CCRN Pediatric Nurse Prep

Free Practice Test — 30 Real Exam-Style Questions

with full answer key & explanations

Practice Questions

Try all 30 first, then check the answer key at the back.

1. Deficiency of which nutrient is most commonly associated with the development of rickets in children?

A. Iron
B. Calcium
C. Vitamin C
D. Vitamin D

2. A concerned mother brings her 5-year-old child into the emergency department due to an unusual curvature in the back that she noticed recently. After a thorough assessment, the nurse explains the diagnosis to the mother. What is this condition called?

A. Spina Bifida
B. Scoliosis
C. Lordosis
D. Kyphosis

3. Which of the following is the PRIMARY treatment concern in the management of pediatric patients with severe burns?

A. Pain management
B. Airway management
C. Wound care
D. Fluid resuscitation

4. Which of the following conditions is NOT typically associated with a deficiency of maternal vitamin D during pregnancy?

A. Down syndrome
B. Rickets
C. Neonatal hypocalcemia
D. Neonatal hyperparathyroidism

5. What is the most common type of bone fracture that requires surgical intervention in pediatric patients?

A. Supracondylar humerus fracture
B. Greenstick fracture
C. Buckle (torus) fracture
D. Spiral fracture

6. Which pediatric renal conditions do NOT typically require referral to a nephrology specialist?

A. Nephrotic syndrome
B. Congenital renal abnormalities
C. Uncomplicated urinary tract infections (UTIs)
D. Chronic kidney disease

7. A nurse is caring for a 10-year-old child who is receiving chemotherapy. The nurse should instruct the child on the need to report which sign(s) and/or symptom(s) immediately?

A. Mild headache, earache
B. Lethargy, occasional dizziness
C. Mild discomfort at the injection site
D. Fever, bleeding gums

8. A nurse is caring for a child with severe hypokalemia who received an intravenous potassium infusion approximately 6 hours ago. Which finding indicates the patient is benefiting from this therapy?

A. Decreased muscle weakness and improved heart rhythm
B. Increased urine output
C. Elevated serum sodium levels
D. Reduced edema in extremities

9. Hyperkalemia is defined as a serum potassium level above which value?

A. 6.0 mEq/L
B. 5.0 mEq/L
C. 5.5 mEq/L
D. 4.5 mEq/L

10. Identify the electrolyte imbalance most likely to occur in a pediatric patient with severe dehydration due to persistent vomiting.

A. Hypernatremia
B. Hypokalemia
C. Hyperkalemia
D. Hyponatremia

11. A nurse is caring for a child with diabetic ketoacidosis (DKA). Which of the following laboratory findings is a common complication of DKA?

A. Hyponatremia
B. Hyperglycemia
C. Hypoglycemia
D. Hypocalcemia

12. A 7-year-old patient with thalassemia major has been prescribed deferoxamine for iron chelation. Which of the following outcomes would indicate this medication is therapeutic?

A. The patient will experience polyuria
B. The patient will experience a decrease in bilirubin levels
C. The patient's serum ferritin levels will decrease over time
D. The patient will experience an increase in hemoglobin

13. A nurse is monitoring a 4-year-old child with Type 1 diabetes mellitus (T1DM). Considering that metabolic control is crucial in preventing complications in these patients, caregivers must ensure strict blood glucose management. What is the leading complication associated with poor glycemic control in pediatric Type 1 diabetic patients?

A. Hyperosmolar hyperglycemic state (HHS)
B. Diabetic ketoacidosis (DKA)
C. Acute hypoglycemia
D. Hypertension

14. At which stage of development are children MOST likely to perceive hospitalization as temporary and non-threatening?

A. Preschoolers
B. Toddlers
C. School-age children
D. Adolescents

15. In pediatric patients, what condition is most commonly related to Acute Respiratory Distress Syndrome (ARDS)?

A. Traumatic brain injury (TBI)
B. Asthma
C. Congestive heart failure (CHF)
D. Sepsis

16. A pediatric nurse is assessing a child with chronic asthma and is evaluating the characteristics of the child's cough. The nurse expects this patient's cough to have which of the following characteristics?

A. Croupy
B. Brassy
C. Nocturnal and dry
D. Loose and productive

17. Pediatric bronchiolitis is often observed in which of the following scenarios?

A. Decreased airway resistance
B. Increased airway resistance
C. Increased lung compliance
D. Increased chest wall compliance

18. Which of the following conditions often presents with wheezing, dyspnea, and chest tightness, commonly peaking in children between 6 and 12 years of age?

A. Bronchiolitis
B. Pneumonia
C. Cystic fibrosis
D. Asthma

19. In pediatric patients with severe asthma exacerbations, which signs could indicate respiratory distress?

A. Wheezing and tachycardia
B. Wheezing and cyanosis
C. Wheezing and retractions
D. Wheezing and hypertension

20. A 2-year-old child presents with a cyanotic congenital heart defect and has undergone a corrective Blalock-Taussig shunt procedure. What is the primary purpose of this procedure?

A. To increase pulmonary blood flow
B. To create an unobstructed right ventricular outflow tract
C. To prevent ventricular hypertrophy and dysfunction from volume overload
D. To direct systemic venous return to the left atrium

21. A pediatric intensive care unit (PICU) nurse is caring for an 8-week-old infant diagnosed with patent ductus arteriosus (PDA). Which of the following assessment findings would the nurse expect for this infant?

A. Strong femoral pulses, higher blood pressure in arms than legs, and cool lower extremities
B. Feeding intolerance, diaphoresis, poor peripheral pulses, and acrocyanosis
C. Decreased appetite, shortness of breath, and cyanosis
D. Continuous murmur, shortness of breath, poor feeding, and failure to thrive

22. In pediatric patients, Kawasaki disease can lead to serious cardiovascular complications. Which of the following combinations of signs and symptoms would be indicative of Kawasaki disease?

A. Peeling skin on hands and thrombocytopenia
B. Swollen lymph nodes and elevated white blood cell count (WBC)
C. Fever for at least 5 days and polymorphous rash
D. Bilateral conjunctival injection and sore throat

23. All the following are appropriate diagnostic studies for a pediatric patient suspected of having Kawasaki disease, EXCEPT:

A. Pulmonary function tests (PFTs)
B. Echocardiogram
C. C-reactive protein (CRP) levels
D. Complete blood count (CBC)

24. A pediatric patient is experiencing severe hypoxemia secondary to acute respiratory distress syndrome (ARDS) and is being treated with nitric oxide (NO). What is the primary therapeutic mechanism of nitric oxide in this condition?

A. Systemic vasodilation and reduction of inflammation
B. Increased left ventricular preload and afterload
C. Relief of chest pain and reduction of systemic vascular resistance
D. Pulmonary vasodilation and improvement of oxygenation

25. Which of the following antihypertensive agents, indicated in the management of pediatric hypertension, has a common side effect of hyperkalemia?

A. Hydrochlorothiazide
B. Amlodipine
C. Lisinopril
D. Atenolol

26. A pediatric patient in the ICU has been administered digoxin (Lanoxin) for the treatment of heart failure. Which assessment finding indicates a potential complication related to this medication?

A. Excessive sweating
B. Visual disturbances
C. Diarrhea
D. Insomnia

27. During which phase of acute rheumatic fever do children typically present with carditis, polyarthritis, and erythema marginatum?

A. Subacute phase
B. Convalescent phase
C. Latent phase
D. Acute phase

28. Which of the following interventions is NOT included in the treatment plan for a child with cyanide poisoning?

A. Sodium thiosulfate
B. Amyl nitrite
C. Activated charcoal
D. Hydroxocobalamin (Cyanokit)

29. A pediatric patient has been diagnosed with Kawasaki disease. During which phase of the disease are coronary artery aneurysms most likely to develop?

A. Acute phase
B. Convalescent phase
C. Latent phase
D. Subacute phase

30. A 3-year-old female with severe congenital heart disease is nearing the end of her life. The cardiology team has informed the parents that there are no further curative treatments available. The palliative care team has consulted with the family, and they have decided not to pursue additional aggressive interventions. When a child is receiving end-of-life care, which intervention may be continued?

A. Intravenous access
B. Measurement of blood pressure
C. Nutritional supplements via NG tube
D. Continuous cardiac monitoring

Answer Key & Explanations

1. D — Vitamin D
Vitamin D deficiency is most commonly associated with rickets, which is characterized by the softening and weakening of bones in children. This condition leads to skeletal deformities such as bowed legs. Vitamin D is essential for calcium absorption, and without sufficient Vitamin D, bones cannot properly mineralize, leading to rickets. Iron is crucial for preventing anemia, while calcium also plays a critical role in bone health but requires Vitamin D for proper absorption. Vitamin C is important for immune function and collagen synthesis but is not directly related to preventing rickets.

2. B — Scoliosis
Answer: Scoliosis Scoliosis is a lateral curvature of the spine. It can appear in early childhood and may be noticed by a parent or during a routine pediatric check-up. Early detection and treatment are key to managing the condition effectively. Lordosis is an excessive inward curve of the spine, typically in the lower back. Kyphosis refers to an exaggerated forward rounding of the back, usually in the upper back. Spina Bifida is a birth defect where there is incomplete closing of the spine and membranes around the spinal cord.

3. B — Airway management
Answer: Airway management The most important intervention during the initial stabilization of any patient is the establishment of a functional patent airway. For pediatric burn patients, airway interventions such as nasopharyngeal airways (NPAs), oropharyngeal airways (OPAs), laryngeal mask airways (LMAs), and endotracheal intubation (ETTs) are crucial. The primary concern in managing a burn patient is ensuring a safe, effective airway due to the risk of inhalation injury and subsequent airway obstruction.

4. A — Down syndrome
Answer: Down syndrome Maternal vitamin D deficiency during pregnancy can lead to a variety of neonatal conditions related to bone and neurological development. Rickets is a disease characterized by softening and weakening of bones in children, primarily due to inadequate vitamin D. This condition can manifest as skeletal deformities, delayed growth, and in severe cases, hypocalcemia that may lead to seizures. Another condition, neonatal hypocalcemia, is a direct consequence of maternal vitamin D deficiency which results in low calcium levels in newborns, causing symptoms such as poor feeding, irritability, and seizures. Neonatal hyperparathyroidism may also develop as the fetal parathyroid gland attempts to compensate for the low calcium levels, leading to bone demineralization and fractures. Down syndrome, however, is a genetic disorder caused by the presence of an extra chromosome 21 and is not related to vitamin D levels during pregnancy. It results from nondisjunction during cell division rather than nutritional deficiencies.

5. A — Supracondylar humerus fracture
Answer: Supracondylar humerus fracture The supracondylar humerus fracture is one of the most common fractures in children that requires surgical intervention. This type of fracture often needs reduction and fixation due to the risk of neurovascular complications. Greenstick fractures are common in children due to the pliability of their bones, but they often only require immobilization. Buckle fractures, also common in children, typically heal well with casting. Spiral fractures might require surgical intervention if they are displaced, but are

less common than supracondylar fractures.

6. C — Uncomplicated urinary tract infections (UTIs)
Answer: Uncomplicated urinary tract infections (UTIs) Pediatric patients with uncomplicated UTIs typically do not require referral to a nephrology specialist and can be managed by their primary care physician. In contrast, conditions such as chronic kidney disease, nephrotic syndrome, and congenital renal abnormalities often require the specialized care of a nephrology specialist to manage and monitor the patient's health.

7. D — Fever, bleeding gums
Answer: Fever, bleeding gums. Prior to starting chemotherapy, the patient should be instructed to report fever and any signs of bleeding (like bleeding gums) immediately because these could be indicative of an infection or bleeding disorder, both of which are serious complications. Other signs and symptoms to report include chills, frequent infections, severe headache, and unusual bruising or petechiae. Mild headache and earache, occasional dizziness, and discomfort at the injection site are not typically serious and can often be managed with basic supportive care.

8. A — Decreased muscle weakness and improved heart rhythm
Answer: Decreased muscle weakness and improved heart rhythm Potassium is crucial for the normal functioning of cells, nerves, and muscles. Severe hypokalemia can cause muscle weakness, cramping, and cardiac arrhythmias. Administering intravenous potassium should improve these symptoms by restoring normal potassium levels, thereby improving muscle function and stabilizing heart rhythm.

9. C — 5.5 mEq/L
Answer: 5.5 mEq/L Hyperkalemia is a condition characterized by an abnormally high level of potassium in the blood. Potassium is a critical electrolyte for the function of nerve and muscle cells, including those in the heart. A serum potassium level above 5.5 mEq/L is generally used as the threshold for diagnosing hyperkalemia. In pediatric critical care, hyperkalemia can be particularly dangerous and may lead to serious cardiac arrhythmias or cardiac arrest if not promptly recognized and treated. Causes of hyperkalemia in children can include renal insufficiency, certain medications, and conditions such as tissue breakdown (hemolysis, rhabdomyolysis).

10. B — Hypokalemia
Answer: Hypokalemia Hypokalemia occurs in severe dehydration from persistent vomiting because of the loss of potassium (K+) in gastric secretions and the body's compensatory mechanisms. Clinical manifestations of hypokalemia include muscle weakness, arrhythmias, and in severe cases, paralysis. Management of hypokalemia involves electrolyte replacement and monitoring of cardiac function, ensuring the maintenance of potassium levels within the normal range.

11. B — Hyperglycemia
Answer: Hyperglycemia DKA is a serious condition characterized by high blood glucose levels, ketonemia, and metabolic acidosis due to insulin deficiency. DKA typically occurs in children with type 1 diabetes. The hyperglycemia leads to osmotic diuresis, dehydration, and electrolyte imbalances. Laboratory findings commonly include hyperglycemia (high blood sugar levels), ketonemia (presence of ketones in the blood), and acidosis (low blood pH) due to the accumulation of ketones. Other common laboratory findings include hyperkalemia (due to insulin deficiency and acidosis), hyperphosphatemia, and increased anion gap. Monitoring and correcting these lab abnormalities is crucial for the management and recovery of the child.

12. C — The patient's serum ferritin levels will decrease over time
Answer: The patient's serum ferritin levels will decrease over time Deferoxamine is used to bind excess iron in the body and promote its excretion, thereby preventing iron overload, which is common in patients with thalassemia major due to frequent blood transfusions. A therapeutic outcome of deferoxamine therapy is a decrease in serum ferritin levels, indicating a reduction in iron stores. Regular monitoring of serum ferritin and other iron parameters is essential to gauge the effectiveness of therapy and adjust doses as necessary. Polyuria is not an expected outcome of deferoxamine therapy.

13. B — Diabetic ketoacidosis (DKA)
Answer: Diabetic ketoacidosis (DKA) DKA is a serious complication that arises due to prolonged periods of hyperglycemia and lack of insulin. In pediatric patients, DKA can progress rapidly and lead to severe dehydration, electrolyte imbalances, and can even be life-threatening if not managed promptly. To minimize the risk of DKA, children with T1DM should have tightly monitored blood glucose levels, with insulin therapy adjustments performed as needed. Caregivers should also ensure appropriate carbohydrate intake and regular check-ups to early detect and address any glycemic management issues. Acute hypoglycemia, though dangerous, is typically a result of overcorrecting hyperglycemia or missed meals. Hypertension and Hyperosmolar hyperglycemic state (HHS) are less common in Type 1 diabetes but are critical complications in Type 2 diabetes.

14. A — Preschoolers
Answer: Preschoolers. At the preschool age (ages 3-5 years), children often perceive hospitalization as a temporary and non-threatening event. This age group might not fully understand the reason for hospitalization and could see it as a short separation or a form of temporary discomfort rather than a serious event.

15. D — Sepsis
Answer: Sepsis ARDS is a severe form of acute lung injury characterized by rapid onset of widespread inflammation in the lungs. It leads to significant respiratory distress and hypoxemia. In pediatric patients, sepsis is the most common underlying cause of ARDS. The systemic infection and inflammatory response can trigger the onset of ARDS. While trauma, including traumatic brain injury, and underlying cardiac conditions like CHF can lead to ARDS, they are less common causes compared to sepsis in the pediatric population. Asthma, though a respiratory condition, does not typically lead to ARDS.

16. C — Nocturnal and dry
Answer: Nocturnal and dry. Asthma often causes a nocturnal dry cough. This is due to the airway inflammation and mucus production associated with the disease. The cough typically worsens at night due to lying down and reduced air circulation. Loose and productive cough is typically linked to conditions where there is mucus production, such as bronchiectasis. A croupy cough is characteristic of viral laryngotracheobronchitis (LTB), with a bark-like sound. A brassy cough is loud and metallic, often associated with tracheitis and upper airway drainage.

17. B — Increased airway resistance
Answer: Increased airway resistance Pediatric bronchiolitis involves the inflammation of the small airways in the lungs, leading to increased airway resistance. This condition is generally caused by viral infections and results in difficulty breathing. The increase in airway resistance makes it harder for the child to breathe, often necessitating medical intervention. Proper management may include oxygen therapy and monitoring to ensure adequate oxygenation.

18. D — Asthma
Answer: Asthma Asthma is a chronic inflammatory disorder of the airways characterized by episodes of wheezing, dyspnea, chest tightness, and cough. It often presents in childhood and can have varying degrees of severity. This condition commonly peaks in children between 6 and 12 years of age. Triggers can include allergens, respiratory infections, exercise, and stress. Bronchiolitis primarily affects infants and presents with signs of lower respiratory tract infections, including cough and wheezing. Pneumonia is a lower respiratory infection marked by fever, cough, and difficulty breathing and can affect any age group. Cystic fibrosis is a genetic disorder that affects the lungs and other organs, presenting with chronic respiratory infections and thick mucus production, usually diagnosed in early childhood.

19. C — Wheezing and retractions
Answer: Wheezing and retractions In pediatric patients, severe asthma exacerbations often present with signs of respiratory distress such as wheezing and retractions. Wheezing is caused by the narrowing of airways, while retractions are visible indentations of the chest wall during breathing, indicating difficulty in moving air through the airways. Other signs like hypertension, tachycardia, and cyanosis may be present but are not direct indicators of respiratory distress due to asthma exacerbations.

20. A — To increase pulmonary blood flow
Answer: To increase pulmonary blood flow The Blalock-Taussig shunt is a surgical procedure used to increase pulmonary blood flow in patients with cyanotic congenital heart defects, such as Tetralogy of Fallot. This involves creating an anastomosis between the subclavian artery and the pulmonary artery, allowing oxygen-poor blood to bypass the obstruction and reach the lungs for oxygenation. This procedure helps alleviate the symptoms of cyanosis and improves oxygen saturation in the blood. It is often a palliative measure to stabilize the child's condition before further definitive surgical repair can be performed.

21. D — Continuous murmur, shortness of breath, poor feeding, and failure to thrive
Answer: Continuous murmur, shortness of breath, poor feeding, and failure to thrive A Patent Ductus Arteriosus (PDA) is a persistent opening between the aorta and the pulmonary artery, which remains open after birth. This condition causes increased pulmonary circulation and can lead to symptoms such as shortness of breath, a continuous murmur, poor feeding, and failure to thrive. Strong femoral pulses, higher blood pressure in arms than legs, and cool lower extremities are associated with Coarctation of the Aorta. Feeding intolerance, diaphoresis, poor peripheral pulses, and acrocyanosis are linked to severe pulmonary stenosis. Decreased appetite, shortness of breath, and cyanosis can be seen in conditions such as Transposition of the Great Arteries (TGA).

22. C — Fever for at least 5 days and polymorphous rash
Answer: Fever for at least 5 days and polymorphous rash Kawasaki disease is diagnosed based on clinical criteria. The child must have a fever lasting at least 5 days along with at least four of the following principal clinical features: Clinical Features Details Bilateral conjunctival injection without exudate Oral mucous membrane changes such as injected or fissured lips, injected pharynx, or strawberry tongue Peripheral extremity changes such as erythema of the palms or soles, edema of the hands or feet, and periungual desquamation Polymorphous rash typical of the disease Cervical lymphadenopathy with at least one lymph node greater than 1.5 cm in diameter

23. A — Pulmonary function tests (PFTs)
Answer: Pulmonary function tests (PFTs) Kawasaki disease is an acute febrile illness of unknown etiology that primarily affects children under the age of 5. It is characterized by inflammation of blood vessels throughout

the body (vasculitis) and can lead to coronary artery aneurysms. Diagnostic studies include echocardiograms, electrocardiograms (ECGs), blood tests such as C-reactive protein (CRP) to measure inflammation, and complete blood count (CBC). Pulmonary function tests (PFTs) measure lung function and are not used in the diagnosis of Kawasaki disease.

24. D — Pulmonary vasodilation and improvement of oxygenation
Answer: Pulmonary vasodilation and improvement of oxygenation ARDS is characterized by widespread inflammation in the lungs and can lead to severe hypoxemia. The inflammation results in increased capillary permeability, leading to fluid accumulation in the alveolar spaces, thereby impairing gas exchange. In critically ill pediatric patients with ARDS, treatment with inhaled nitric oxide is used to selectively dilate pulmonary vessels in well-ventilated areas of the lung, reducing pulmonary artery pressure and improving oxygenation without causing systemic hypotension. Symptoms of ARDS include hypoxemia, dyspnea, tachypnea, and cyanosis. The therapeutic goal of using nitric oxide in ARDS is to achieve selective pulmonary vasodilation, enhancing blood flow to better-ventilated alveoli and thus improving oxygenation.

25. C — Lisinopril
Answer: Lisinopril Lisinopril is an ACE inhibitor, which can increase potassium levels, causing hyperkalemia as a potential side effect. It is often used in the management of hypertension in pediatric patients. Atenolol, hydrochlorothiazide, and amlodipine typically do not cause hyperkalemia and are associated with other side effects.

26. B — Visual disturbances
Answer: Visual disturbances Digoxin is a cardiac glycoside used to improve the strength and efficiency of the heart, or to control the rate and rhythm of the heartbeat. Visual disturbances can be a sign of digoxin toxicity, a serious complication. Other signs of toxicity may include nausea, vomiting, and arrhythmias.

27. D — Acute phase
Answer: Acute phase Acute rheumatic fever is a systemic inflammatory disease that may develop after a group A Streptococcus infection. It affects the heart, joints, skin, and brain. The cause of this disease is an abnormal immune response to a streptococcal throat infection. The disease has three phases: the acute phase, subacute phase, and convalescent phase. The acute phase (weeks 0-2) presents with symptoms such as carditis, polyarthritis, erythema marginatum (a type of skin rash), Sydenham's chorea, and subcutaneous nodules. The subacute phase features residual symptoms and potential cardiac complications, while the convalescent phase involves the resolution of symptoms and recovery. The latent phase is not associated with acute rheumatic fever.

28. C — Activated charcoal
Activated charcoal is NOT used in the treatment of cyanide poisoning because cyanide is not effectively adsorbed by activated charcoal. The treatment of cyanide poisoning includes the use of hydroxocobalamin (Cyanokit), sodium thiosulfate, and amyl nitrite to neutralize the cyanide and enhance its excretion.

29. D — Subacute phase
Answer: Subacute phase Kawasaki disease is an acute febrile illness of unknown etiology that primarily affects children younger than 5 years of age. It causes inflammation in the walls of some blood vessels in the body. The disease typically progresses through three phases: acute, subacute, and convalescent. The subacute phase occurs about 2 to 4 weeks after the onset of fever and is characterized by peeling of the skin on hands and feet, thrombocytosis, and the highest risk of coronary artery aneurysms. Close monitoring of

cardiac function during this phase is crucial to manage potential complications.

30. A — Intravenous access
Answer: Intravenous access During end-of-life care, also known as palliative or comfort care, aggressive medical interventions are ceased. This includes stopping invasive procedures such as frequent measurement of blood pressure, nutritional supplements via NG tube, and continuous monitoring. However, intravenous access is often maintained for the administration of medications aimed at providing comfort, alleviating pain, and ensuring the child does not suffer.

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