

Kevin's Review - 100 NCLEX Practice Questions

1. Which of the following tests can be performed to diagnose a hiatal hernia?

- A. Colonoscopy
- B. Lower GI series
- C. Barium swallow
- D. Abdominal x-rays

Correct Answer: C. Barium swallow

A barium swallow with fluoroscopy shows the position of the stomach in relation to the diaphragm. A barium swallow involves drinking a special liquid, then taking X-rays to help see problems in the esophagus (such as swallowing disorders) and the stomach (such as ulcers and tumors). It also shows how big the hiatal hernia is and if there is twisting of the stomach as a result of the hernia.

- **Option A:** A colonoscopy shows disorders of the intestine. Colonoscopy is a diagnostic as well as a therapeutic procedure performed to evaluate the large intestine (i.e., colon, rectum, and anus) as well as the distal portion of the small intestine (terminal ileum). It is performed using a hand-held flexible tube-like device called the colonoscope, which has a high definition camera mounted at the tip of the scope, as well as accessory channels that allow insertion of equipment and fluids to cleanse the colonoscope lense and colonic mucosa
- **Option B:** A lower GI series shows disorders of the intestine. A lower GI series is a procedure in which a doctor uses X-rays and a chalky liquid called barium to view the large intestine. The barium will make the large intestine more visible on an x-ray. A lower GI series is also called a barium enema.
- **Option D:** Abdominal x-ray uses a very small dose of ionizing radiation to produce pictures of the inside of the abdominal cavity. It is used to evaluate the stomach, liver, intestines, and spleen and may be used to help diagnose unexplained pain, nausea, or vomiting.

2. Adequate fluid replacement and vasopressin replacement are objectives of therapy for which of the following disease processes? Adequate fluid replacement and vasopressin replacement are objectives of therapy for which of the following disease processes?

- A. Diabetes mellitus
- B. Diabetes insipidus
- C. Diabetic ketoacidosis
- D. Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Correct Answer: B. Diabetes insipidus

Maintaining adequate fluid and replacing vasopressin are the main objectives in treating diabetes insipidus.

- **Option A:** Diabetes is a chronic condition associated with abnormally high levels of sugar (glucose) in the blood. Insulin produced by the pancreas lowers blood glucose.
- **Option C:** Diabetic ketoacidosis is a result of severe insulin insufficiency.
- **Option D:** An excess of antidiuretic hormone leads to SIADH, causing the patient to retain fluid.

3. The expected weight gain in a normal pregnancy during the 3rd trimester is:

- A. 1 pound a week
- B. 2 pounds a week
- C. 10 lbs a month
- D. 10 lbs total weight gain in the 3rd trimester

Correct Answer: A. 1 pound a week

During the 3rd trimester, the fetus is gaining more subcutaneous fat and is growing fast in preparation for extrauterine life. Thus, one pound a week is expected.

- **Option B:** In the first trimester, most women don't need to gain much weight — which is good news if she is struggling with morning sickness. If a pregnant woman starts out at a healthy or normal weight, she needs to gain only about 1 to 4 pounds (0.5 to 1.8 kilograms) in the first few months of pregnancy.
- **Option C:** Gaining too much weight during pregnancy can increase the baby's risk of health problems, such as being born significantly larger than average (fetal macrosomia). The woman might also be at increased risk of pregnancy-related hypertension, gestational diabetes, prolonged labor, and the need for a C-section or delivery before her due date. Excessive weight gain during pregnancy can also increase the risk of postpartum weight retention and increases the risk of blood clots in the postpartum period.
- **Option D:** Steady weight gain is more important in the second and third trimesters — especially if a pregnant woman starts out at a healthy weight or she is underweight. According to the guidelines, the pregnant woman will gain about 1 pound (0.5 kilogram) a week until delivery. An extra 300 calories a day — half a sandwich and a glass of skim milk — might be enough to help her meet this goal.

4. A mother complains to the clinic nurse that her 2 ½-year-old son is not yet toilet trained. She is particularly concerned that, although he reliably uses the potty seat for bowel movements, he isn't able to hold his urine for long periods. Which of the following statements by the nurse is correct?

- A. The child should have been trained by age 2 and may have a psychological problem that is responsible for his "accidents."
- B. Bladder control is usually achieved before bowel control, and the child should be required to sit on the potty seat until he passes urine.
- C. Bowel control is usually achieved before bladder control, and the average age for completion of toilet training varies widely from 24 to 36 months.
- D. The child should be told "no" each time he wets so that he learns the behavior is unacceptable.

Correct Answer: C. Bowel control is usually achieved before bladder control, and the average age for completion of toilet training varies widely from 24 to 36 months.

Toddlers typically learn bowel control before bladder control, with boys often taking longer to complete toilet training than girls. Readiness to begin toilet training depends on the individual child. In general, starting before age 2 (24 months) is not recommended. The readiness skills and physical development the child needs occur between age 18 months and 2.5 years.

- **Option A:** Many children are not trained until 36 months and this should not cause concern. Later training is rarely caused by psychological factors and is much more commonly related to individual developmental maturity. Timing is important. Toilet training should not be started when the child is feeling ill or when the child is experiencing any major life changes such as moving, new siblings, new school, or new child-care situation.
- **Option B:** Bowel control is first achieved before bladder control. Start a routine with regular reminders beginning with one time a day—after breakfast or maybe at bath time when the child is already undressed. Watch for behavior, grimaces, or poses that may signal the need for a bowel movement, and ask the child if he or she needs to go.
- **Option D:** Reprimanding the child will not speed the process and may be confusing. Accidents are common and should be expected in the training process. Praise the child whenever he or she tells you that he/she needs to go and when the child tells you without being reminded.

5. Which of the following would best indicate to the nurse that a depressed client is improving?

- A. Reduced levels of anxiety
- B. Changes in vegetative signs
- C. Compliance with medications
- D. Requests to talk to the nurse

Correct Answer: B. Changes in vegetative signs

Vegetative signs such as insomnia, anorexia, psychomotor retardation, constipation, diminished libido, and poor concentration are biological responses to depression. Improvement in these signs indicates a lifting of the depression. Give step-by-step reminders such as “Brush the teeth “Clean the outer surfaces of your upper teeth, then your lower teeth. . .”Encourage the client to get up and dress and to stay out of bed during the day. Minimizing sleep during the day increases the likelihood of sleep at night. Encourage small, high-calorie, and high-protein snacks and fluids frequently throughout the day and evening if weight loss is noted.

- **Option A:** Reduced levels of anxiety do not indicate an improvement in depressive symptoms. Eventually involve the client in group activities (e.g., group discussions, art therapy, dance therapy). Socialization minimizes feelings of isolation. Genuine regard for others can increase feelings of self-worth.
- **Option C:** Compliance with medications does not indicate improvement in depression. Help the client identify negative thinking/thoughts. Teach the client to reframe and/or refute negative thoughts. Negative ruminations add to feelings of hopelessness and are part of a depressed person’s faulty thought processes. Intervening in this process helps in a healthier and more useful outlook in life.
- **Option D:** Requests to talk to the nurse vary. Requests may show trust in the nurse but are not a sign that depression has diminished. Initially, provide activities that require minimal concentration (e.g., drawing, playing simple board games). Depressed people lack concentration and memory. Activities that have no “right or wrong” or “winner or loser” minimizes opportunities for the client to put himself/herself down. Eventually maximize the client’s contacts with others (first one other, then two others, etc.).

6. The nurse uses a stethoscope to auscultate a male patient's chest. Which statement about a stethoscope with a bell and diaphragm is true?

- A. The bell detects high-pitched sounds best.
- B. The diaphragm detects high-pitched sounds best.
- C. The bell detects thrills best.
- D. The diaphragm detects low-pitched sounds best.

Correct Answer: B. The diaphragm detects high-pitched sounds best.

The diaphragm of a stethoscope detects high-pitched sound best; the bell detects low pitched sounds best. Palpation detects thrills best. The bell is flat and round and is covered by a thin layer of plastic known as the diaphragm. The diaphragm vibrates as sound is produced within the body. These vibrations travel from the bell, up the hollow tube which splits into two, and into hollow earpieces to be heard as sound by the medical professional.

- **Option A:** The smaller or other part of the resonator is called a bell. It is made up of hollow pieces of metal that help at picking up low-frequency sounds.
- **Option C:** Whenever a medical practitioner places a stethoscope diaphragm on a chest of a patient, vibration will occur at the flat surface of the stethoscope which is a result of sound waves that is being generated from the patient's body. The vibration picked by the diaphragm is being protected externally in order to prevent sound loss and thereby channeled through the tube to a specific direction.
- **Option D:** The diaphragm is the lower part of the chest piece. It is a flat metallic disc surrounded by chill rings which enable it to pick a very high pitch sound.

7. Using the principles of standard precautions, the nurse would wear gloves in what nursing interventions?

- A. Providing a back massage.
- B. Feeding a client.
- C. Providing hair care.
- D. Providing oral hygiene.

Correct Answer: D. Providing oral hygiene

Doing oral care requires the nurse to wear gloves. Standard precautions apply to the care of all patients, irrespective of their disease state. These precautions apply when there is a risk of potential exposure to (1) blood; (2) all body fluids, secretions, and excretions, except sweat, regardless of whether or not they contain visible blood; (3) non-intact skin, and (4) mucous membranes. This includes the use of hand hygiene and personal protective equipment (PPE), with hand hygiene being the single most important means to prevent transmission of disease.

- **Option A:** Must be worn when touching blood, body fluids, secretions, excretions, mucous membranes, or non-intact skin. Change when there is contact with potentially infected material in the same patient to avoid cross-contamination. Remove before touching surfaces and clean items. Wearing gloves does not mitigate the need for proper hand hygiene.
- **Option B:** Hand washing after feeding the client is sufficient. Handwashing with soap and water for at least 40 to 60 seconds, making sure not to use clean hands to turn off the faucet, must be

performed if hands are visibly soiled, after using the restroom, or if potential exposure to spore-forming organisms.

- **Option C:** Gloves are not needed in providing hair care. Hand rubbing with alcohol applied generously to cover hands completely should be performed and hands rubbed until dry.

8. The nurse recognizes that an expected change in the hematologic system that occurs during the 2nd trimester of pregnancy is:

- A. A decrease in WBC's
- B. Increase in hematocrit.
- C. An increase in blood volume.
- D. A decrease in sedimentation rate.

Correct Answer: C. An increase in blood volume.

The blood volume increases by approximately 40-50% during pregnancy. The peak blood volume occurs between 30 and 34 weeks of gestation. The hematocrit decreases as a result of the increased blood volume.

- **Option A:** WBC count increases to 6 to 16 million/mL and can be as high as 20 million/mL during and shortly after labor.
- **Option B:** In pregnancy, the RBC volume increases by 20% to 30%, while the plasma volume increases 45 to 55%. This disproportionate volume increase leads to dilutional anemia with decreased hematocrit.
- **Option D:** Fibrinogen and factors VII – X levels increase, but the clotting and bleeding times remain unchanged. However, increased venous stasis and damaged vessel endothelium result in higher rates of thromboembolic events during pregnancy.

9. When teaching parents about the child's readiness for toilet training, which of the following signs should the nurse instruct them to watch for in the toddler?

- A. Demonstrates dryness for 4 hours.
- B. Demonstrates ability to sit and walk.
- C. Has a new sibling for stimulation.
- D. Verbalizes desire to go to the bathroom.

Correct Answer: D. Verbalizes desire to go to the bathroom

The child must be able to state the need to go to the bathroom to initiate toilet training. Toilet training is teaching the child to recognize their body signals for urinating and having a bowel movement. It also means teaching the child to use a potty chair or toilet correctly and at the appropriate times.

- **Option A:** Usually, a child needs to be dry for only 2 hours, not 4 hours. Children develop at different rates. A child younger than 12 months has no control over bladder or bowel movements. There is very little control between 12 to 18 months. Most children don't have bowel and bladder control until 24 to 30 months. The average age of toilet training is 27 months.
- **Option B:** The child also must be able to sit, walk, and squat. Toilet training should start when your child shows signs that he or she is ready. There is no right age to begin. If you try to toilet train

before your child is ready, it can be a battle for both you and your child. The ability to control bowel and bladder muscles comes with proper growth and development.

- **Option C:** A new sibling would most likely hinder toilet training. If there are older siblings, ask them to let the younger child see you praising them for using the toilet.

10. The most indicative test for prostate cancer is:

- A. A thorough digital rectal examination
- B. Magnetic resonance imaging (MRI)
- C. Excretory urography
- D. Prostate-specific antigen

Correct Answer: D. Prostate-specific antigen

An elevated prostate-specific antigen level indicates prostate cancer, but it can be falsely elevated if done after the prostate gland is manipulated. Elevated Prostate Specific Antigen (PSA) levels (usually greater than 4 ng/ml) in the blood is how 80% of prostate cancers initially present even though elevated PSA levels alone correctly identify prostate cancer only about 25% to 30% of the time. We recommend at least 2 abnormal PSA levels or the presence of a palpable nodule on DRE to justify a biopsy and further investigation.

- **Option A:** A digital rectal examination should be done as part of the yearly screening, and then the antigen test is done if the digital exam suggests cancer. Digital rectal examination (DRE) may detect prostate abnormalities, asymmetry, and suspiciously hard nodules but is not considered a definitive test for prostate cancer by itself. An abnormal DRE initially uncovers about 20% of all prostate cancers.
- **Option B:** MRI is used in staging the cancer. Prostate MRI has much better soft tissue resolution than ultrasound and can identify areas in the gland that are truly “suspicious” with a high degree of accuracy and reliability (positive predictive value greater than 90%). Prostate MRI is also used for surgical planning in men considering radical prostatectomy and for improved biopsies, instead of saturation biopsies, when cancer is strongly suspected despite a negative initial TRUS-guided biopsy.
- **Option C:** An intravenous pyelogram (PIE-uh-low-gram), also called an excretory urogram, is an X-ray exam of the urinary tract. An intravenous pyelogram lets the doctor view the kidneys, the bladder, and the tubes that carry urine from the kidneys to the bladder (ureters).

11. Referencing the image below, what is the name of the structure marked #2.

- A. Minor calyx
- B. Major calyx
- C. Cortical blood vessels
- D. Interlobal blood vessels
- E. Arcuate blood vessels
- F. Renal vein
- G. Renal nerve

- H. Renal artery
- I. Renal pelvis
- J. Renal pyramid

Correct answer: #12 is Option D. Interlobar blood vessels

The interlobar blood vessels are the arteries and veins that supply blood to the renal columns, which are structures that separate the renal pyramids in the renal medulla.

12. A nurse has just started her rounds delivering medication. A new patient on her rounds is a 4-year-old boy who is non-verbal. This child does not have any identification on. What should the nurse do?

- A. Contact the provider
- B. Ask the child to write their name on paper
- C. Ask a coworker about the identification of the child
- D. Ask the father who is in the room the child's name

Correct Answer: D. Ask the father who is in the room the child's name.

In this case, you can determine the name of the child by the father's statement. You should not withhold the medication from the child after identification.

- **Option A:** Contacting the provider is unnecessary and may take time. A pediatric patient must have folks with them inside the room, so asking the child's folks would be the most appropriate intervention.
- **Option B:** The child may have not yet developed his writing abilities. Some children are able to write their names at age 4, but some typically developing children still aren't ready until well into age.
- **Option C:** Asking a coworker would be inappropriate and against the patient's confidentiality.

13. Physiologically, the middle ear, containing the three ossicles, serves primarily to: Maintain balance.

- A. Maintain balance.
- B. Translate sound waves into nerve impulses.
- C. Amplify the energy of sound waves entering the ear.
- D. Communicate with the throat via the Eustachian tube.

Correct Answer: C. Amplify the energy of sound waves entering the ear.

The middle ear contains the three ossicles—malleus, incus, and stapes—which, along with the tympanic membrane and oval window, form an amplifying system. These bony structures are suspended by ligaments which make them suitable for transmission of vibrations into the inner ear. The vibrations that come into this part of the middle ear then get transmitted by the action of the stapes, into the inner ear.

- **Option A:** The inner ear is a space composed of the bony labyrinth and the membranous labyrinth, one inside the other. The bony labyrinth has a cavity filled with semicircular canals that are in charge of sensing equilibrium; this cavity is called the vestibule and is the place where the vestibular part of the VIII cranial nerve forms.
- **Option B:** The first transformation consists of the conversion of air vibrations into tympanic membrane vibrations. These vibrations then get transmitted into the middle ear and the ossicles. Then these vibrations transform into liquid vibrations in the inner ear and the cochlea, and these stimulate a region called the basilar membrane and the organ of Corti. Finally, these vibrations get transformed into nerve impulses, which travel to the nervous system.
- **Option D:** The Eustachian tube plays a role in equalization, oxygenation, and drainage of the tympanic cavity in the middle ear. More specifically, the Eustachian tube permits equalization of pressure in the middle ear with respect to ambient pressure. In doing so, the Eustachian tube allows for regulation of the pressure across the tympanic membrane.

14. Which of the following heart muscle diseases is unrelated to other cardiovascular diseases?

- A. Cardiomyopathy
- B. Coronary artery disease
- C. Myocardial infarction
- D. Pericardial effusion

Correct Answer: A. Cardiomyopathy

Cardiomyopathy isn't usually related to an underlying heart disease such as atherosclerosis. The etiology in most cases is unknown. Although most cases are idiopathic, a number of conditions (e.g. coronary artery disease, wet beriberi), infections (e.g., Coxsackie B virus, Chagas disease), and substances (e.g. heavy drinking, cocaine) have been identified as causes.

- **Option B:** The hallmark of the pathophysiology of CAD is the development of atherosclerotic plaque. Plaque is a build-up of fatty material that narrows the vessel lumen and impedes the blood flow. Growth factors released activate smooth muscles, which also take up oxidized LDL particles and collagen and deposit along with activated macrophages and increase the population of foam cells. This process leads to the formation of subendothelial plaque.
- **Option C:** MI is directly related to atherosclerosis. Smoking and abnormal apolipoprotein ratio showed the strongest association with acute myocardial infarction. The increased risk associated with diabetes and hypertension were found to be higher in women, and the protective effect of exercise and alcohol was also found to be higher in women.
- **Option D:** Pericardial effusion is the escape of fluid into the pericardial sac, a condition associated with pericarditis and advanced heart failure. The fluid accumulation increases pressure in the pericardial sac leading to the compression of the heart, especially the right heart due to a thinner wall. Impaired diastolic filling of the right heart causes venous congestion.

15. If parents keep a toddler dependent in areas where he is capable of using skills, the toddler will develop a sense of which of the following?

- A. Mistrust

- B. Shame
- C. Guilt
- D. Inferiority

Correct Answer: B. Shame

According to Erikson, toddlers experience a sense of shame when they are not allowed to develop appropriate independence and autonomy. If children are criticized, overly controlled, or not given the opportunity to assert themselves, they begin to feel inadequate in their ability to survive, and may then become overly dependent upon others, lack self-esteem, and feel a sense of shame or doubt in their abilities.

- **Option A:** Infants develop mistrust when their needs are not consistently gratified. Failing to acquire the virtue of hope will lead to the development of fear. This infant will carry the basic sense of mistrust with them to other relationships. It may result in anxiety, heightened insecurities, and an over feeling of mistrust in the world around them.
- **Option C:** Preschoolers develop guilt when their initiative needs are not met. If this tendency is squelched, either through criticism or control, children develop a sense of guilt. The child will often overstep the mark in his forcefulness, and the danger is that the parents will tend to punish the child and restrict his initiatives too much.
- **Option D:** While school-agers develop a sense of inferiority when their industry needs are not met. If this initiative is not encouraged, if it is restricted by parents or teachers, then the child begins to feel inferior, doubting his own abilities and therefore may not reach his or her potential.

16. Before giving a postpartum (PP) client the rubella vaccine, which of the following facts should the nurse include in client teaching?

- A. The vaccine is safe in clients with egg allergies.
- B. Breastfeeding isn't compatible with the vaccine.
- C. Transient arthralgia and rash are common adverse effects.
- D. The client should avoid getting pregnant for 3 months after the vaccine because the vaccine has teratogenic effects.

Correct Answer: D. The client should avoid getting pregnant for 3 months after the vaccine because the vaccine has teratogenic effects.

The client must understand that she must not become pregnant for 3 months after the vaccination because of its potential teratogenic effects. Women who are planning to become pregnant should check with their doctor to make sure they are vaccinated before they get pregnant. Because MMR vaccine is an attenuated (weakened) live virus vaccine, pregnant women who are not vaccinated should wait to get MMR vaccine until after they have given birth. Adult women of childbearing age should avoid getting pregnant for at least four weeks after receiving an MMR vaccine.

- **Option A:** The rubella vaccine is made from duck eggs so an allergic reaction may occur in clients with egg allergies. Vaccines that contain small quantities of egg protein can cause hypersensitivity reactions in some people with egg allergy. Adverse reactions are more likely with vaccines, such as yellow fever and influenza vaccines, that are grown in embryonated eggs.
- **Option B:** The virus is not transmitted into the breast milk, so clients may continue to breastfeed after the vaccination. Early studies found no transmission of rubella virus to breastfed infants. None of 18 infants who were breastfed after maternal vaccination with rubella vaccine (various strains)

had detectable antibodies in one study. A study of mothers vaccinated with the Cendehill strain of live, attenuated rubella virus found no transmission of the live virus to their breastfed infants. However, rubella vaccine virus can appear in breastmilk and result in infections in some infants.

- **Option C:** Transient arthralgia and rash are common adverse effects of the vaccine. Transient joint manifestations, ranging from mild arthralgia to severe extensive polyarthritis are a troublesome feature of rubella. These complaints, described as early as 1906 in Osler's textbook, have been a source of considerable concern in the past, since they may simulate the picture of acute rheumatoid polyarthritis.

17. A 35-year-old female patient, with a history of leukemia, is scheduled for a bone marrow biopsy as a component of her ongoing diagnostic workup. The patient is concerned about the necessity of the procedure and inquires about its importance. The healthcare provider explains that the biopsy is crucial to evaluate the patient's hematopoiesis, ensuring her bone marrow is functioning correctly in producing blood cells. Furthermore, it could provide insights into her disease status and response to treatment. With regard to the explanation provided by the healthcare provider, which of the following options best defines hematopoiesis, the process that occurs within the bone marrow?

- A. A serious medical condition that most commonly results from maternal-fetal blood type (Rh factor) incompatibility
- B. An abnormally high absorption of iron by the intestinal tract, resulting in excessive storage of iron, particularly in the liver, skin, pancreas, heart, joints, and testes
- C. The process of blood cell production or the formation of blood cellular components
- D. The presence of megakaryocytes in the blood or of excessive numbers in the bone marrow
- E. A disorder in which the body produces too many platelets (thrombocytes), which play an important role in blood clotting

Correct Answer: C. The process of blood cell production or the formation of blood cellular components

This choice correctly defines hematopoiesis as the process of blood cell production, which occurs in the bone marrow. Hematopoiesis generates the cellular components of blood, including red blood cells, white blood cells, and platelets, which are vital for oxygen transport, immune defense, and hemostasis, respectively.

- **Option A:** This choice incorrectly defines hematopoiesis as a condition arising from blood type incompatibility between mother and fetus, which is related to Rh factor issues, not the formation of blood cells in the bone marrow.
- **Option B:** This choice inaccurately describes hematopoiesis as an abnormal iron absorption condition. While iron is essential for hemoglobin in red blood cells, this does not reflect the process of hematopoiesis.
- **Option D:** This choice incorrectly defines hematopoiesis by focusing on megakaryocytes, which are indeed a part of the hematopoietic process but not representative of the entire process. Megakaryocytes are cells in the bone marrow that give rise to platelets, but hematopoiesis encompasses the production of all blood cellular components.
- **Option E:** This choice inaccurately defines hematopoiesis as a platelet production disorder. While platelet production is a part of hematopoiesis, this choice does not encapsulate the entirety of the

process that also includes the formation of red and white blood cells.

18. The nurse administers a cleansing enema. The common position for this procedure is?

- A. Sims left lateral
- B. Dorsal Recumbent
- C. Supine
- D. Prone

Correct Answer: A. Sims left lateral

This position provides comfort to the patient and easy access to the natural curvature of the rectum. Enemas are rectal injections of fluid intended to cleanse or stimulate the emptying of the bowel. Enemas may also be prescribed to flush out the colon before certain diagnostic tests or surgeries. The bowel needs to be empty before these procedures to reduce infection risk and prevent stool from getting in the way.

- **Option B:** Position the patient on the left side, lying with the knees drawn to the abdomen. This eases the passage and flow of fluid into the rectum. Gravity and the anatomical structure of the sigmoid colon also suggest that this will aid enema distribution and retention. Dorsal recumbent is a position in which the patient lies on the back with the lower extremities moderately flexed and rotated outward. It is employed in the application of obstetrical forceps, repair of lesions following parturition, vaginal examination, and bimanual palpation.
- **Option C:** The supine position means lying horizontally with the face and torso facing up, as opposed to the prone position, which is face down. When used in surgical procedures, it allows access to the peritoneal, thoracic, and pericardial regions; as well as the head, neck, and extremities.
- **Option D:** Prone position is a body position in which the person lies flat with the chest down and the backup. In anatomical terms of location, the dorsal side is up, and the ventral side is down. The supine position is the 180° contrast.

19. The name selected by the original manufacturer based on the chemical structure of the drug is the:

- A. Chemical name
- B. Drug name
- C. Generic name
- D. Trade name

Correct Answer: C. Generic name

The generic name is the name of the active ingredient. The generic name is granted by the USAN Council and is commonly used to identify a drug during its useful clinical lifetime. Each medicine has an approved name called the generic name. A group of medicines that have similar actions often have similar-sounding generic names. For example, phenoxymethylpenicillin, ampicillin, amoxicillin, and flucloxacillin are in one group of antibiotics.

- **Option A:** A chemical name is given when a new chemical entity (NCE) is developed. The chemical name is a scientific name based on the compound's chemical structure (e.g., 6-thioguanine) and is almost never used to identify the drug in a clinical or marketing situation.
- **Option B:** The drug name does not exist. A marketed drug has three names: a chemical name, a generic name, and a brand name. The process for naming a marketable drug involves five steps: NCE submission and patent application, generic naming, brand naming, FDA review, and final approval.
- **Option D:** For drugs that make it all the way through development, testing, and regulatory acceptance, the pharmaceutical company then gives the drug a trade name, which is a standard term in the pharmaceutical industry for a brand name or trademark name.

20. Which information should be reported to the state Board of Nursing?

- A. The facility fails to provide literature in both Spanish and English.
- B. The narcotic count has been incorrect on the unit for the past 3 days.
- C. The client fails to receive an itemized account of his bills and services received during his hospital stay.
- D. The nursing assistant assigned to the client with hepatitis fails to feed the client and give the bath.

Correct Answer: B. The narcotic count has been incorrect on the unit for the past 3 days.

General advice from the Department of Health is that stocks of controlled drugs should be kept to the minimum required to meet the clinical needs of patients. They should be stored securely in a locked cabinet or safe to prevent unauthorised access, with the keys held in a safe place.

- **Option A:** The Joint Commission conducts inspections with two main objectives: To evaluate the healthcare organization using TJC performance measures and standards. To educate and guide the organization's staff in "good practices" to help improve the organization's performance.
- **Option C:** The Joint Commission on Accreditation of Hospitals will probably be interested in the problem in answer A. The Joint Commission offers many benefits to their members. They help members organize and strengthen their patient improvement programs and safety efforts. They raise health care consumer and community confidence in the quality of the organization's care, services and treatment. This provides a competitive edge in the healthcare industry and a proven framework for organizational management. The Joint Commission helps to reduce risk management, liability insurance, and employee turnover costs.
- **Option D:** The failure of the nursing assistant to care for the client with hepatitis might result in termination but is not of interest to the Joint Commission. The Joint Commission monitors and advocates for legislation that promotes better patient safety. When it comes to state legislation, The Joint Commission collaborates with patient safety authorities and state regulatory bodies to minimize unrealistic expectations and reform outdated rules. They push state regulatory bodies to rely more on private accreditation instead of mandatory state licensure inspections.

21. During an internal examination, the nurse palpated the posterior fontanel to be at the left side of the mother at the upper quadrant. The interpretation is that the position of the fetus is:

- A. LOA

- B. ROP
- C. LOP
- D. ROA

Correct Answer: A. LOA

The landmark used in determining fetal position is the posterior fontanel because this is the nearest to the occiput. So if the nurse palpated the occiput (O) at the left (L) side of the mother and at the upper/anterior (A) quadrant then the fetal position is LOA.

- **Option B:** In the right occiput posterior position (ROP), the baby is facing forward and slightly to the right (looking toward the mother's left thigh). This presentation may slow labor and cause more pain.
- **Option C:** When facing forward, the baby is in the occiput posterior position. If the baby is facing forward and slightly to the left (looking toward the mother's right thigh) it is in the left occiput posterior (LOP) position. This presentation can lead to more back pain (sometimes referred to as "back labor") and slow progression of labor.
- **Option D:** The right occiput anterior (ROA) presentation is also common in labor. In this position, the back of the baby is slightly off center in the pelvis with the back of the head toward the mother's right thigh. In general, OA positions do not lead to problems or additional pain during labor or birth.

22. The nurse decides on a teaching plan for a new mother and her infant. The plan should include:

- A. Discussing the matter with her in a non-threatening manner
- B. Showing by example and explanation how to care for the infant
- C. Setting up a schedule for teaching the mother how to care for her baby
- D. Supplying the emotional support to the mother and encouraging her independence

Correct Answer: B. Showing by example and explanation how to care for the infant.

- **Option B:** Teaching the mother by example is a non-threatening approach that allows her to proceed at her own pace.

23. During an otoscopic examination, which action should be avoided to prevent the client from discomfort and injury?

- A. Tipping the client's head away from the examiner and pulling the ear up and back.
- B. Inserting the otoscope inferiorly into the distal portion of the external canal.
- C. Inserting the otoscope superiorly into the proximal two-thirds of the external canal.
- D. Bracing the examiner's hand against the client's head.

Correct Answer: C. Inserting the otoscope superiorly into the proximal two-thirds of the external canal.

In the superior position, the speculum of the otoscope is nearest the tympanic membrane, and the most sensitive portion of the external canal is the proximal two-thirds. It is important to avoid these structures during the examination. The provider should then slowly progress the speculum into the canal until the

tympanic membrane becomes visible. The provider should evaluate the health of the tympanic membrane and observe factors such as color, presence of perforation, and a bulging appearance.

- **Option A:** With the hand that is not holding the otoscope, the provider should grasp and gently pull the patient's pinna to help straighten the patient's external auditory canal. This step will facilitate visualization of the tympanic membrane. In a child, the examiner should pull the pinna posteriorly and inferiorly. In an adult, the examiner should pull the pinna posteriorly and superiorly.
- **Option B:** During the otoscopic examination, the provider utilizes an otoscope, also known as an auriscope, to visualize the ear anatomy. While performing the otoscopic examination, the provider holds the handle of the otoscope and inserts the cone of the otoscope into the patient's external auditory canal.
- **Option D:** Providers may have their own preferences regarding how to grasp the otoscope. However, it is generally advisable to hold the otoscope like a pen in between the first and second fingers. The otoscope is usually held in the right hand when evaluating the patient's right ear and the left hand when assessing the patient's left ear. The provider should place their free fifth finger of the hand, holding the otoscope against the patient's cheek to support and brace the hand during the examination.

24. Which of the following suggestions should the nurse offer the parents of a 4-year-old boy who resists going to bed at night?

- A. "Allow him to fall asleep in your room, then move him to his own bed."
- B. "Tell him that you will lock him in his room if he gets out of bed one more time."
- C. "Encourage active play at bedtime to tire him out so he will fall asleep faster."
- D. "Read him a story and allow him to play quietly in his bed until he falls asleep."

Correct Answer: D. "Read him a story and allow him to play quietly in his bed until he falls asleep."

Preschoolers commonly have fears of the dark, being left alone especially at bedtime, and ghosts, which may affect the child's going to bed at night. Quiet play and time with parents is a positive bedtime routine that provides security and also readies the child for sleep.

- **Option A:** The child should sleep in his own bed.
- **Option B:** Telling the child about locking him in his room will be viewed by the child as a threat. Additionally, a locked door is frightening and potentially hazardous.
- **Option C:** Vigorous activity at bedtime stirs up the child and makes it more difficult to fall asleep.

25. A client with dysthymic disorder reports to a nurse that his life is hopeless and will never improve in the future. How can the nurse best respond using a cognitive approach?

- A. Agree with the client's painful feelings.
- B. Challenge the accuracy of the client's belief.
- C. Deny that the situation is hopeless.
- D. Present a cheerful attitude.

Correct Answer: B. Challenge the accuracy of the client's belief

Use of cognitive techniques allows the nurse to help the client recognize that these negative beliefs may be distortions and that, by changing his thinking, he can adopt more positive beliefs that are realistic and hopeful. Assess individual signs of hopelessness. These aids focus attention on aspects of individual needs. These signs may include social withdrawal, decreased physical activity, and comments made by the patient that indicate despair and hopelessness.

- **Option A:** Express hope to the patient with realistic comments about the patient's strengths and resources. Patients may feel hopeless, but it is helpful to hear positive expressions from others. Allow the patient to express feelings and perceptions. The process of recognizing feelings that underlie and drive behaviors allows the patient to start taking control of their lives.
- **Option D:** Presenting a cheerful attitude is not consistent with a cognitive approach and would not be helpful in this situation. Assist the patient to determine aspects of life that are under his or her control. An individual's emotional state may interfere with problem-solving. Support may be required to identify areas that are under his or her control and to have clarity about options for taking control.
- **Option C:** Denying the client's feelings is belittling and may convey that the nurse does not understand the depth of the client's distress. Aid the patient to determine aspects of life events that are not within his or her ability to control. Discuss feelings related to this lack of control. The patient needs to recognize and resolve feelings related to inability to control certain life situations before acceptance can be achieved and hopefulness becomes possible.

26. A nurse is monitoring a pregnant client with pregnancy induced hypertension who is at risk for Preeclampsia. The nurse checks the client for which specific signs of Preeclampsia? Select all that apply.

- A. Elevated blood pressure
- B. Negative urinary protein
- C. Facial edema
- D. Increased respirations

Correct Answer: A & C.

The three classic signs of preeclampsia are hypertension, generalized edema, and proteinuria. Increased respirations are not a sign of preeclampsia. Preeclampsia is a hypertensive disorder in pregnancy-related to 2% to 8% of pregnancy-related complications worldwide. It results in 9% to 26% of maternal deaths in low-income countries and 16% in high-income countries. Preeclampsia is defined as new-onset hypertension.

- **Option A:** The parameters for initial identification of preeclampsia are specifically defined as a systolic blood pressure of 140 mm Hg or more or diastolic blood pressure of 90 mm Hg or more on two occasions at least 4 hours apart; or shorter interval timing of systolic blood pressure of 160 mm Hg or more or diastolic blood pressure of 110 mm Hg or more, all of which must be identified after 20 weeks of gestation.
- **Option B:** Although elevated blood pressure with accompanying proteinuria is typically thought to be required for the diagnosis of preeclampsia, it may not be present in several cases. In such cases, where the absence of proteinuria and new-onset hypertension is discovered, other new-onset symptoms such as thrombocytopenia, renal insufficiency, pulmonary edema, impaired liver function, or new-onset headache with or without visual disturbance may be used for diagnosis.

- **Option C:** Overall evaluation for edema should also be completed, specifically evaluating areas of dependent (gravity-related) edema like the lower extremities or independent edema, such as in the face or hands.
- **Option D:** Shortness of breath and a perceived increase in swelling, both worsening from baseline pregnancy-related symptoms, may also be reported. Suppose patients present with shortness of breath, auscultation, and percussion of lungs should be undertaken to examine for pulmonary disturbances.

27. Nurse Jenny of Nurseslabs Medical Center is planning care for a client who had undergone colposcopy. Which of the following actions should the RN take first?

- A. Discuss the client's fear regarding potential cervical cancer.
- B. Assist with silver nitrate application to the cervix to control bleeding.
- C. Give instructions regarding douching and sexual relations.
- D. Administer pain medications.

Correct Answer: B. Assist with silver nitrate application to the cervix to control bleeding.

Colposcopy is a procedure to examine the cervix, vagina, and vulva for signs of disease. The priority nursing action when caring for a client who underwent colposcopy is to assist in controlling potential bleeding by applying silver nitrate to the cervix.

- **Option A:** Colposcopy is a procedure in which a lighted, magnifying instrument called a colposcope is used to examine the cervix, vagina, and vulva. The indications for a colposcopy to be performed are risk-based. Women referred for colposcopy have a variety of underlying risks for cervical pre-cancer based on their cytological results, the HPV testing if it was performed, and personal history of cervical dysplasia.
- **Option C:** There is no required preparation for the patient having the colposcopy; however, it can be difficult to perform if she is on her menstrual cycle due to obscuring blood. Having the room with the proper equipment readily available will expedite the patient's visit.
- **Option D:** The procedure is typically not painful. It does not require local or regional anesthesia. Slight discomfort may be felt when a speculum is inserted into the vagina, which can be minimized by deep breathing during the procedure.

28. Which home remedy is suitable to relieve the itching associated with varicella?

- A. Applying a paste of baking soda and water
- B. Dusting the lesions with baby powder
- C. Using cool compresses of normal saline
- D. Applying gauze saturated in hydrogen peroxide

Correct Answer: A. Applying a paste of baking soda and water

- **Option A:** Applying a paste of baking soda and water soothes the itching and helps to dry the vesicles.

- Option B: The use of baby powder is not recommended for either child.
- Options C and D: Hydrogen peroxide and the saline will not relieve the itching and will prevent the vesicles from crusting.

29. In reducing the risk of endocarditis, good dental care is an important measure. To promote good dental care in clients with endocarditis in a teaching plan should include proper use of?

- A. Dental floss
- B. Electric toothbrush
- C. Manual toothbrush
- D. Irrigation device

Correct Answer: C. Manual toothbrush

The use of an electric toothbrush, irrigation device or dental floss may cause bleeding of gums, allowing bacteria to enter and increasing the risk of endocarditis. Maintaining good oral hygiene and infection control can decrease the incidence of endocarditis in the moderate-risk group of patients and can eliminate the necessity of antibiotic prophylaxis of endocarditis.

- **Option A:** Dental floss may injure the gums and cause bleeding that may lead to infection. The gums become inflamed (red and swollen) and often bleed during tooth brushing, flossing, or certain dental procedures involving manipulation of the gums. When gums bleed, the bacteria can enter the bloodstream and can infect other parts of the body.
- **Option B:** Electronic toothbrushes cause too much friction to the gums and cause an infection that can increase the risk of endocarditis. In very rare cases, bacteria in the mouth may trigger endocarditis in people at higher risk. Here's what happens: Bacteria found in tooth plaque may multiply and cause gingivitis (gum disease).
- **Option D:** An irrigation device uses a stream of pressurized, pulsating water to clean between teeth and below the gum line. The water's pressure may cause injury to sensitive gums and lead to bleeding or an infection. To prevent endocarditis, patients with certain heart conditions receive a single dose of an antibiotic. The patient receives it about one hour prior to certain dental treatments.

30. While a nurse is administering a cleansing enema, the client reports abdominal cramping. Which of the following is the appropriate intervention?

- A. Have a client hold his breath briefly.
- B. Discontinue the fluid installation.
- C. Remind the client that cramping is common at this time.
- D. Lower the enema fluid container.

Correct Answer: D. Lower the enema fluid container.

To relieve the client's discomfort, the nurse should slow the rate of installation by reducing the height of the enema solution container. An enema may be helpful when there is a problem forming or passing stool. The colon, also called the large intestine or large bowel, is a long, hollow organ in the abdomen. It

plays an important role in digestion by removing water from digested material and forming feces (stool). In some circumstances, due to diet, medical condition, or medication, among other possible causes, the bowel may form stool that is hard to pass easily resulting in constipation.

- **Option A:** Taking slow, deep breaths is more therapeutic for easing discomfort than holding the breath. A cleansing enema can also lower the amount of bacteria in the colon and reduce the risk of infection for certain surgeries.
- **Option B:** The nurse should stop the installation if the client's abdomen becomes rigid and distended or if the nurse notes bleeding from the rectum. An enema should not be painful when administered properly. The client may feel fullness, mild pressure, or brief, minimal cramping during the procedure. The client may also feel like he needs to have a bowel movement.
- **Option C:** This intervention is not therapeutic as it implies that the client must tolerate the discomfort and that the nurse cannot or will not do anything to ease it. The client may take a few long, deep breaths to help himself relax. If he has pain or discomfort while self-inserting an enema, stop and contact the doctor.

31. The primary nursing intervention for a victim of child abuse is:

- A. Assess the scope of the problem.
- B. Analyze the family dynamics.
- C. Ensure the safety of the victim.
- D. Teach the victim coping skills.

Correct Answer: C. Ensure the safety of the victim

The priority consideration is the safety of the victim. Attend to the physical injuries to ensure the physiologic safety and integrity of the child. Reporting suspected cases of abuse may deter the recurrence of abuse. Encourage expression of concerns and fears of the child regarding environment and management; Grant questions and provide honest explanations and communication at the level of the child's age. Provides an opportunity to release feelings that can decrease anxiety.

- **Option A:** Assess level of anxiety and fear in the child and how it is manifested; Determine the source of anxiety and note reactions to staff and parents at each contact. Provides information about the source and level of anxiety and what might relieve it and basis to judge the improvement.
- **Option B:** Assess parents for the achievement of developmental tasks of self and understanding of child's growth and development; how they are bonded and attached to the child; how they interpret and respond to the child; how they accept and support the child; how they meet the child's social, psychological and physical needs. Provides information about parent-child relationship and parenting styles that may lead to child abuse; identifies parents at risk for violence or other abusive behavior.
- **Option D:** Provide a play program with other children; set aside time to be alone with the child or quiet time for the child as well; praise the child or reward with a special treat when appropriate. Modifies negative behavior by promoting interactions with others and rewarding desired behaviors; promotes self-esteem. Use a therapeutic play kit to instruct the child in any procedure to be done (dolls, syringe, tubing, dressing, other articles, specify). Reduces anxiety by familiarizing the child with what to expect to reduce anxiety.

32. An older client's physical examination reveals the presence of a number of bright red-colored lesions scattered on the trunk and thighs. The nurse

interprets that this indicates which of the following lesions due to alterations in blood vessels of the skin?

- A. Cherry angioma
- B. Spider angioma
- C. Venous star
- D. Purpura

Correct Answer: A. Cherry angioma

Cherry angioma occurs with increasing age and has no clinical significance. It appears as a small, round, bright red-colored lesion on the trunk or extremities.

- **Option A:** Spider angiomas have a bright red center with legs that radiate outward. These lesions commonly are seen in liver disease and vitamin B deficiency, although they occasionally can occur without underlying pathology.
- **Option C:** A venous star results from increased pressure in veins, usually in the lower legs, and has an irregularly shaped bluish center with radiating branches.
- **Option D:** Purpura results from hemorrhage into the skin.

33. The nurse is working with an overweight client who has a high-stress job and smokes. This client has just received a diagnosis of type 2 diabetes mellitus and has just been started on an oral hypoglycemic agent. Which of the following goals for the client which if met, would be most likely to lead to an improvement in insulin efficiency to the point the client would no longer require oral hypoglycemic agents?

- A. Comply with medication regimen 100% for 6 months
- B. Quit the use of any tobacco products by the end of three months
- C. Lose a pound a week until the weight is within the normal range for height and exercise 30 minutes daily
- D. Practice relaxation techniques for at least five minutes five times a day for at least five months

Correct Answer: C. Lose a pound a week until the weight is within the normal range for height and exercise 30 minutes daily

When Type II diabetics lose weight through diet and exercise they sometimes have an improvement in insulin efficiency sufficient to the degree they no longer require oral hypoglycemic agents. A diet low in saturated fat, refined carbohydrates, high fructose corn syrup, and high in fiber and monounsaturated fats needs to be encouraged. Aerobic exercise for a duration of 90 to 150 minutes per week is also beneficial. The major target in T2DM patients, who are obese, is weight loss.

- **Option A:** If adequate glycemia cannot be achieved, metformin is the first-line therapy. Following metformin, many other therapies such as oral sulfonylureas, dipeptidyl peptidase-4 (DPP-4) inhibitors. Glucagon-like peptide-1 (GLP-1) receptor agonists, Sodium-glucose co-transporter-2 (SGLT2) inhibitors, pioglitazone, especially if the patient has fatty liver disease, alpha-glucosidase inhibitors, and insulin, are available.

- **Option B:** Smokers are 30 to 40 percent more likely to develop type 2 diabetes than nonsmokers. Smoking can also make managing the disease and regulating insulin levels more difficult because high levels of nicotine can lessen the effectiveness of insulin, causing smokers to need more insulin to regulate blood sugar levels.
- **Option D:** Techniques for stress reduction without a full-body movement component that have been studied in diabetes include stress management training, biofeedback training, and progressive muscle relaxation. Techniques that also include a movement component include yoga, Tai Chi, and Qigong.

34. When a client abuses a CNS depressant, withdrawal symptoms will be caused by which of the following?

- A. Acetylcholine excess
- B. Dopamine depletion
- C. Serotonin inhibition
- D. Norepinephrine rebound

Correct Answer: D. Norepinephrine rebound

CNS depressants, when abused, cause depletion of stimulating neurotransmitters. When the CNS depressant is stopped, the result is a rebound of excitatory or stimulating neurotransmitters, such as norepinephrine. Central Nervous System (CNS) depressants are medicines that include sedatives, tranquilizers, and hypnotics. These drugs can slow brain activity, making them useful for treating anxiety, panic, acute stress reactions, and sleep disorders.

- **Option A:** Most CNS depressants act on the brain by increasing activity of gamma-aminobutyric acid (GABA), a chemical that inhibits brain activity. This action causes the drowsy and calming effects that make the medicine effective for anxiety and sleep disorders. People who start taking CNS depressants usually feel sleepy and uncoordinated for the first few days until the body adjusts to these side effects.
- **Option B:** If a person takes CNS depressants long term, he or she might need larger doses to achieve therapeutic effects. Continued use can also lead to dependence and withdrawal when use is abruptly reduced or stopped. Suddenly stopping can also lead to harmful consequences like seizures.
- **Option C:** Acetylcholine, dopamine, and serotonin are not significant factors in the symptoms of withdrawal from a CNS depressant. When people overdose on a CNS depressant, their breathing often slows or stops. This can decrease the amount of oxygen that reaches the brain, a condition called hypoxia. Hypoxia can have short- and long-term mental effects and effects on the nervous system, including coma and permanent brain damage.

35. A newborn has been diagnosed with exstrophy of the bladder. The nurse should position the newborn:

- A. Prone
- B. Supine
- C. On either side
- D. With the head elevated

Correct Answer: C. On either side

- Option C: Placing the newborn in a side-lying position helps the urine to drain from the exposed bladder.
- Option A: It would position the child on the exposed bladder.
- Options B and D: Supine and head elevation are incorrect because they would allow the urine to pool.

36. Which of the following is a positive sign of pregnancy?

- A. Fetal movement felt by mother
- B. Enlargement of the uterus
- C. (+) pregnancy test
- D. (+) ultrasound

Correct Answer: D. (+) ultrasound

A positive ultrasound will confirm that a woman is pregnant since the fetus in utero is directly visualized.

- **Option A:** The first fetal movements which are felt by the mother are called quickening. One function of these movements is to alert the pregnant woman that she has a fetus growing in her uterus. Quickening often occurs between the 16th to the 22nd week of pregnancy. This is called a presumptive sign of pregnancy as the other movements of the woman's body can mimic early fetal movements such as flatus, peristalsis, and abdominal muscle contractions.
- **Option B:** From conception to delivery, a woman's uterus can grow from the size of a pear to the size of a watermelon. But pregnancy isn't the only potential reason for an enlarged uterus. An enlarged uterus is common and can be a symptom of a variety of medical conditions, some of which require treatment.
- **Option C:** An elevated β -hCG in the absence of viable pregnancy can occur for multiple reasons and has a broad differential diagnosis including miscarriage, ectopic pregnancy, pituitary hCG production, trophoblastic disease, and phantom hCG.

37. According to Piaget, a 5-year-old is at what stage of development:

- A. Sensorimotor stage
- B. Concrete operations
- C. Pre-operational
- D. Formal operation

Correct Answer: C. Pre-operational

Preoperational stage (2-7 years) is the stage when the use of language, the use of symbols and the concept of time occur. The foundations of language development may have been laid during the previous stage, but it is the emergence of language that is one of the major hallmarks of the preoperational stage of development. At this stage, kids learn through pretend play but still struggle with logic and taking the point of view of other people. They also often struggle with understanding the idea of constancy.

- **Option A:** Sensorimotor stage (0-2 years) is the stage when the child uses the senses in learning about the self and the environment through exploration. During this earliest stage of cognitive development, infants and toddlers acquire knowledge through sensory experiences and manipulating objects. A child's entire experience at the earliest period of this stage occurs through basic reflexes, senses, and motor responses.
- **Option B:** Concrete operations (7-12 years) when inductive reasoning develops. While children are still very concrete and literal in their thinking at this point in development, they become much more adept at using logic. The egocentrism of the previous stage begins to disappear as kids become better at thinking about how other people might view a situation. During this stage, children also become less egocentric and begin to think about how other people might think and feel. Kids in the concrete operational stage also begin to understand that their thoughts are unique to them and that not everyone else necessarily shares their thoughts, feelings, and opinions.
- **Option D:** Formal operations (2 till adulthood) is when abstract thinking and deductive reasoning develop. The final stage of Piaget's theory involves an increase in logic, the ability to use deductive reasoning, and an understanding of abstract ideas. At this point, people become capable of seeing multiple potential solutions to problems and think more scientifically about the world around them. The ability to think about abstract ideas and situations is the key hallmark of the formal operational stage of cognitive development. The ability to systematically plan for the future and reason about hypothetical situations are also critical abilities that emerge during this stage.

38. Vasectomy is a procedure done on a male for sterilization. The organ involved in this procedure is

- A. Prostate gland
- B. Seminal vesicle
- C. Testes
- D. Vas deferens

Correct Answer: D. Vas deferens

Vasectomy is a procedure wherein the vas deferens of the male is ligated and cut to prevent the passage of the sperms from the testes to the penis during ejaculation.

- **Option A:** The prostate is a gland about the size of a chestnut and weighs about 30 grams (about 1 ounce). It is part of the male reproductive system and is located inside the body. The prostate's most important function is the production of a fluid that, together with sperm cells from the testicles and fluids from other glands, makes up semen. The muscles of the prostate also ensure that the semen is forcefully pressed into the urethra and then expelled outwards during ejaculation.
- **Option B:** The seminal vesicles are a pair of glands that also include the prostate gland and the bulbourethral glands. The seminal vesicles are located in the pelvis superior to the rectum, inferior to the fundus of the bladder and posterior to the prostate. The seminal vesicles contribute around 70% of the fluid that will eventually become semen. The fluid that they secrete has a number of properties and components that are important for semen function and sperm survival.
- **Option C:** The testes are male sex glands that have both an endocrine and exocrine function. The testes are oval-shaped reproductive structures that are found in the scrotum and separated by the scrotal septum. The testis is the male reproductive gland that is responsible for producing sperm and making androgens, primarily.

39. An adolescent brings a physician's note to school stating that he is not to participate in sports due to a diagnosis of Osgood-Schlatter disease. Which of the following statements about the disease is correct?

- A. The condition was caused by the student's competitive swimming schedule.
- B. The student will most likely require surgical intervention.
- C. The student experiences pain in the inferior aspect of the knee.
- D. The student is trying to avoid participation in physical education.

Correct Answer: C. The student experiences pain in the inferior aspect of the knee.

Osgood-Schlatter disease occurs in adolescents in rapid growth phase when the infrapatellar ligament of the quadriceps muscle pulls on the tibial tubercle, causing pain and swelling in the inferior aspect of the knee. Osgood-Schlatter disease is commonly caused by activities that require repeated use of the quadriceps, including track and soccer.

- **Option A:** Swimming is not a likely cause. Osgood Schlatter disease is an overuse injury that occurs in active adolescent patients. It occurs secondary to repetitive strain and microtrauma from the force applied by the strong patellar tendon at its insertion into the relatively soft apophysis of the tibial tubercle. This force results in irritation and severe cases partial avulsion of the tibial tubercle apophysis.
- **Option B:** The condition is usually self-limited, responding to ice, rest, and analgesics. The condition is self-limited and occurs secondary to repetitive extensor mechanism stress activities such as jumping and sprinting. Ultimately, the condition is self-limiting but may persist for up to 2 years until the apophysis fuses. Treatment includes relative rest and activity modification from the offending activity as guided by the level of pain.
- **Option D:** Continued participation will worsen the condition and the symptoms. Force is increased with higher levels of activity and especially after periods of rapid growth. Rarely trauma may lead to a full avulsion fracture. Predisposing factors include poor flexibility of quadriceps and hamstrings or other evidence of extensor mechanism malalignment.

40. Nurse Christine is teaching an adolescent health class about the dangers of inhalant abuse; the nurse warns about the possibility of:

- A. Contracting an infectious disease, such as hepatitis or AIDS.
- B. Recurrent flashback events.
- C. Psychological dependence after initial use.
- D. Sudden death from cardiac or respiratory depression

Correct Answer: D. Sudden death from cardiac or respiratory depression.

Inhalants are CNS depressants; if taken in an excess amount, they can cause cardiac and respiratory depressions. It is impossible to control the inhalant dosage; therefore, death can occur. Prognosis depends upon follow up and motivational and cognitive behavior therapy. Support like Alcoholics-Anonymous groups play an important role in prognosis. Substance use leads to a number of problems among youth, including accidents, death, health effects, crime, unplanned pregnancy, and lower achievement.

- **Option A:** Substance use and/or substance use disorders (SUDs) are associated with many negative consequences among youth, including accidents, death, health effects, crime, unplanned pregnancy, and lower achievement. Substance use contributes to accidents, death, and a variety of hazardous behaviors. Sexual behaviors are increased during adolescent substance use.
- **Option B:** Posttraumatic stress disorder (PTSD) is a syndrome that results from exposure to real or threatened death, serious injury, or sexual assault. The symptoms of PTSD include persistently re-experiencing the traumatic event, intrusive thoughts, nightmares, flashbacks, dissociation (detachment from oneself or reality), and intense negative emotional (sadness, guilt) and physiological reaction on being exposed to the traumatic reminder.
- **Option C:** As with most behavioral and psychiatric disorders, the interplay between genetic risk, temperamental traits, and the environment may predispose to early use of substances of abuse. Once exposed to substances, brain reward systems reinforce substance use, resulting in repeated use and lower ability to control substance use.

41. A pregnant client is receiving magnesium sulfate for the management of preeclampsia. A nurse determines the client is experiencing toxicity from the medication if which of the following is noted on assessment?

- A. Presence of deep tendon reflexes.
- B. Serum magnesium level of 6 mEq/L.
- C. Proteinuria of +3.
- D. Respirations of 10 per minute.

Correct Answer: D. Respirations of 10 per minute.

Magnesium toxicity can occur from magnesium sulfate therapy. Signs of toxicity relate to the central nervous system depressant effects of the medication and include respiratory depression, loss of deep tendon reflexes, and a sudden drop in the fetal heart rate and maternal heart rate and blood pressure.

- **Option A:** Although deep tendon reflexes are more useful in assessing magnesium toxicity, the presence of clonus may indicate an increased risk of convulsions.
- **Option B:** Therapeutic levels of magnesium are 4-7 mEq/L. Magnesium sulfate is the first-line treatment for the prevention of primary and recurrent eclamptic seizures. For eclamptic seizures that are refractory to magnesium sulfate, lorazepam and phenytoin may be used as second-line agents.
- **Option C:** Proteinuria of +3 would be noted in a client with preeclampsia. Proteinuria is defined as the presence of at least 300 mg of protein in a 24-hour urine collection, a protein (mg/dL)/creatinine (mg/dL) ratio greater than or equal to 0.3, or a urine dipstick protein of 1+ (if a quantitative measurement is unavailable). Serial confirmations 6 hours apart increase the predictive value. Although more convenient, a urine dipstick value of 1+ or more (30 mg/dL) is not reliable in the diagnosis of proteinuria.

42. A nurse is giving dietary instructions to a client receiving levodopa. Which of the following food items should be avoided by the client?

- A. Goat yogurt
- B. Whole grain cereal

- C. Asparagus
- D. Apples

Correct Answer: B. Whole grain cereal

When administering levodopa, the client should avoid excessive intake of foods rich in pyridoxine (vitamin B6) which has been found to reduce the effects of levodopa. Large amounts of pyridoxine are also contained in some foods such as bananas, egg yolks, lima beans, meats, peanuts, and whole-grain cereals.

- **Options A, C, & D:** These are foods low in vitamin B6.

43. Disease of which of the following structures is most likely to affect electrolyte reabsorption?

- A. Glomerulus
- B. Renal tubules
- C. Bladder
- D. Renal pelvis

Correct Answer: B. Renal tubules

The renal tubules are the site of electrolyte reabsorption. From the PCT, the non-reabsorbed filtrates move on to the nephron loop. The nephron loop functionally divides into a descending and an ascending limb. In the ascending limb, Na moves passively down its concentration gradient in the thin segment of the ascending limb, and also sodium, potassium, and chlorides get reabsorbed together through a symporter in the thick segment of the ascending limb.

- **Option A:** The glomerulus is the site of electrolyte filtration. Glomerular filtration is the initial process in urine production. It is a passive process in which hydrostatic pressure pushes fluid and solutes through a membrane with no energy requirement.
- **Option C:** The bladder is where the urine is stored. The bladder is essentially a muscular sac with three layers. Its three layers are similar to the ureter except that the muscular layer has muscle fibers organized in inner and outer longitudinal layers and a middle circular layer.
- **Option D:** The renal pelvis is where urine travels as it moves from the collecting ducts to the ureter. Once the production of urine is complete, it travels through a structure called ureter for urine storage in the bladder. There are two ureters in a human body; one on each side; left and right.

44. Which of the following statements provides the rationale for using a hypotonic solution for a patient with FVD?

- A. A hypotonic solution provides free water to help the kidneys eliminate the solute.
- B. A hypotonic solution supplies an excess of sodium and chloride ions.
- C. Excessive volumes are recommended in the early postoperative period.
- D. A hypotonic solution is used to treat hyponatremia.

Correct Answer: A. A hypotonic solution provides free water to help the kidneys eliminate the solute.

Hypotonic solutions provide free water, which helps the kidneys eliminate solute. A solution that contains fewer dissolved particles (such as salt and other electrolytes) than is found in normal cells and blood. Hypotonic solutions are commonly used to give fluids intravenously to hospitalized patients in order to treat or avoid dehydration.

- **Option B:** If a cell is placed in a hypotonic solution, there will be a net flow of water into the cell, and the cell will gain volume. If the solute concentration outside the cell is lower than inside the cell, and the solutes cannot cross the membrane, then that solution is hypotonic to the cell.
- **Option C:** If a cell is placed in a hypertonic solution, there will be a net flow of water out of the cell, and the cell will lose volume. A solution will be hypertonic to a cell if its solute concentration is higher than that inside the cell, and the solutes cannot cross the membrane.
- **Option D:** In severely symptomatic hyponatremia, administer 3% sodium chloride; 100 mL intravenous (IV) bolus (repeat up to twice if symptoms persist). In mild to moderately symptomatic hyponatremia, 3% Sodium chloride, slow infusion (use sodium deficit formula to calculate the rate of infusion but recalculate rate with frequent sodium monitoring).

45. Which statement about an institutional ethics committee is correct?

- A. The ethics committee is an additional resource for clients and healthcare professionals.
- B. The ethics committee relieves health care professionals from dealing with ethical issues.
- C. The ethics committee would be the first option in addressing an ethical dilemma.
- D. The ethics committee replaces decision-making by the client and health care providers.

Correct Answer: A. The ethics committee is an additional resource for clients and healthcare professionals.

In hospitals throughout the United States, institutional ethics committees (IECs) have become a standard vehicle for the education of health professionals about biomedical ethics, for the drafting and review of hospital policy, and for clinical ethics case consultation.

- **Option B:** Institutional ethics committees (IECs) initially was proposed to review decisions to limit or withdraw life-sustaining treatment for neurologically devastated or dying adult patients and were viewed as a reasonable approach to the complex issues raised by decisions not to treat seriously ill or disabled newborns.
- **Option C:** An IEC that is engaged in providing ethics consultations should have a policy and procedure statement that includes the following: who can request a consultation, how the IEC is contacted, who responds to the request, how the consultation is conducted, who is to be included in the consultation, proper notification of affected persons, protection of patient confidentiality, how the consultation is documented, whether in some circumstances an ethics consultation is required, and the advisory nature of the consultant's recommendations.
- **Option D:** IECs help resolve conflicts about treatment decisions through case consultation, provide a forum for discussion of policies relating to institutional ethics, and educate their health care communities about ethical concepts.

46. Joshua is receiving furosemide and Digoxin, which laboratory data would be the most important to assess in planning the care for the client?

- A. Sodium level

- B. Magnesium level
- C. Potassium level
- D. Calcium level

Correct Answer: C. Potassium level

Diuretics such as furosemide may deplete serum potassium, leading to hypokalemia. When the client is also taking digoxin, the subsequent hypokalemia may potentiate the action of digoxin, placing the client at risk for digoxin toxicity. Most cases of hypokalemia result from gastrointestinal (GI) or renal losses. Renal potassium losses are associated with increased mineralocorticoid-receptor stimulation such as occurs with primary hyperreninism and primary aldosteronism.

- **Option A:** Diuretic therapy may lead to the loss of other electrolytes such as sodium, but the loss of potassium in association with digoxin therapy is most important. Increased delivery of sodium and/or non-absorbable ions (diuretic therapy, magnesium deficiency, genetic syndromes) to the distal nephron can also result in renal potassium wasting. GI losses are a common cause of hypokalemia with severe or chronic diarrhea being the most common extrarenal cause of hypokalemia.
- **Option B:** Hypomagnesemia generally is associated with poor nutrition, alcoholism, and excessive GI or renal losses, not diuretic therapy. Magnesium homeostasis involves the kidney (primarily through the proximal tubule, the thick ascending loop of Henle, and the distal tubule), small bowel (primarily through the jejunum and ileum), and bone. Hypomagnesemia occurs when something, whether a drug or a disease condition, alters the homeostasis of magnesium.
- **Option D:** Hypocalcemia is usually associated with inadequate vitamin D intake or synthesis, renal failure, or the use of drugs, such as aminoglycosides and corticosteroids. Calcitonin on the other hand lowers levels of calcium. Hypocalcemia is a common cause of tetany and neuromuscular irritability. An alkaline environment lowers calcium levels and induces tetany, whereas an acidic environment is protective.

47. Which assessment finding indicates that lactulose is effective in decreasing the ammonia level in the client with hepatic encephalopathy?

- A. Passage of two or three soft stools daily
- B. Evidence of watery diarrhea
- C. Daily deterioration in the client's handwriting
- D. Appearance of frothy, foul-smelling stools

Correct Answer: A. Passage of two or three soft stools daily.

Lactulose reduces serum ammonia levels by inducing catharsis, subsequently decreasing colonic pH and inhibiting fecal flora from producing ammonia from urea. Ammonia is removed with the stool. Two or three soft stools daily indicate the effectiveness of the drug. Lactulose, also known as 1,4 beta galactoside-fructose, is a non-absorbable synthetic disaccharide made up of galactose and fructose. The human small intestinal mucosa does not have the enzymes to split lactulose, and hence lactulose reaches the large bowel unchanged. Lactulose is metabolized in the colon by colonic bacteria to monosaccharides, and then to volatile fatty acids, hydrogen, and methane.

- **Option B:** Watery diarrhea indicates overdose. Since its intended use is to soften the stool quantity and increase the stool amount, its most significant side effect remains diarrhea. The diarrhea is dose-dependent and decreases in severity with a reduction in the dose of lactulose.

- **Option C:** Daily deterioration in the client's handwriting indicates an increase in the ammonia level and worsening of hepatic encephalopathy. From a pharmacokinetic standpoint, lactulose has negligible systemic absorption. However, like most laxatives, it has a propensity to bring about large changes in the body's fluid and electrolyte status. This activity would require periodic electrolyte monitoring, especially in the elderly and critically ill population.
- **Option D:** Frothy, foul-smelling stools indicate steatorrhea, caused by impaired fat digestion. Because lactulose has insignificant absorption by the gut and undergoes rapid excretion by the kidneys, its effects remain localized to the gut microenvironment.

48. Which action by the nurse indicates understanding of herpes zoster?

- A. The nurse covers the lesions with a sterile dressing.
- B. The nurse wears gloves when providing care.
- C. The nurse administers a prescribed antibiotic.
- D. The nurse administers oxygen.

Correct Answer: B. The nurse wears gloves when providing care.

Herpes zoster is shingles. Clients with shingles should be placed in contact precautions. Wearing gloves during care will prevent transmission of the virus. Use universal precautions in caring for the client to prevent transmission of disease to self or other clients. VZV can be transmitted to others and cause chickenpox in the person who has not previously had the disease.

- **Option A:** Covering the lesions with a sterile gauze is not necessary. Suggest the use of gauze to separate the lesions in skin folds. This reduces irritation, itching, and cross-contamination. Teach contact isolation. VZV is spread by contact with fluid from lesions containing viruses.
- **Option C:** Antibiotics are not prescribed for herpes zoster. Instruct the client in the use of antiviral medications, as prescribed. Antiviral agents are most effective during the first 72 hours of an outbreak when viruses are proliferating. Drugs of choice are acyclovir, famciclovir, or valacyclovir.
- **Option D:** Oxygen is not necessary for shingles. Instruct the client to avoid contact with pregnant women and immunocompromised individuals. Active lesions can be infectious, and immunosuppressed individuals are more susceptible.

49. A nurse is monitoring a client admitted to the hospital with a diagnosis of appendicitis. The client is scheduled for surgery in 2 hours. The client begins to complain of increased abdominal pain and begins to vomit. On assessment, the nurse notes that the abdomen is distended and the bowel sounds are diminished. Which of the following is the most appropriate nursing intervention?

- A. Administer dilaudid.
- B. Notify the physician.
- C. Call and ask the operating room team to perform the surgery as soon as possible.
- D. Reposition the client and apply a heating pad in a warm setting to the client's abdomen.

Correct Answer: B. Notify the physician

Based on the signs and symptoms presented in the question, the nurse should suspect peritonitis and should notify the physician. If left untreated, appendicitis can lead to abscess formation with the development of an enterocutaneous fistula. Diffuse peritonitis and sepsis can also develop, which may progress to significant morbidity and possible death.

- **Option A:** Administering pain medication is not an appropriate intervention. While in the emergency department, the patient must be kept NPO and hydrated intravenously with crystalloid. Antibiotics should be administered intravenously as per the surgeon. The responsibility for the consent falls on the surgeon.
- **Option C:** Scheduling surgical time is not within the scope of nursing practice, although the physician probably would perform the surgery earlier than the pre-scheduled time. The gold-standard treatment for acute appendicitis is to perform an appendectomy. Laparoscopic appendectomy is preferred over the open approach. Most uncomplicated appendectomies are performed laparoscopically.
- **Option D:** Heat should never be applied to the abdomen of a client with suspected appendicitis. Complications of appendicitis and appendectomy include surgical site infections, intra-abdominal abscess formation (3% to 4% in open appendectomy and 9% to 24% in laparoscopic appendectomy), prolonged ileus, enterocutaneous fistula, and small bowel obstruction.

50. A client has urge incontinence. Which of the following signs and symptoms would the nurse expect to find in this client?

- A. Inability to empty the bladder.
- B. Loss of urine when coughing.
- C. Involuntary urination with minimal warning.
- D. Frequent dribbling of urine.

Correct Answer: C. Involuntary urination with minimal warning.

A characteristic of urge incontinence is involuntary urination with little or no warning. Urge incontinence is a type of urinary incontinence in adults, which involves sudden compelling urges to void and results in involuntary leakage of urine. This is a serious and debilitating condition and has a social stigma attached to it. To avoid the huge socioeconomic burden and high morbidity associated with this condition, early diagnosis, treatment, and referral concepts must be widely practiced among clinicians.

- **Option A:** The inability to empty the bladder is urinary retention. Urinary retention is the inability to void urine voluntarily. It is a common problem around the world and can occur acutely or chronically. Acute retention most commonly occurs in men and can be a urologic emergency. Acute urinary retention in men most commonly occurs secondary to benign prostatic hyperplasia.
- **Option B:** Loss of urine when coughing occurs with stress incontinence. Stress urinary incontinence (SUI) is the involuntary, sudden loss of urine secondary to increased intraabdominal pressure that is bothersome or affecting the patient's quality of life. Physical activities precipitating SUI include laughing, sneezing, straining, coughing, or exercising. Patients may refer to a sudden loss of urine as "leaking," "dripping" or "flooding." The patient may initially present with urinary complaints of frequency, urgency, and dysuria.
- **Option D:** Frequent dribbling of urine is common in male clients after some types of prostate surgery or may occur in women after the development of a vesicovaginal or ureterovaginal fistula. It's common in older men because the muscles surrounding the urethra — the long tube in the penis that allows urine to pass out of the body — don't squeeze as hard as they once did. This leaves a small pool of urine at a dip in the urethra behind the base of the penis. In less than a

minute after finishing, this extra urine dribbles out.

51. A patient with Crohn's disease is receiving an infusion therapy of infliximab (Remicade). Which of the following should the nurse do while the patient is on this medication?

- A. Monitoring liver function test prior to the infusion
- B. Monitoring the vomiting episodes
- C. Monitoring the frequency and consistency of bowel movements
- D. Monitoring urine output and orientation

Correct Answer: C. Monitoring the frequency and consistency of bowel movements

Crohn's disease is a condition in which the body attacks the lining of the digestive tract, causing pain, diarrhea, weight loss, and fever. Infliximab works by reducing the inflammation in the colon, thereby decreasing diarrhea.

- **Options A, B, & D:** These are not related to this medication.

52. Which condition or treatment best ensures lung maturity in an infant?

- A. Meconium in the amniotic fluid
- B. Glucocorticoid treatment just before delivery
- C. Lecithin to sphingomyelin ratio more than 2:1
- D. Absence of phosphatidylglycerol in amniotic fluid

Correct Answer: C. Lecithin to sphingomyelin ratio more than 2:1.

- **Option C:** Lecithin and sphingomyelin are phospholipids that help compose surfactant in the lungs; lecithin peaks at 36 weeks and sphingomyelin concentrations remain stable.

53. Nurse Hazel receives emergency laboratory results for a client with chest pain and immediately informs the physician. An increased myoglobin level suggests which of the following?

- A. Liver disease
- B. Myocardial damage
- C. Hypertension
- D. Cancer

Correct Answer: B. Myocardial damage

Detection of myoglobin is a diagnostic tool to determine whether myocardial damage has occurred. Myoglobin, an oxygen-carrying protein found in cardiac muscle and striated skeletal muscle, presents an attractive alternative to CPK and LDH in the emergency department setting for identification of acute myocardial infarction. Myoglobin levels may be elevated in the serum within one hour after myocardial cell death with peak levels reached within four to six hours.

- **Option A:** Liver disease usually has elevated hepatic enzymes, elevated serum bilirubin, elevated serum ammonia, low levels of glucose, and elevated creatinine, among others. In chronic liver disease, there is inflammation and destruction of hepatocytes that leads to the release of aspartate aminotransferase (AST) and alanine aminotransferase (ALT), hence the high levels of these markers in the blood. Other parameters (ALP and GGT) of LFTs also appear elevated in cholestatic conditions like PBC.
- **Option C:** Initial laboratory tests for hypertension may include urinalysis; fasting blood glucose; hematocrit; serum sodium, potassium, creatinine, and calcium; and lipid profile. The evaluation consists of looking for signs of end-organ damage and consists of the following: blood workup including complete blood count, ESR, creatinine, eGFR, electrolytes, HbA1c, thyroid profile, blood cholesterol levels, and serum uric acid; 12 lead ECG (to document left ventricular hypertrophy, cardiac rate, and rhythm); and urine albumin to creatinine ratio.
- **Option D:** Cancer is diagnosed based on a number of diagnostic tests and procedures and radiology. The 2015 NHIS findings show that the utilization of cancer screening tests for cervical, colorectal, and breast cancer was below Healthy People 2020 target. In 2015, rates for Pap tests, mammography, colorectal cancer screening were 80%, 70%, and just above 60 %, respectively, whereas the HP 2020 targets are 93% for Pap tests, 81% for mammography, and 70.5 % for colorectal cancer screening.

54. Ryan underwent an open reduction and internal fixation of the left hip. One day after the operation, the client is complaining of pain. Which data would cause the nurse to refrain from administering the pain medication and to notify the health care provider instead?

- A. Left hip dressing dry and intact.
- B. Blood pressure of 114/78 mm Hg; pulse rate of 82 beats per minute.
- C. Left leg in functional anatomic position.
- D. Left foot cold to touch; no palpable pedal pulse.

Correct Answer: D. Left foot cold to touch; no palpable pedal pulse.

A left foot cold to touch without palpable pedal pulse represents an abnormal finding on neurovascular assessment of the left leg. The client is most likely experiencing some complication from surgery, which requires immediate medical intervention. The nurse should notify the health care provider of these findings.

- **Option A:** A dry and intact hip dressing is a normal assessment of findings that do not require medical intervention. A dressing is considered INTACT if portions of the white dressing border have lifted from the skin as long as the clear viewing window maintains full contact with the skin. The skin under the viewing window does not appear visibly soiled with exudate or blood. The skin under the viewing window does not appear dampened or moist with sweat, exudate, fluid, or blood.
- **Option B:** A blood pressure of 114/78 mm Hg and pulse rate of 82 beats per minute are normal assessment findings that do not require medical intervention. The normal range used in an adult is between 60 to 100 beats /minute with rates above 100 beats/minute and rates and below 60 beats per minute, referred to as tachycardia and bradycardia, respectively. The respiratory rate is the number of breaths per minute. The normal breathing rate is about 12 to 20 beats per minute in an average adult.
- **Option C:** A left foot in functional anatomic position are all normal assessment findings that do not require medical intervention. It functions as a rigid structure for weight-bearing and it can also

function as a flexible structure to conform to uneven terrain.

55. The physician has ordered an intravenous infusion of Pitocin for the induction of labor. When caring for the obstetric client receiving intravenous Pitocin, the nurse should monitor for:

- A. Maternal hypoglycemia
- B. Fetal bradycardia
- C. Maternal hyperreflexia
- D. Fetal movement

Correct Answer: B. Fetal bradycardia

The client receiving Pitocin should be monitored for decelerations. It is essential to monitor patient fluids (both intake and outtake) while administering oxytocin, as well as the frequency of uterine contractions, patient blood pressure, and heart rate of the unborn fetus.

- **Option A:** Oxytocin is primarily used by the obstetrician and the labor and delivery nurses. Healthcare workers who do prescribe this hormone should be familiar with its side effects. An inappropriate dosage of oxytocin can lead to dangerous tachycardia, arrhythmias, and myocardial ischemia. High dosages of oxytocin can cause uterine rupture, hypertonicity, and spasms.
- **Option C:** If oxytocin is given in doses too large or even slowly during 24 hours, the medication can exhibit an antidiuretic effect resulting in extreme water intoxication. This excessive dosing can result in coma, seizures, and even death in the mother.
- **Option D:** When oxytocin is given to women who are in the first or second stages of labor, or to women to cause induction of labor, uterine rupture, as well as maternal subarachnoid hemorrhages, maternal death, and even fetal death, can result.

56. A male client has approached the nurse asking for advice on how to deal with his alcohol addiction. Nurse Sally should tell the client that the only effective treatment for alcoholism is:

- A. Psychotherapy
- B. Total abstinence
- C. Alcoholics Anonymous (AA)
- D. Aversion therapy

Correct Answer B. Total abstinence

Total abstinence is the only effective treatment for alcoholism. For people who have severe alcohol use disorder, this is a key step. The goal is to stop drinking and give the body time to get the alcohol out of the system. That usually takes a few days to a week. Psychotherapy, attendance at AA meetings, and aversion therapy are all adjunctive therapies that can support the client in his efforts to abstain.

- **Option A:** With alcohol use disorder, controlling your drinking is only part of the answer. You also need to learn new skills and strategies to use in everyday life. Psychologists, social workers, or alcohol counselors can teach you how to change the behaviors that make you want to drink; deal with stress and other triggers; build a strong support system; and set goals and reach them.

- **Option C:** Group therapy or a support group can help during rehab and help the client stay on track as life gets back to normal. Group therapy, led by a therapist, can give the client the benefits of therapy along with the support of other members. Support groups aren't led by therapists. Instead, these are groups of people who have alcohol use disorder. Examples include Alcoholics Anonymous, SMART Recovery, and other programs. The peers can offer understanding and advice and help keep the client accountable. Many people stay in groups for years.
- **Option D:** Aversion therapy is a type of behavioral therapy that involves repeatedly pairing an unwanted behavior with discomfort. For example, a person undergoing aversion therapy to stop smoking might receive an electrical shock every time they view an image of a cigarette. The goal of the conditioning process is to make the individual associate the stimulus with unpleasant or uncomfortable sensations.

57. Which of the following is/are an example(s) of a health restoration activity? Select all that apply.

- A. Administering an antibiotic every day.
- B. Teaching the importance of handwashing.
- C. Assessing a client's surgical incision.
- D. Advising a woman to get an annual mammogram after age 50 years.
- E. Attending rehabilitation of a fractured arm.

Correct Answer: A, C, E

Health restoration activities help an ill client return to health. This would include taking an antibiotic every day and assessing a client's surgical incision. Hand washing and mammograms both involve healthy people who are trying to prevent illness.

- **Option A:** Rehabilitation or restoration is defined as "a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment".
- **Option B:** Disease prevention, understood as specific, population-based, and individual-based interventions for primary and secondary (early detection) prevention, aiming to minimize the burden of diseases and associated risk factors.
- **Option C:** Rehabilitation helps a child, adult, or older person to be as independent as possible in everyday activities and enables participation in education, work, recreation, and meaningful life roles such as taking care of a family. It does so by addressing underlying conditions (such as pain) and improving the way an individual function in everyday life, supporting them to overcome difficulties with thinking, seeing, hearing, communicating, eating, or moving around.
- **Option D:** Secondary prevention deals with early detection when this improves the chances for positive health outcomes (this comprises activities such as evidence-based screening programs for early detection of diseases or for prevention of congenital malformations; and preventive drug therapies of proven effectiveness when administered at an early stage of the disease).
- **Option E:** Rehabilitation is highly person-centered, meaning that the interventions and approach selected for each individual depends on their goals and preferences. Rehabilitation can be provided in many different settings, from inpatient or outpatient hospital settings to private clinics, or community settings such as an individual's home.

58. A client with histoplasmosis has an order for ketoconazole (Nizoral). The nurse teaches the client to do which of the following while taking this medication?

- A. Take the medication on an empty stomach.
- B. Take the medication with an antacid.
- C. Avoid exposure to sunlight.
- D. Limit alcohol to 2 ounces per day.

Correct Answer: C. Avoid exposure to sunlight.

The client should be taught that ketoconazole is an antifungal medication. The client should also avoid exposure to sunlight because the medication increases photosensitivity. Ketoconazole has approval for use in the treatment of fungal infections of the skin and systemic fungal infections. These include blastomycosis, histoplasmosis, paracoccidioidomycosis, coccidioidomycosis, and chromomycosis. The most common use of ketoconazole for skin infections is that of tinea versicolor.

- **Option A:** It should be taken with food or milk. Ketoconazole is available in tablet form and as a topical agent in creams, foams, and shampoos. It is also available in mixture products. Ketoconazole works as an antifungal agent by inhibiting the cytochrome P450 14 α -demethylase enzyme. This enzyme is responsible for inhibiting the biosynthesis of triglycerides and phospholipids by fungi. More specifically, ketoconazole inhibits the synthesis of lanosterol, a necessary precursor for ergosterol biosynthesis. Ergosterol is needed to maintain the integrity of the membrane of fungi. Without ergosterol, the fluidity of the membrane increases, which in turn prevents the fungal growth.
- **Option B:** Antacids should be avoided for 2 hours after it is taken because gastric acid is needed to activate the medication. The oral form of ketoconazole is used for systemic administration and must be taken at least two hours before any antacids. The high pH of the gastric contents would decrease absorption, so appropriate timing of administration is paramount to its absorption and subsequent efficacy. Adult and pediatric patients with achlorhydria should be given ketoconazole tablets with an acidic beverage to decrease pH and allow for optimal absorption.
- **Option D:** The client should avoid concurrent use of alcohol because the medication is hepatotoxic. Ketoconazole is contraindicated in patients with acute or chronic liver disease due to its association with hepatotoxicity, which can be fatal. It is contraindicated in adrenal insufficiency because high doses of ketoconazole inhibit adrenocortical function. Due to its hepatotoxic effects, patients taking oral ketoconazole should have their hepatic function monitored, which is through hepatic function tests such as aspartate transaminase (AST), alanine transaminase (ALT), alkaline phosphatase (ALP), bilirubin, albumin, and prothrombin time (PT).

59. During the shift of a triage nurse in the Emergency Department (ED), the following clients arrive. Which client needs the most rapid response to protect other clients in the ED from infection?

- A. A 72-year-old who must undergo tuberculosis (TB) testing after being exposed to TB during a recent international airplane flight.
- B. A 58-year-old who has a history of a methicillin-resistant *Staphylococcus aureus* (MRSA) abdominal wound infection.
- C. A 7-year-old who has a new pruritic rash and a possible chickenpox infection.

D. A 4-year-old who has paroxysmal coughing and whose sibling has pertussis.

Correct Answer: C. A 7-year-old who has a new pruritic rash and a possible chickenpox infection

Varicella or chickenpox is spread by airborne means and could be quickly transmitted to other clients in the ED. The child with a rash should be immediately isolated from the other clients through placement in a negative-pressure room.

- **Option A:** The client who has been exposed to TB does not set other clients at risk for infection because there are no symptoms of active TB. In the past few decades, there has been a concerted global effort to eradicate TB. These efforts had yielded some positive dividends especially since 2000 when the World Health Organization (WHO, 2017) estimated that the global incidence rate for tuberculosis has fallen by 1.5% every year.
- **Option B:** Prevention and control of MRSA infections include necessary infection-control steps like strict hand hygiene and adequate contact precautions. Contact precautions include the use of gowns, gloves, and possibly masks during clinical encounters with patients with MRSA infection. Infection control also may include keeping patients in isolated rooms or the same rooms of other patients who have an MRSA infection.
- **Option D:** Droplet precautions should be instituted for the clients with possible pertussis, but this can be achieved after isolating the child with possible chickenpox. Strict isolation is important while the patient remains infectious. Pertussis is contagious throughout the catarrhal phase and for 3 weeks after the onset of the paroxysmal phase.

60. A client went to the emergency room with a sudden onset of high fever and diaphoresis. Serum sodium was one of the laboratory tests taken. Which of the following values would you expect to see?

- A. 130 mEq/L.
- B. 148 mEq/L.
- C. 143 mEq/L.
- D. 139 mEq/L.

Correct Answer: B. 148 mEq/L.

The normal sodium level is 135-145 mEq/L. Diaphoresis and a high fever can lead to free water loss through the skin, resulting in increased sodium level (hypernatremia). Hypernatremia is defined as a serum sodium concentration of greater than 145 meq/l. The human body maintains sodium and water homeostasis by concentrating the urine secondary to the action of antidiuretic hormone (ADH) and increased fluid intake by a powerful thirst response.

- **Option A:** The basic mechanisms of hypernatremia are water deficit and excess solute. Total body water loss relative to solute loss is the most common reason for developing hypernatremia. Hypernatremia is usually associated with hypovolemia, which can occur in conditions that cause combined water and solute loss, where water loss is greater than sodium loss, or free water loss.
- **Option C:** Excessive sweating can occur due to exercise, fever, or high heat exposure. Renal losses can be seen in intrinsic renal disease, post-obstructive diuresis, and with the use of osmotic or loop diuretics. Hyperglycemia and mannitol are common causes of osmotic diuresis. Free water loss is seen with central or nephrogenic diabetes insipidus (DI) and also in conditions with increased insensible loss.

- **Option D:** Sodium excretion also involves regulatory mechanisms such as the renin-angiotensin-aldosterone systems. When serum sodium increases, the plasma osmolality increases which triggers the thirst response and ADH secretion, leading to renal water conservation and concentrated urine.

61. The nurse is reviewing a medication history of a client with BPH. Which medication should be recognized as likely to aggravate BPH?

- A. metformin (Glucophage)
- B. buspirone (BuSpar)
- C. inhaled ipratropium (Atrovent)
- D. ophthalmic timolol (Timoptic)

Correct Answer: C. inhaled ipratropium (Atrovent)

Atrovent is a bronchodilator, and its anticholinergic effects can aggravate urinary retention. Caution is necessary for the use of intranasal/inhaled ipratropium in patients with hypertrophic prostate. Ipratropium is an acetylcholine antagonist via blockade of muscarinic cholinergic receptors. Blocking cholinergic receptors decreases the production of cyclic guanosine monophosphate (cGMP). This decrease in the lung airways will lead to decreased contraction of the smooth muscles.

- **Option A:** Metformin does not affect the urinary system. Metformin is a biguanide drug that reduces blood glucose levels by decreasing the production of glucose in the liver, decreasing intestinal absorption, and increasing insulin sensitivity. Metformin decreases both the basal and postprandial blood glucose.
- **Option B:** BuSpar does not affect the urinary system. Buspirone's use is primarily for the treatment of generalized anxiety disorder (GAD). Typically, it is used as a second-line agent behind selective serotonin reuptake inhibitors (SSRIs) when a patient does not respond to or cannot tolerate the side effects of SSRIs.
- **Option D:** Timolol does not have a systemic effect. Timolol is a medication used in the treatment and management of open-angle glaucoma and ocular hypertension. It is in the beta-blocker class of drugs. Timolol can also be used in some instances to treat infantile hemangiomas, hypertension, myocardial infarction, migraine prophylaxis, and atrial fibrillation.

62. Identify the five most important elements in conducting disaster triage for multiple victims. Select all that apply.

- A. Assess level of consciousness
- B. Check airway, breathing, and circulation
- C. Monitor vital signs, including pulse and respirations
- D. Inquire about last tetanus shot
- E. Determine a history of allergies to food or medicine
- F. Know the list of current medications
- G. Identify past medical and surgical history
- H. Note color, presence of moisture and temperature of the skin

I. Visually examine for gross deformities, bleeding, and obvious injuries

Correct Answers: A, B, C, H, and I

The following would be appropriate for disaster triage. The other options would be discussed when the staff has time and means to collect additional data. It would be appropriate to include all items during nondisaster circumstances.

- **Option A:** A rapid assessment of the patient's neurologic status is necessary on arrival in the emergency department. This should include the patient's conscious state and neurological signs. This is assessed by the patient's Glasgow coma scale (GCS), pupil size and reaction, and lateralizing signs.
- **Option B:** The common acronym for performing the primary trauma survey is ABCDE, each letter representing an area of focus. If any abnormality is identified in one of the areas of focus, it should be resolved before a practitioner progresses further through the algorithm.
- **Option C:** Assess vital signs; A narrow pulse pressure and tachycardia indicate hypovolemic shock in a trauma setting until proven otherwise. Vital signs should be closely monitored and response to interventions should be assessed. In elderly population, normal vital signs should not be reassuring as hemodynamic changes such as tachycardia or hypotension may be delayed.
- **Option D:** Rendering care to a trauma patient can be a challenging endeavor due to the potential for numerous injuries. This part of evaluation should not be performed until the primary survey is completed.
- **Option E:** It should be performed after the primary survey and the initial stabilization is complete. The purpose of the secondary survey is to obtain pertinent historical data about the patient and his or her injury, as well as to evaluate and treat injuries not found during the primary survey.
- **Option F:** Patients who are hemodynamically unstable should be stabilized first before they are transferred to a trauma center. An attempt should be made to obtain the patient's history regarding the mechanism of injury since certain mechanisms can raise suspicion for certain injuries.
- **Option G:** The purpose of the secondary survey is to obtain a detailed history, perform a head-to-toe physical exam, reassess all vital signs, and obtain pertinent lab and imaging studies to identify injuries and metabolic abnormalities.
- **Option H:** In this, visualize all possible areas of skin. This includes the locations of lacerations, abrasions, ecchymosis, hematoma, marks, or bruises. Pay attention to the hidden areas. Back should be evaluated by log-rolling the patient, and the spine should be palpated for step-offs or focal tenderness.
- **Option I:** The extremities should be assessed for fractures by carefully palpating each extremity over its entire length for tenderness and decreased the range of motion. Assess the integrity of uninjured joints by both active and passive movements. Injured joints should also be immobilized, and radiographs should be obtained if necessary.

63. A male client with psoriasis visits the dermatology clinic. When inspecting the affected areas, the nurse expects to see which type of secondary lesion?

- A. Scale
- B. Crust
- C. Ulcer
- D. Scar

Correct Answer: A. Scale

A scale is the characteristic secondary lesion occurring in psoriasis. Although crusts, ulcers, and scars also are secondary lesions in skin disorders, they don't accompany psoriasis. Psoriasis is a chronic proliferative and inflammatory condition of the skin. It is characterized by erythematous plaques covered with silvery scales particularly over the extensor surfaces, scalp, and lumbosacral region.

- **Option B:** Impetigo is a common infection of the superficial layers of the epidermis that is highly contagious and most commonly caused by gram-positive bacteria. It most commonly presents as erythematous plaques with a yellow crust and may be itchy or painful. The lesions are highly contagious and spread easily.
- **Option C:** Decubitus ulcers are skin or soft tissue injuries that form due to prolonged pressure exerted over specific areas of the body. They should receive prompt treatment; otherwise, complications associated with these injuries can be fatal. The cornerstone of treatment is to reduce the pressure exerted at the site of the lesion.
- **Option D:** Hypertrophic scarring represents an undesirable variant in the wound healing process. In hypertrophic scars, excess connective tissue is deposited in the area of the original tissue wound. Hypertrophic scarring presents as an area of increased induration and often dyspigmentation over the site of a wound, especially in areas of increased wound tension.

64. A client with type 1 diabetes mellitus who is a multigravida visits the clinic at 27 weeks gestation. The nurse should instruct the client that for most pregnant women with type 1 diabetes mellitus:

- A. Weekly fetal movement counts are made by the mother.
- B. Contraction stress testing is performed weekly.
- C. Induction of labor begins at 34 weeks' gestation.
- D. Nonstress testing is performed weekly until 32 weeks' gestation.

Correct Answer: D. Nonstress testing is performed weekly until 32 weeks' gestation

For most clients with type 1 diabetes mellitus, non-stress testing is done weekly until 32 weeks' gestation and twice a week to assess fetal well-being.

- **Option A:** Increased fetal activity may minimize the impact of hyperglycemia on subsequent birth weight. The inactive fetus appears to be at a higher risk for glucose-mediated macrosomia.
- **Option B:** Contraction stress test may be done weekly with reassuring results of no heart rate deceleration in response to 3 contractions in 10 minutes.
- **Option C:** Nonstress test may be done twice a week with reassuring results of 2 heart rate acceleration in 20 minutes.

65. While examining a client's leg, the nurse notes an open ulceration with visible granulation tissue in the wound. Until a wound specialist can be contacted, which type of dressings is most appropriate for the nurse in charge to apply?

- A. Dry sterile dressing
- B. Sterile petroleum gauze

- C. Moist, sterile saline gauze
- D. Povidone-iodine-soaked gauze

Correct Answer: C. Moist, sterile saline gauze

Moist, sterile saline dressings support wound healing and are cost-effective. If the wound is infected and there are a lot of sloughs, which cannot be mechanically debrided, then a chemical debridement can be done with collagenase-based products. The goal is to help the wound heal as soon as possible by using an appropriate dressing material to maintain the right amount of moisture. When the wound bed is dry, use a dressing to increase moisture and if too wet and the surrounding skin is macerated, use material that will absorb excess fluid and protect the surrounding healthy skin.

- **Option A:** Dry sterile dressings adhere to the wound and debride the tissue when removed. Tulle is a non-adherent dressing impregnated with paraffin. It aids healing but doesn't absorb exudate. It also requires a secondary dressing to hold it in place. It is ideal for burns as one can add topical antibiotics to the dressing. It is known to cause allergies, and this limits its wider use.
- **Option B:** Petroleum supports healing but is expensive. The semipermeable dressing allows for moisture to evaporate and also reduces pain. This dressing also acts as a barrier to prevent environmental contamination. The semipermeable dressing does not absorb moisture and requires regular inspection. It also requires a secondary dressing to hold the semipermeable dressing in place.
- **Option D:** Povidone-iodine can irritate epithelial cells, so it shouldn't be left on an open wound. Plastic film dressings are known to absorb exudate and can be used for wounds with a moderate amount of exudate. They should not be used on dry wounds. They often require a secondary dressing to hold the plastic in place.

66. Which intervention would be included in the care plan for the client with an acute exacerbation of Ménière's disease?

- A. Instructing the client on the correct way to remove impacted cerumen.
- B. Speaking slowly and distinctly in a low-pitched, clear voice without yelling
- C. Providing a safe, quiet, dimly lit environment with enforced bed rest.
- D. Instructing the client to pull the top of the ear and back to instill ear drops.

Correct Answer: C. Providing a safe, quiet, dimly lit environment with enforced bed rest.

Ménière's disease is a chronic disorder of the inner ear involving sensorineural hearing loss, severe vertigo, and tinnitus. Typically, the client experiences sudden episodes of severe whirling vertigo with an inability to stand or walk, buzzing tinnitus that worsens before and during an episode, nausea, vomiting, and diaphoresis. The client's safety must be ensured along with decreasing exposure to extraneous stimuli. This is accompanied by providing the client with a quiet, dimly lit environment and bed rest.

- **Option A:** Instructions about removing cerumen are appropriate for a client with cerumen impaction. When treatment is appropriate, there are three recommended removal methods: cerumenolytic agents, irrigation, and manual removal. To prevent further accumulation of cerumen in patients with recurrent symptoms greater than one per year, patients may apply mineral oil to the external canal 10 to 20 minutes weekly.
- **Option B:** Speaking slowly and distinctly in a low-pitched, clear voice without yelling is appropriate for clients experiencing hearing loss. Clients with Ménière's disease are not deaf during acute

exacerbations. However, hearing loss may occur after repeated episodes.

- **Option D:** Ear drops are not the treatment of choice for an acute attack of Ménière's disease. A Cochrane review found low-level evidence to support the use of betahistine with substantial variability between studies. Medical therapy in many medical centers often starts with betahistine orally.

67. A 7-year-old client is brought to the E.R. He's tachypneic and afebrile and has a respiratory rate of 36 breaths/minute and a nonproductive cough. He recently had a cold. From his history, the client may have which of the following?

- A. Acute asthma
- B. Bronchial pneumonia
- C. Chronic obstructive pulmonary disease (COPD)
- D. Emphysema

Correct Answer: A. Acute asthma

Based on the client's history and symptoms, acute asthma is the most likely diagnosis. Patients will usually give a history of a wheeze or a cough, exacerbated by allergies, exercise, and cold. There is often diurnal variation, with symptoms being worse at night. Many asthmatics have nocturnal coughing spells but appear normal in the daytime. He's unlikely to have bronchial pneumonia without a productive cough and fever and he's too young to have developed COPD or emphysema.

- **Option B:** Recurrent episodes of acute shortness of breath, typically occurring at night or in the early morning hours, are the cardinal manifestation of bronchial asthma. Further symptoms include cough, wheezing, and a feeling of tightness in the chest. Auscultation of the chest reveals rales, rhonchi, and wheezes.
- **Option C:** It is associated with structural lung changes due to chronic inflammation from prolonged exposure to noxious particles or gases most commonly cigarette smoke. Chronic inflammation causes airway narrowing and decreased lung recoil. Patients usually present with complaints of chronic and progressive dyspnea, cough, and sputum production. Patients may also have wheezing and chest tightness.
- **Option D:** Most patients present with very nonspecific symptoms of chronic shortness of breath and cough with or without sputum production. As the disease process advances, the shortness of breath and cough progressively gets worse. Initially, there is exertional dyspnea with significant physical activity, especially arm work at or above shoulder level with progression to dyspnea with simple daily activities and even at rest. Some patients may present with wheezing because of the airflow obstruction.

68. A practitioner uses a urine specimen for culture and sensitivity via a straight catheter for a patient. What should the nurse do when collecting this urine specimen?

- A. Use a sterile specimen container.
- B. Collect urine from the catheter port.
- C. Inflate the balloon with 10 mL of sterile water.

D. Have the patient void before collecting the specimen.

Correct Answer: A. Use a sterile specimen container.

A culture attempts to identify the microorganisms present in the urine, and a sensitivity study identifies the antibiotics that are effective against the isolated microorganisms. A sterile specimen container is used to prevent contamination of the specimen by microorganisms outside the body (exogenous).

- **Option B:** The urine from the straight catheter flows directly into the specimen container. Collecting a urine specimen from a catheter port is necessary when the patient has a urinary retention catheter. A straight catheter has a single lumen for draining urine from the bladder.
- **Option C:** A straight catheter does not remain in the bladder and therefore does not have a 2nd lumen for water to be inserted into a balloon. This may result in no urine left in the bladder for the straight catheter to collect.
- **Option D:** A minimum of 3 mL of urine is necessary for a specimen for urine culture and sensitivity. Do not urinate for at least 1 hour before the test. If the client doesn't have the urge to urinate, he may be instructed to drink a glass of water 15 to 20 minutes before the test. Otherwise, there is no preparation for the test.

69. During the first 24 hours after thrombolytic therapy for ischemic stroke, the primary goal is to control the client's:

- A. Pulse
- B. Respirations
- C. Blood pressure
- D. Temperature

Correct Answer: C. Blood pressure

Controlling the blood pressure is critical because an intracerebral hemorrhage is the major adverse effect of thrombolytic therapy. Blood pressure should be maintained according to the physician and is specific to the client's ischemic tissue needs and risks of bleeding from treatment. Other vital signs are monitored, but the priority is blood pressure.

- **Option A:** Patients receiving thrombolytic therapy must undergo a constant neurologic and cardiovascular evaluation with blood pressure monitoring every 15 minutes during and after tPA infusion at least for 2 hours, then half-hourly for 6 hours and hourly for the next 16 hours after injection.
- **Option B:** Strict BP monitoring is essential to prevent complications. Thrombolytic therapy should be stopped urgently with any signs of neurologic deterioration, and the patient should receive an emergency computed tomography (CT).
- **Option D:** Fibrinolytic agents or any anticoagulants must be stopped immediately with any evidence of bleeding complications in a patient with ongoing fibrinolytic therapy. In the next step, supportive measures should be instituted, including volume correction and blood factor transfusion.

70. In reviewing the burned client's laboratory report of white blood cell count with differential, all the following results are listed. Which laboratory finding indicates the possibility of sepsis?

- A. The total white blood cell count is 9000/mm³.
- B. The lymphocytes outnumber the basophils.
- C. The “bands” outnumber the “segs.”
- D. The monocyte count is 1,800/mm³.

Correct Answer: C. The “bands” outnumber the “segs.”

Normally, the mature segmented neutrophils (“segs”) are the major population of circulating leukocytes, constituting 55% to 70% of the total white blood count. Fewer than 3% to 5% of the circulating white blood cells should be the less mature “band” neutrophils. A left shift occurs when the bone marrow releases more immature neutrophils than mature neutrophils. Such a shift indicates severe infection or sepsis, in which the client’s immune system cannot keep pace with the infectious process.

- **Option A:** The normal WBC count is 4,500 to 11,000/mm³. Burn injury causes systemic inflammatory response. The magnitude of the changes is roughly a function of burn size that is manifested by increased body temperature, increased WBC count, and increased metabolic rate, which makes diagnosis of infection in the burned patient more difficult.
- **Option B:** Peripheral blood lymphocytes represent the most important line of host defense against pathogenic microorganisms in humans. Researchers found a reduction in the number of lymphocytes as well as WBC, which may contribute to the impairment of general mechanisms for immune regulation during burn shock and transition of blood to the level of self-regulation.
- **Option D:** The normal monocyte count ranges from 100-700 per mm³ (2–8%). Severe burn and sepsis profoundly inhibit the functions of DC, monocyte, and macrophage. These phagocytes are the first cellular responders to severe burn injury after acute disruption of the skin barrier.

71. A teen patient is admitted to the hospital by his physician who suspects a diagnosis of acute glomerulonephritis. Which of the following findings is consistent with this diagnosis? Select all that apply.

- A. Urine specific gravity of 1.040.
- B. Urine output of 350 ml in 24 hours.
- C. Brown (“tea-colored”) urine.
- D. Generalized edema.
- E. Periorbital swelling.

Correct Answer: A, B, C & E

Acute glomerulonephritis is characterized by high urine specific gravity related to oliguria as well as dark “tea-colored” urine caused by large amounts of red blood cells. As the glomerular filtration rate (GFR) is decreased, symptoms like edema and hypertension occur, majorly due to the subsequent salt and water retention caused by the activation of the renin-angiotensin-aldosterone system.

- **Option A:** Glomerulonephritis and pyelonephritis cause a decreased urine volume and low specific gravity. In these diseases, damage to the kidney’s tubules affects the ability of the kidney to reabsorb water. As a result, the urine remains dilute.
- **Option B:** About half of the people with acute glomerulonephritis have no symptoms. If symptoms do occur, the first to appear are tissue swelling (edema) due to fluid retention, low urine volume, and production of urine that is dark because it contains blood.

- **Option C:** When kidneys are failing, the increased concentration and accumulation of substances in urine lead to a darker color which may be brown, red or purple. The color change is due to abnormal protein or sugar, high levels of red and white blood cells, and high numbers of tube-shaped particles called cellular casts.
- **Option D:** There is periorbital edema, but generalized edema is seen in nephrotic syndrome, not acute glomerulonephritis. Edema may first appear as puffiness of the face and eyelids but later is prominent in the legs. This is reported in approximately 85% of pediatric patients; edema may be mild (involving only the face) to severe, bordering on a nephrotic appearance.
- **Option E:** Patients often have a normal physical examination and blood pressure; most frequently, however, patients present with a combination of edema, hypertension, and oliguria. The physician should look for signs of fluid overload, like periorbital and/or pedal edema.

72. The type of fluid used to manipulate fluid shifts among compartments states is:

- A. Whole blood
- B. TPN
- C. Albumin
- D. Ensure

Correct Answer: C. Albumin

Albumin is a colloid that is used to manipulate fluid shifts among compartments. Albumin is also a colloid fluid administered to patients in need of fluid resuscitation, especially in the setting of trauma (i.e. hypovolemic shock) or in the setting of large-volume paracentesis. Strength albumin has over crystalloids is that it leads to an increase in intravascular oncotic pressure. There are some situations in which a patient needs improved oncotic pressure, and this characteristic can be advantageous.

- **Option A:** Whole blood is used to replace blood volume. Whole Blood is the simplest, most common type of blood donation. It's also the most flexible because it can be transfused in its original form, or used to help multiple people when separated into its specific components of red cells, plasma, and platelets.
- **Option B:** TPN is used for patients who are unable to take in food or fluid. Total parenteral nutrition (TPN) supplies all daily nutritional requirements. TPN can be used in the hospital or at home. Because TPN solutions are concentrated and can cause thrombosis of peripheral veins, a central venous catheter is usually required.
- **Option D:** Ensure is a high-calorie nutritional supplement; it is not used to manipulate fluid shifts. It contains well-balanced proportions of macronutrients that conform to guidelines for Dietary Reference Intake and the latest American Heart Association Guidelines for healthy diets.

73. A client with rheumatoid arthritis has been receiving hydroxychloroquine (Plaquenil) in recent months. The nurse tells the client to visit which of the following while on the treatment?

- A. Dentist
- B. Ophthalmologist
- C. Pulmonologist

D. Endocrinologist

Correct Answer: B. Ophthalmologist

Plaquenil can adversely affect the eyes such as retinal damage. Clients taking this medicine should be seen by an ophthalmologist at least once a year.

- **Options A, C, and D:** A dentist, pulmonologist, and endocrinologist will not be needed when taking this medication.

74. After receiving an oral dose of codeine for an intractable cough, the male client asks the nurse, “How long will it take for this drug to work?” How should the nurse respond?

- A. In 30 minutes
- B. In 1 hour
- C. In 2.5 hours
- D. In 4 hours

Correct Answer: A. In 30 minutes

Codeine’s onset of action is 30 minutes. Within the nervous system, activation of mu receptors in the midbrain is the dominant mechanism of opioid-induced analgesia. The cough reflex primarily gets mediated through the opioid receptors present in the medulla.

- **Option B:** Its peak concentration occurs in about 1 hour. In patients who are on around-the-clock continuous codeine with breakthrough pain, short-acting opioids may be an option. The dose can vary from 15 mg to 120 mg a day. It is, however, indicated in the management of prolonged cough (in specific populations like lung cancer) usually as 30 mg every 4 to 6 hours as needed.
- **Option C:** Its half-life, in 2.5 hours. Initial dosing and titration can be individualized depending on the patient’s health status, previous opioid exposure, attainment of therapeutic outcomes, and predicted or observed adverse events.
- **Option D:** Its duration of action is 4 to 6 hours. Codeine is useful in the treatment of various etiologies producing chronic cough. Also, 46% of patients with chronic cough do not have a distinct etiology despite a proper diagnostic evaluation. Codeine produces a decrease in cough frequency and severity in these patients.

75. A nurse is caring for a patient with a platelet count of 20,000/microliter. Which of the following is an important intervention?

- A. Observe for evidence of spontaneous bleeding.
- B. Limit visitors to family only.
- C. Give aspirin in case of headaches.
- D. Impose immune precautions.

Correct Answer: A. Observe for evidence of spontaneous bleeding.

Platelet counts under 30,000/microliter may cause spontaneous petechiae and bruising, particularly in the extremities. When the count falls below 15,000, spontaneous bleeding into the brain and internal

organs may occur. Headaches may be a sign and should be watched for.

- **Options B and D:** Thrombocytopenia does not compromise immunity, and there is no reason to limit visitors as long as any physical trauma is prevented.
- **Option C:** Aspirin disables platelets and should never be used in the presence of thrombocytopenia.

76. Mucosal barrier fortifiers are used in peptic ulcer disease management for which of the following indications?

- A. To inhibit mucus production.
- B. To neutralize acid production.
- C. To stimulate mucus production.
- D. To stimulate hydrogen ion diffusion back into the mucosa.

Correct Answer: C. To stimulate mucus production.

The mucosal barrier fortifiers stimulate mucus production and prevent hydrogen ion diffusion back into the mucosa, resulting in accelerated ulcer healing. Sucralfate, a polymer of sucrose with aluminum hydroxide, forms a protective coating on the mucosal lining, particularly in ulcerated areas. In the presence of acid, it becomes a gel that adheres to epithelial cells and ulcer craters.

- **Option A:** Misoprostol is a prostaglandin analog that increases the release of bicarbonate and mucin (a component of mucus) and reduces acid secretion by binding to prostaglandin receptors on parietal cells. Because NSAIDs (nonsteroidal anti-inflammatory drugs) inhibit prostaglandin formation, a synthetic prostaglandin such as misoprostol is sometimes given to reduce NSAID-induced damage.
- **Option B:** Antacids neutralize acid production. The antacids reduce the acid reaching the duodenum by neutralizing the acid present in the stomach. The salts' mechanism of neutralization of acid varies, and each salt has a different mechanism with the ultimate goal of acid neutralization.
- **Option D:** The mucosal barrier is the name given to the barrier in the stomach that resists the back-diffusion of hydrogen ions. The barrier is a layer of thick mucus secreted together with an alkaline fluid. Since the mucus is a gel, it entraps the alkaline fluid so that the stomach is coated.

77. A physical assessment is being performed on patient Geoff by Nurse Tine. During the abdominal examination, Nurse Tine should perform the four physical examination techniques in which sequence?

- A. Auscultation immediately after the inspection and then percussion and palpation.
- B. Percussion, followed by inspection, auscultation, and palpation.
- C. Palpation of tender areas first and then inspection, percussion, and auscultation.
- D. Inspection and then palpation, percussion, and auscultation.

Correct Answer: A. Auscultation immediately after the inspection and then percussion and palpation

With an abdominal assessment, auscultation always is performed before percussion and palpation because any abdominal manipulation, such as from palpation or percussion, can alter bowel sounds.

Assessing the patient's abdomen can provide critical information about his internal organs. Always follow this sequence: inspection, auscultation, percussion, and palpation. Changing the order of these assessment techniques could alter the frequency of bowel sounds and make the findings less accurate.

- **Option B:** Percussion should never precede inspection or auscultation, and any tender or painful areas should be palpated last. Assess for any visible mass, bulging, or asymmetry. Look for unusual coloring, scars, striae, lesions, petechiae, ecchymoses, spider angiomas, and suspicious-looking moles. Inspect the umbilicus and note any hernias. Look for pulsations. A thin patient may have a pulsation of the aorta in his epigastric area and possibly peristaltic waves.
- **Option C:** Lightly percuss all four quadrants of the patient's abdomen. You'll hear dull sounds over solid structures (such as the liver) and fluid-filled structures (such as a full bladder). Air-filled areas (such as the stomach) produce tympany. Dullness is a normal finding over the liver, but a large, dull area elsewhere may indicate a tumor or mass.
- **Option D:** Using a light, gentle, dipping motion, palpate for abnormalities, such as muscle guarding, rigidity, or superficial masses. Palpate clockwise, lifting fingers as you move from one location to another. After light palpation of the entire abdomen, place a non-dominant hand on the dominant hand to perform deeper palpation (1½ to 2 inches [3.8 to 5 cm]). However, avoid deep palpation if the patient may have a problem such as splenomegaly, appendicitis, or aneurysm or if palpation is painful for any reason.

78. A male client suffers acute respiratory distress syndrome as a consequence of shock. The client's condition deteriorates rapidly, and endotracheal (ET) intubation and mechanical ventilation are initiated. When the high-pressure alarm on the mechanical ventilator sounds, the nurse starts to check for the cause. Which condition triggers the high-pressure alarm?

- A. Kinking of the ventilator tubing.
- B. A disconnected ventilator tube.
- C. An ET cuff leak.
- D. A change in the oxygen concentration without resetting the oxygen level alarm.

Correct Answer: A. Kinking of the ventilator tubing

Conditions that trigger the high-pressure alarm include kinking of the ventilator tubing, bronchospasm or pulmonary embolism, mucus plugging, water in the tube, coughing or biting on the ET tube, and the client's being out of breathing rhythm with the ventilator.

- **Option B:** A disconnected ventilator tube or an ET cuff leak would trigger the low-pressure alarm. The low-pressure alarm indicates a possible disconnection or mechanical ventilator malfunction.
- **Option C:** The high peak pressure alarm indicates bronchospasm, retained secretions, obstruction of ET tube, atelectasis, acute respiratory distress syndrome (ARDS), or pneumothorax, among others.
- **Option D:** Changing the oxygen concentration without resetting the oxygen level alarm would trigger the oxygen alarm. Listen for alarms. Know the range in which the ventilator will set off the alarm and how to troubleshoot.

79. Nurse Kathy is assessing infantile reflexes in a 9-month-old baby; which of the following would she identify as normal?

- A. Persistent rooting
- B. Bilateral parachute
- C. Absent moro reflex
- D. Unilateral grasp

Correct Answer: B. Bilateral parachute

The parachute reflex appears to be normal at about 9 months of age. Persistence of primitive reflexes past 4 to 6 months or absence before this time when they should have been present is predictive of cerebral palsy. The presence of 5 or more abnormal reflexes correlated with the development of cerebral palsy or mental delays.

- **Option A:** The rooting reflex, mouth turning toward an object, is seen in response to light stroking on the cheek or bringing an object into the patient's visual field. Rooting begins at 32 weeks gestation and decreases after one month.
- **Option C:** The absence of the Moro reflex suggests CNS dysfunction. The Moro reflex is a protective response to the abrupt disruption of body balance and is elicited by pulling up on the arms with an infant in the supine position. The reflex develops by 28 weeks gestation and disappears by six to nine months.
- **Option D:** The grasping reflex can be elicited by providing sustained pressure on the palmar aspect of the hand, resulting in flexion of the patient's fingers grasping the object providing the pressure. This reflex develops by 28 weeks gestation and disappears by six months.

80. A male adult patient hospitalized for treatment of a pulmonary embolism develops respiratory alkalosis. Which clinical findings commonly accompany respiratory alkalosis?

- A. Nausea or vomiting
- B. Abdominal pain or diarrhea
- C. Hallucinations or tinnitus
- D. Lightheadedness or paresthesia

Correct Answer: D. Lightheadedness or paresthesia

The patient with respiratory alkalosis may complain of lightheadedness or paresthesia (numbness and tingling in the arms and legs). The exact history and physical exam findings are highly variable as there are many pathologies that induce the pH disturbance. These may include acute onset dyspnea, fever, chills, peripheral edema, orthopnea, weakness, confusion, light-headedness, dizziness, anxiety, chest pain, wheezing, hemoptysis, trauma, history of central line catheter, recent surgery, history of thromboembolic disease, history of asthma, history of COPD, acute focal neurological signs, numbness, paresthesia, abdominal pain, nausea, vomiting, tinnitus, or weight loss.

- **Option A:** Nausea, vomiting, abdominal pain, and diarrhea may accompany respiratory acidosis. Following a performance predominantly relying on anaerobic glycolysis, systemic acidosis may cause vomiting as a physiological response to drain H⁺ and thereby allow the stomach to add bicarbonate to the body
- **Option B:** Hyperchloremic acidosis is caused by the loss of too much sodium bicarbonate from the body, which can happen with severe diarrhea. In pathologies with profuse watery diarrhea,

bicarbonate within the intestines is lost through the stool due to increased motility of the gut. This leads to further secretion of bicarbonate from the pancreas and intestinal mucosa, leading to net acidification of the blood from bicarbonate loss.

- **Option C:** Hallucinations and tinnitus are associated with respiratory alkalosis or any other acid-base imbalance. Respiratory alkalosis in itself is not life-threatening; however, the underlying etiology may be. Always look for and treat the source of the illness. Interventions to reduce pH directly are typically not necessary as there is no mortality benefit to this therapy.

81. A nurse is caring for a client with a history of overdose of aspirin. The nurse suspects which of the following can be an early sign of aspirin toxicity?

- A. Unsteady gait
- B. Drowsiness
- C. Confusion
- D. Tinnitus

Correct Answer: D. Tinnitus

Acute ingestion of less than 150 mg/kg can result in severe toxicity. The earliest symptoms of acute aspirin poisoning may include ringing in the ears (tinnitus) and impaired hearing.

- **Options A, B, & C:** These are the late signs of aspirin poisoning.

82. A client with a bipolar disorder exhibits manic behavior. The nursing diagnosis is *Disturbed thought processes related to difficulty concentrating, secondary to flight of ideas*. Which of the following outcome criteria would indicate improvement in the client?

- A. The client verbalizes feelings directly during treatment.
- B. The client verbalizes a positive “self” statement.
- C. The client speaks in coherent sentences.
- D. The client reports feelings calmer.

Correct Answer: C. The client speaks in coherent sentences

A client exhibiting flight of ideas typically has a continuous speech flow and jumps from one topic to another. Speaking in coherent sentences is an indicator that the client’s concentration has improved and his thoughts are no longer racing. The defining characteristics of mania are increased talkativeness, rapid speech, decreased the need for sleep (unlike depression or anxiety in which the need for sleep exists, but there is an inability to sleep), racing thoughts, distractibility, increase in goal-directed activity, and psychomotor agitation.

- **Option A:** Some other hallmarks of mania are an elevated or expansive mood, mood lability, impulsivity, irritability, and grandiosity. If the individual experiencing these symptoms requires hospitalization, then this period automatically qualifies as true mania and not hypomania, even if the symptoms are present for less than one week.
- **Option B:** Mania must be distinguished from heightened energy and altered functioning that arises from substance use, medical conditions or other causes. Mania is a “natural” state which is the

characteristic of bipolar I disorder. A single manic phase is sufficient to make the diagnosis of bipolar I disorder, although most cases of bipolar I also involve hypomanic and depressed episodes.

- **Option D:** Many families bring their loved ones to the emergency room due to the excessive behavioral changes they have noticed over a brief period. Patients amid a manic phase commonly engage in goal-directed activities that may result in harmful consequences, such as spending excessive money, starting businesses unprepared, traveling, or promiscuity.

83. The most serious adverse effect of Alprostadil (Prostin VR pediatric injection) administration in neonates is:

- A. Bleeding tendencies.
- B. Apnea.
- C. Hypotension.
- D. Pyrexia.

Correct Answer: B. Apnea.

All items are adverse reactions of the drug. However, apnea appearing during the first hour of drug infusion occurs in 10-12 percent of neonates with congenital heart defects. Clinicians deciding to utilize alprostadil must be prepared to intubate and mechanically ventilate the infant. Careful monitoring for apnea or respiratory depression is mandatory. In some institutions, elective intubation occurs prior to the initiation of the medication.

- **Option A:** Alprostadil inhibits platelet aggregation and therefore can increase the risk of bleeding. Use intravenous alprostadil cautiously in patients with bleeding tendencies or receiving anticoagulant therapy. Additionally, caution should be used in patients at risk of coagulopathy.
- **Option C:** Alprostadil is known to cause hemodynamic instability causing hypotension/hypertension, and flushing. It is advisable to monitor blood pressure, heart rate, and temperature before and after the use of the drug.
- **Option D:** Alprostadil is a prostaglandin used to maintain patent ductus arteriosus in neonates with ductus arteriosus dependent congenital heart malformations. Alprostadil administration results in fever in 14% of treated neonates. The occurrence of fever in this setting often leads to extensive investigations to identify the source of fever, as well as to empiric antibiotic therapy and the postponement of cardiac surgery. These measures can lead to several neonatal complications.

84. Mrs. Santos is on her 5th pregnancy and has a history of abortion in the 4th pregnancy, and the first pregnancy was a twin. She is considered to be:

- A. G 4 P 3
- B. G 5 P 3
- C. G 5 P 4
- D. G 4 P 4

Correct Answer: B. G 5 P 3

Gravida refers to the total number of pregnancies including the current one. Para refers to the number of pregnancies that have reached viability. Thus, if the woman has had one abortion, she would be

considered Para 3. Twin pregnancy is counted only as 1.

- **Option A:** Gravida should be 5 since the woman is on her 5th pregnancy.
- **Option C:** Para should be 3 because twin pregnancies are counted as one and the woman has one abortion.
- **Option D:** Gravida should be 5 since the woman is on her 5th pregnancy.

85. The nurse is giving medication teachings to a client receiving theophylline. The nurse instructed the client to limit the intake of which of the following?

- A. Apple and banana
- B. Yogurt and cheese
- C. Tuna and oysters
- D. Cola and chocolate

Correct Answer: D. Cola and chocolate

Theophylline is a methylxanthine bronchodilator. The nurse instructs the client to limit the intake of xanthine-containing foods such as chocolate, cola, and coffee.

- **Options A, B, & C:** These food items can be eaten by a client taking theophylline.

86. A newly admitted client with streptococcal pharyngitis (tonsillitis) has been placed on droplet precaution. Which of the following statements indicates the best understanding of this type of isolation?

- A. Must maintain a spatial distance of 3 feet
- B. The client can be placed in a room with another client with measles (rubeola)
- C. A special mask (N95) should be worn when working with the client
- D. Gloves should be only worn when giving direct care

Correct Answer: A. Must maintain a spatial distance of 3 feet.

The most common forms of transmission of an organism in a client with tonsillitis are through coughing, sneezing, and talking. Droplets can travel no more than 3ft so precautions should be maintained when there is a possibility of entering this distance.

- **Option B:** The client requires a private room.
- **Option C:** An N95 mask is not required for this client. A face mask instead can be used when dealing with the client.
- **Option D:** Gloves, gowns, face masks, and eye protection should be worn in giving direct care.

87. Paul is admitted to the hospital due to metabolic acidosis caused by Diabetic ketoacidosis (DKA). The nurse prepares which of the following medications as an initial treatment for this problem?

- A. Regular insulin
- B. Potassium
- C. Sodium bicarbonate
- D. Calcium gluconate

Correct Answer: A. Regular insulin

Metabolic acidosis is anaerobic metabolism caused by lack of ability of the body to use circulating glucose. Administration of insulin corrects this problem. The discovery of insulin, along with the antibiotics, has led to a drastic decrease in mortality with DKA, down to 1%. Intravenous insulin by continuous infusion is the standard of care. Previous treatment protocols have recommended the administration of an initial bolus of 0.1 U/kg, followed by the infusion of 0.1 U/kg/h.

- **Option B:** Potassium is an essential mineral constituent of the human body and is the chief cation found within the intracellular fluid of all cells. Multiple salts of potassium exist and can be useful as a medication for a wide range of indications. The chief indication for potassium administration is potassium deficiency or hypokalemia, a condition in which serum potassium level falls below a critical range.
- **Option C:** Sodium bicarbonate is a medication used in the management and treatment of multiple disease pathologies. It is a general chemical compound by classification. Under arrhythmias and cardiovascular instability, sodium bicarbonate can be administered to adults at 4 to 8 hour IV infusions. Each dose should be monitored and planned in a standard protocol to help evaluate the degree of response expected and predicted to understand the necessity to advance further infusions or withhold administration, given its fluid overloading effects.
- **Option D:** Calcium gluconate belongs to a class of drugs called Antidotes; Calcium Salts. It is an over-the-counter and a prescription medicine used to treat symptoms of hypocalcemia and as a calcium supplement. Calcium gluconate is used to treat conditions arising from calcium deficiencies such as hypocalcemic tetany, hypocalcemia related to hyperparathyroidism, and hypocalcemia due to rapid growth or pregnancy.

88. A young woman is found comatose, having taken an unknown number of sleeping pills an unknown time before. An arterial blood sample yields the following values: pH 6.90, HCO₃⁻ 13 meq/liter, and PaCO₂ 68 mmHg. This patient's acid-base status is most accurately described as:

- A. Metabolic Acidosis
- B. Respiratory Acidosis
- C. Simultaneous Respiratory and Metabolic Acidosis
- D. Respiratory Acidosis with Complete Renal Compensation

Correct Answer: C. Simultaneous Respiratory and Metabolic Acidosis

Whenever the PCO₂ and HCO₃ are abnormal in opposite directions, ie, one above normal while the other is reduced, a mixed respiratory and metabolic acid-base disorder exists. When the PCO₂ is elevated and the [HCO₃⁻] reduced, respiratory acidosis and metabolic acidosis coexist.

89. The charge nurse on the cardiac unit is planning assignments for the day. Which of the following is the most appropriate assignment for the float nurse

that has been reassigned from labor and delivery?

- A. A one-week postoperative coronary bypass patient, who is being evaluated for placement of a pacemaker prior to discharge.
- B. A suspected myocardial infarction patient on telemetry, just admitted from the Emergency Department and scheduled for an angiogram.
- C. A patient with unstable angina being closely monitored for pain and medication titration.
- D. A postoperative valve replacement patient who was recently admitted to the unit because all surgical beds were filled.

Correct Answer: A. A one-week postoperative coronary bypass patient, who is being evaluated for placement of a pacemaker prior to discharge.

The charge nurse planning assignments must consider the skills of the staff and the needs of the patients. The labor and delivery nurse who is not experienced with the needs of cardiac patients should be assigned to those with the least acute needs. The patient who is one-week post-operative and nearing discharge is likely to require routine care.

- **Option B:** A new patient admitted with suspected MI and scheduled for angiography would require continuous assessment as well as coordination of care that is best carried out by experienced staff. Nurse-patient assignments are typically allocated based on estimated direct patient care requirements with little consideration for other activities that must be completed throughout a shift. In an effort to improve upon previous assignment methodologies, new measures and metrics were considered in this study to reduce and balance demands placed on nurses through the assignment of required activities.
- **Option C:** The unstable patient requires staff that can immediately identify symptoms and respond appropriately. In most hospitals, a unit charge nurse is responsible for the shift assignment of patients to nurses based on experience and past practices. The nurse-patient assignment process is also often a manual process in which the charge nurse must sort through multiple decision criteria in a limited amount of time.
- **Option D:** A postoperative patient also requires close monitoring and cardiac experience. Balancing workload among nurses on a hospital unit is important for the satisfaction and safety of nurses and patients. To balance nurse workloads, direct patient care activities, indirect patient care activities, and non-patient care activities that occur throughout a shift must be considered.

90. The nurse is caring for the male client who begins to experience seizure activity while in bed. Which of the following actions by the nurse would be contraindicated?

- A. Loosening restrictive clothing.
- B. Restraining the client's limbs.
- C. Removing the pillow and raising padded side rails.
- D. Positioning the client to the side, if possible, with the head flexed forward.

Correct Answer: B. Restraining the client's limbs.

The limbs are never restrained because the strong muscle contractions could cause the client harm. If the client is not in bed when seizure activity begins, the nurse lowers the client to the floor, if possible, protects the head from injury, and moves furniture that may injure the client. Other aspects of care are

as described for the client who is in bed.

- **Option A:** Nursing actions during a seizure include providing for privacy and loosening restrictive clothing. Loosen clothing from neck or chest and abdominal areas. Aids in breathing or chest expansion. Maintain in lying position, flat surface; turn head to side during seizure activity. Helps in the drainage of secretions; prevents the tongue from obstructing the airway.
- **Option C:** Use and pad side rails with the bed in lowest position, or place the bed up against the wall and pad floor if rails are not available or appropriate. Prevents or minimizes injury when seizures (frequent or generalized) occur while the patient is in bed. Note: Most individuals seize in place and if, in the middle of the bed, the individual is unlikely to fall out of bed.
- **Option D:** Turn head to side and suction airway as indicated. Insert plastic bite blocks only if the jaw relaxed. Helps maintain airway patency and reduces the risk of oral trauma but should not be “forced” or inserted when teeth are clenched because dental and soft-tissue damage may result. Note: Wooden tongue blades should not be used because they may splinter and break in the patient’s mouth.

91. A 24-year old female client has just been diagnosed with condylomata acuminata (genital warts). What information is appropriate to tell this client?

- A. This condition puts her at a higher risk for cervical cancer; therefore, she should have a Papanicolaou (Pap) smear annually.
- B. The most common treatment is metronidazole (Flagyl), which should eradicate the problem within 7 to 10 days.
- C. The potential for transmission to her sexual partner will be eliminated if condoms are used every time they have sexual intercourse.
- D. The human papillomavirus (HPV), which causes condylomata acuminata, can’t be transmitted during oral sex.

Correct Answer: A. This condition puts her at a higher risk for cervical cancer; therefore, she should have a Papanicolaou (Pap) smear annually.

Women with condylomata acuminata are at risk for cancer of the cervix and vulva. Yearly Pap smears are very important for early detection. Cervical cancer screening guidance comes from the American Cancer Society guidelines and does not require modification with the presence or absence of genital warts. There are no indications for females younger than 21 to be screened for cervical cancer.

- **Option B:** Because condylomata acuminata is a virus, there is no permanent cure. Topical therapies, cryotherapy, and surgical excision are available treatment options for patients. A formal treatment algorithm does not exist, and treatment depends on lesion location, morphology, and patient preference.
- **Option C:** Because condylomata acuminata can occur on the vulva, a condom won’t protect sexual partners. The patient should receive education on safe sex practice; this means using barrier protection, avoiding anal sex, and multiple partners. The patient should be encouraged to be tested for other sexually transmitted infections and maintain long-term follow-up.
- **Option D:** HPV can be transmitted to other parts of the body, such as the mouth, oropharynx, and larynx. While condyloma acuminata generally occur in the anogenital region, lesions may also be present in the oral cavity. Simultaneous lesions in the anogenital region suggest sexual transmission, but fomites may also be the source of condyloma acuminata present in the oral cavity.

92. A male patient is to receive a percutaneously inserted central catheter (PICC). He asks the nurse whether the insertion will hurt. How will the nurse reply?

- A. "You will have general anesthesia so you won't feel anything."
- B. "It will be inserted rapidly, and any discomfort is fleeting."
- C. "The insertion site will be anesthetized. Threading the catheter through the vein is not painful."
- D. "You will receive sedation prior to the procedure."

Correct Answer: C. "The insertion site will be anesthetized. Threading the catheter through the vein is not painful."

Pain related to PICC insertion occurs with the puncture of the skin. When inserting PICC lines, the insertion site is anesthetized so no pain is felt. Unnecessary pain should be prevented. Peripherally inserted central catheters (PICCs) are a subset of central venous catheters. They are 50 cm to 60 cm long single, double or triple lumen catheters that are placed in a peripheral arm vein and terminate in the thorax. They can be used for medium-term venous access, which is defined as anywhere between several weeks to 6 months.

- **Option A:** The patient will not receive general anesthesia or sedation. After placement and functionality have been confirmed, appropriate maintenance, which includes the use of stabilization devices, frequent flushing of line with saline and heparin-containing solutions, and sterile dressings replaced at regular intervals, should be employed to minimize complications.
- **Option B:** This statement is not correct. If not treated, pain can compromise the resolution of processes underlying disease, delay surgical recovery, and increase the costs of healthcare. In addition, multiple painful and stressful events experienced by clients induce acute physiological changes, as well as permanent structural and functional changes in the central nervous system. This can have long-term consequences, including chronic pain and altered neurobehavioral responses to pain. Appropriate use of environmental, behavioral, and pharmacological interventions may prevent, reduce, or eliminate the pain associated with procedures in clients.
- **Option D:** An exploratory descriptive study, that evaluated 43 neonates in the neonatal unit of a hospital in the city of São Paulo, indicated that 86.1% of PICC insertions were not accompanied by analgesia, and in 13.9% of cases, sedatives were used. Nonpharmacologic methods of pain relief and stress were not used. Therefore, a high frequency of sedatives was noted during PICC insertion in neonates. Midazolam is a benzodiazepine with a short and limited analgesic effect, commonly used in the NICU to produce sedation and muscle relaxation. Chloral hydrate is used for sedation, particularly when numbness is necessary without analgesia. An increased incidence of apnea and oxygen desaturation in term neonates less than one month of age and preterm infants less than 60 weeks of postnatal age, who received this barbiturate to perform magnetic resonance imaging, was identified.

93. A 40-year-old construction worker presents to the emergency department after falling from a height. Radiographic imaging is ordered to assess potential fractures. The radiologist pays special attention to the areas where two or more bones come together, as these are common sites of injury. Which term best describes these areas?

- A. Cartilage

- B. Tendon
- C. Ligament
- D. Joint

- **Option A:** Cartilage is a connective tissue that provides cushioning between bones in a joint.
- **Option B:** Tendons connect muscles to bones.
- **Option C:** Ligaments connect bones to bones.

94. The nurse must verify the client's identity before administration of medication. Which of the following is the safest way to identify the client?

- A. Ask the client his name.
- B. Check the client's identification band.
- C. State the client's name aloud and have the client repeat it.
- D. Check the room number.

Correct Answer: B. Check the client's identification band

The identification band is the safest way to know the identity of a patient whether he is conscious or unconscious. Nurses have a unique role and responsibility in medication administration, in that they are frequently the final person to check to see that the medication is correctly prescribed and dispensed before administration.

- **Option A:** Ask the client his name only after you have checked his ID band. Right patient' – ascertaining that a patient being treated is, in fact, the correct recipient for whom medication was prescribed. This is best practiced by nurses directly asking a patient to provide his or her full name aloud, checking medical wristbands if appropriate for matching name and ID number as on a chart.
- **Option C:** It is advisable not to address patients by first name or surname alone, in the event, there are two or more patients with identical or similar names in a unit. Depending on the unit that a patient may be in, some patients, such as psychiatric patients, may not wear wristbands or may have altered mentation to the point where they are unable to identify themselves correctly. In these instances, nurses are advised to confirm a patient's identity through alternative means with appropriate due diligence.
- **Option D:** The medical literature states that the value of nurses' critical thinking, the role of patient advocacy, and clinical judgment are not accounted for by the five rights framework that is commonly observed in modern practice to deliver patient-centered care. Research has shown a clear benefit in the value of nursing experience as it relates to decision-making capability; however, it states that further studies are necessary to achieve an improved understanding of how nurses apply intuition, the context of the situation, and interpretation.

95. Which of the following statements about intravenous administration of steroids is true?

- A. Steroids administered intravenously must be diluted.
- B. Steroids administered intravenously can be either in diluted or undiluted form.
- C. Steroids should be given IV push only.

D. Intravenous administration of steroids is contraindicated in acutely ill clients.

Correct Answer: B. Steroids administered intravenously can be either in diluted or undiluted form.

IV steroids can either be diluted or given without dilution. The route of administration for corticosteroids depends on many factors, primarily being the disorder treated. The route can be parenteral, oral, inhaled, topical, injected (intramuscular, intraarticular, intralesional, intradermal, etc.), and rectal. The clinician must keep many factors in mind upon deciding to initiate corticosteroid therapy, including the route of administration, preparation, dosing, frequency, and duration of treatment.

- **Option A:** Parenteral administration is often used in more emergent therapy as well as in those unable to tolerate medication by mouth. Oral administration is more common for chronic treatment. Patients should receive non-systemic therapy whenever possible, to minimize systemic exposure.
- **Option C:** When administering Methylprednisolone sodium succinate in high doses intravenously it should be given over a period of at least 30 minutes. Doses up to 250 mg should be given intravenously over a period of at least five minutes.
- **Option D:** The toxicity of corticosteroids accounts for one of the most common causes of iatrogenic illness in patients on chronic therapy. No specific reversal agent exists for corticosteroids. Their effect in excess is manageable by gradual taper and addressing the particular complication (e.g., hyperglycemia, infection, hypertension).

96. Nurse Cecile is teaching a female client about preventing osteoporosis. Which of the following teaching points is correct?

- A. Obtaining an X-ray of the bones every 3 years is recommended to detect bone loss.
- B. To avoid fractures, the client should avoid strenuous exercise.
- C. The recommended daily allowance of calcium may be found in a wide variety of foods
- D. Obtaining the recommended daily allowance of calcium requires taking a calcium supplement.

Correct Answer: C. The recommended daily allowance of calcium may be found in a wide variety of foods.

Premenopausal women require 1,000 mg of calcium per day. Postmenopausal women require 1,500 mg per day. It's often, though not always, possible to get the recommended daily requirement in the foods we eat.

- **Option D:** Supplements are available but not always necessary.
- **Option A:** Osteoporosis doesn't show up on ordinary X-rays until 30% of the bone loss has occurred. Bone densitometry can detect bone loss of 3% or less. This test is sometimes recommended routinely for women over 35 who are at risk.
- **Option B:** Strenuous exercise won't cause fractures. Weight-bearing aerobics exercises and resistance training are good for people with osteoporosis.

97. What is the priority nursing diagnosis for a client in the rehabilitative phase of recovery from a burn injury?

- A. Acute Pain
- B. Impaired Adjustment

C. Deficient Diversional Activity

D. Imbalanced Nutrition: Less than Body Requirements

Correct Answer: B. Impaired Adjustment

Recovery from a burn injury requires a lot of work on the part of the client and significant others. Seldom is the client restored to the preburn level of functioning. Adjustments to changes in appearance, family structure, employment opportunities, role, and functional limitations are only a few of the numerous life-changing alterations that must be made or overcome by the client.

- **Option A:** By the rehabilitation phase, acute pain from the injury or its treatment is no longer a problem. This stage starts with the closure of the burn and ends when the patient has reached the optimal level of functioning. The focus is on helping the patient return to a normal injury-free life. Helping the patient adjust to the changes the injury has imposed is also a priority.
- **Option C:** Diversional activity for pain is applicable during the intermediate phase of the burn injury. Provide diversional activities appropriate for age and condition. This helps lessen concentration on pain experience and refocus attention.
- **Option D:** Imbalanced nutrition is more appropriate during the emergent and intermediate phases of the burn injury. Appropriate guides to proper caloric intake include 25 kcal/kg body weight, plus 40 kcal per percentage of TBSA burn in the adult. As the burn wound heals, the percentage of burned areas is reevaluated to calculate prescribed dietary formulas, and appropriate adjustments are made.

99. Baroreceptors in the carotid artery walls and aorta respond to which of the following conditions?

A. Changes in blood pressure.

B. Changes in arterial oxygen tension.

C. Changes in arterial carbon dioxide tension.

D. Changes in heart rate.

Correct Answer: A. Changes in blood pressure.

Baroreceptors located in the carotid arteries and aorta sense pulsatile pressure. Baroreceptors are a type of mechanoreceptor allowing for the relay of information derived from blood pressure within the autonomic nervous system. Information is then passed in rapid sequence to alter the total peripheral resistance and cardiac output maintaining blood pressure within a preset, normalized range.

- **Option B:** Peripheral chemoreceptors in the aorta and carotid arteries are primarily stimulated by oxygen. Peripheral chemoreceptors include the carotid and aortic bodies. The carotid bodies are located at the bifurcation of the common carotid arteries and send information to the respiratory center via cranial nerve IX, the glossopharyngeal nerve. The aortic bodies are situated within the aortic arch, and send information to the brain via cranial nerve X, the vagus nerve. While capable of sensing carbon dioxide and hydrogen ions, the peripheral sensory system primarily detects low arterial oxygen levels (hypoxemia).
- **Option C:** Chemoreceptors in the medulla are primarily stimulated by carbon dioxide. Carbon dioxide is a lipid-soluble molecule that freely diffuses across the blood-brain barrier and forms hydrogen ions within the cerebrospinal fluid. Chemoreceptors, in turn, respond to pH changes as they become more acidic and send sensory input to the brain to stimulate hyperventilation. The result is a slow and deep breathing pattern that helps eliminate carbon dioxide from the body.

- **Option D:** Decreases in pulsatile pressure cause a reflex increase in heart rate. Pulse pressure has been previously correlated with arterial compliance and with hemodynamic factors such as stroke volume and peak aortic blood flow. Left ventricular systolic dysfunction reduces stroke volume and therefore also PP and systolic BP.

100. A nurse is assessing a pregnant client in the 2nd trimester of pregnancy who was admitted to the maternity unit with a suspected diagnosis of abruptio placentae. Which of the following assessment findings would the nurse expect to note if this condition is present?

- A. Absence of abdominal pain
- B. A soft abdomen
- C. Uterine tenderness/pain
- D. Painless, bright red vaginal bleeding

Correct Answer: C. Uterine tenderness/pain

In abruptio placentae, acute abdominal pain is present. Uterine tenderness and pain accompany placental abruption, especially with a central abruption and trapped blood behind the placenta. Observation of the fetal monitoring often reveals increased uterine resting tone, caused by failure of the uterus to relax in an attempt to constrict blood vessels and control bleeding.

- **Option A:** Placental abruption occurs when there is a compromise of the vascular structures supporting the placenta. In other words, the vascular networks connecting the uterine lining and the maternal side of the placenta are torn away. These vascular structures deliver oxygen and nutrients to the fetus.
- **Option B:** The abdomen will feel hard and board like on palpation as the blood penetrates the myometrium and causes uterine irritability. Disruption of the vascular network may occur when the vascular structures are compromised because of hypertension or substance use or by conditions that cause stretching the uterus. The uterus is a muscle and is elastic whereas the placenta is less elastic than the uterus. Therefore, when the uterine tissue stretches suddenly, the placenta remains stable and the vascular structure connecting the uterine wall to the placenta tears away.
- **Option D:** If bleeding is present, the quantity and characteristic of the blood, as well as the presence of clots, is evaluated. Remember, the absence of vaginal bleeding does not eliminate the diagnosis of placental abruption.