surrounding air. This is why it's important to position warmers and bassinets out of drafts. Tachypnea (respiratory rate greater than 60/min) increases insensible water loss through rapid respiration. Babies born in uncontrolled environments are subject to greater insensible water loss due to improper drying and swaddling in the field.

166.

What is the difference between hypoxia and hypoxemia?

Hypoxia is increased oxygen at the tissue level while hypoxemia is an increase in the oxygen level within arterial blood

Hypoxia is decreased oxygen available at the tissue level while hypoxemia is a decrease in the oxygen level within arterial blood