NEONATAL & PEDIATRIC
FINAL EXAM

Study Guide and Practice Questions
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You can get access to our massive bank of TMC Practice Questions by Clicking Here. 😊
Why hello there!

Thank you so much for downloading this study guide! In this book, you will find a ton of helpful practice questions, all, of course, covering the topic of — Neonatal and Pediatric Respiratory Care.

These questions are designed to help you prepare for the Neo/Peds final exam in Respiratory Therapy School.

Hopefully, by going through these practice questions, you will be able to boost your knowledge to a whole new level and ace your final exam.

This is definitely one of the most important subjects in Respiratory Therapy School. Not to mention, it’s also the topic that some students struggle with.

With that being said, (hopefully) this study guide, along with the resources on our [website](#) and [YouTube channel](#) can help.

So if you’re ready, let’s go ahead and get started.

Good luck! 😊
1. Which of the following statements describe truncus arteriosus?
   A. The pulmonary artery arises from the left ventricle, and the aorta stems from the right ventricle.
   B. A large VSD allows total mixing of blood from the two ventricles.
   C. If SVR decreases relative to PVR, blood flow will be shunted from right to left, bypassing the lungs.
   D. All of the above

2. What factor is responsible for closure of the foramen ovale?
   A. Increased PaO2
   B. Increased pressure on the left side of the heart
   C. Blood flowing through the lungs
   D. High pulmonary vascular resistance

3. What is the incidence of respiratory distress syndrome (RDS) among infants born at less than 28 weeks of gestation?
   A. 30% to 40%
   B. 40% to 50%
   C. 60% to 80%
   D. >80%

4. What radiographic features is the therapist likely to see on a typical chest X-ray of an infant with MAS?
   A. Ground-glass appearance
   B. Complete whiteout
   C. Decreased lung volume
   D. Patchy areas of atelectasis

5. The therapist is treating a child with TOF who appears to be having a “tet” spell. What should the therapist suggest to treat this event?
   A. Beta blockers
   B. Knee-chest position to increase SVR
   C. Morphine sulfate
   D. All of the above
6. The therapist is setting pulse oximetry to determine the presence of right-to-left shunt in an infant suspected of having a heart defect. Where should the therapist place the pulse ox probe to obtain the most accurate measure of preductal oxygen saturation?
   A. Any finger of the right hand
   B. Any finger of the left hand
   C. Left earlobe
   D. Lower extremities

7. Which of the following physiologic mechanisms need to be in place to ensure adequate systemic perfusion in infants with hypoplastic left heart syndrome (HLHS)?
   A. Presence of an ASD
   B. Presence of a mitral regurgitation
   C. Adequate left atrial function
   D. Presence of a PDA

8. Blood samples are simultaneously obtained from both the right radial artery and the umbilical artery, and the arterial partial pressure of oxygen (PaO2) value from the right radial artery is 20 mm Hg greater than that analyzed from the umbilical artery sample. On the basis of this finding, which of the following conditions does the neonate likely have?
   A. PPHN
   B. MAS
   C. Neonatal pneumonia
   D. RDS

9. What ventilator settings should a therapist select for a newborn with respiratory distress syndrome?
   A. PIP 25-30 cm H2O
   B. PEEP 3-6 cm H2O
   C. VT 5-6 mL/kg
   D. Frequency 60 breaths per minute
10. Why does meconium staining occur predominantly in infants older than 36 weeks of gestational age?
   A. Because these infants can generate strong inspiratory efforts
   B. Because infants this age have significant cardiac outputs
   C. Because these infants demonstrate strong peristalsis
   D. Because these newborns have weak anal sphincter tone

11. Which of the following clinical manifestations is consistent with an atrial septal defect (ASD)?
   A. An ASD often causes congestive heart failure (because of decreased pulmonary blood flow).
   B. The right ventricle may become hypertrophic (right ventricular hypertrophy).
   C. Most patients with an ASD are symptomatic in the neonatal intensive care unit, presenting with right atrial enlargement.
   D. Chest radiographs are usually abnormal.

12. What is the typical type of airway obstruction that occurs with MAS?
   A. Ball valve
   B. Complete
   C. No obstruction
   D. Airway inflammation

13. How should the therapist interpret a preductal-to-postductal PaO2 difference of 8 mm Hg in a neonate?
   A. Unreliable data
   B. Absence of ductal shunting
   C. Presence of ductal shunting
   D. Inconclusive data

14. Which of the following congenital cardiac anomalies is classified as conotruncal, associated with a “boot-shaped” appearance of the heart?
   A. Tetralogy of Fallot
   B. Transposition of the great vessels
15. Which of the following medications should the therapist recommend for an infant with apnea of prematurity experiencing episodes of apnea?
   A. Caffeine
   B. Benzodiazepines
   C. Antibiotics
   D. Doxapram

16. Which of the following therapeutic interventions is generally needed to treat transient tachypnea of the newborn (TTN)?
   A. Endotracheal intubation
   B. 30%-40% oxygen hood
   C. Bronchial hygiene therapy
   D. Bronchodilator therapy

17. Which of the following blood gas parameters should the therapist target when managing patients with PPHN?
   A. SaO2 > 95%
   B. PaCO2 35-45 mm Hg
   C. pH 7.35-7.45
   D. All of the above

18. Eight hours after being born, a baby presents with cyanosis despite administration of adequate ventilation, tachypnea, and retractions. Which of the following conditions should the therapist suspect is affecting this newborn?
   A. RDS
   B. BPD
   C. PPHN
   D. GBS pneumonia

19. Which of the following clinical features characterize a critical aortic stenosis in a neonate?
A. Chest radiography reveals pleural effusion and pulmonary engorgement.
B. The neonate often has metabolic alkalosis.
C. The neonate presents in cardiogenic shock with hypotension.
D. These infants are rarely symptomatic during the first month of life.

20. When using sub-ambient oxygen therapy, what range of oxygen saturations should the therapist target?
   A. >95% to 95%
   B. 85% to 90%
   C. 75% to 85%
   D. 70% to 80%

21. At birth, what factor causes dilation of the pulmonary vascular bed and a decrease in the pulmonary vascular resistance?
   A. Increased arterial partial pressure of oxygen (PaO2)
   B. Decreased arterial partial pressure of carbon dioxide (PaCO2)
   C. Lung inflation
   D. Circulating indomethacin

22. While reviewing the chest X-ray of a newborn, the therapist observes the following features:
   I. Pulmonary vascular congestion
   II. Prominent perihilar streaking
   III. Fluid in the interlobular fissures
   IV. Hyperexpansion
   V. Flat diaphragm

Which of the following conditions does this patient likely have?
   A. RDS
   B. Persistent pulmonary hypertension of the newborn
   C. Transient tachypnea of the newborn
   D. Barotrauma
23. While reviewing the chest X-ray of a newborn, the therapist observes the following features: continuous diaphragm sign and linear bands of air paralleling the left side of the heart and the descending aorta with extension superiorly along the great vessels into the neck. Which of the following conditions does this patient likely have?
   A. Pneumothorax
   B. Cardiac tamponade
   C. Pneumomediastinum
   D. Pneumopericardium

24. How should the therapist interpret a lecithin-to-sphingomyelin (L:S) ratio of 2:1?
   A. The presence of lung maturity
   B. A gestational age of less than 28 weeks
   C. The likelihood of RDS
   D. Laboratory error

25. The therapist is treating a child with a congenital heart defect who is unresponsive to oxygen therapy. Although the chest X-ray is relatively normal, the heart is described as “egg-shaped.” Which of the following heart defects is more consistent with this description?
   A. Complete transposition of the great arteries
   B. Coarctation of the aorta
   C. Truncus arteriosus
   D. Tetralogy of Fallot

26. Which of the following strategies can be used to increase pulmonary vascular resistance (PVR) in infants with hypoplastic left heart syndrome (HLHS)?
   A. FiO2 < 0.21
   B. Induce hypocapnia
   C. Administer indomethacin
   D. Close the PDA
27. Which of the following methods is involved in the management of a PDA?
   A. Increasing the circulating volume
   B. Maintaining/optimizing the hematocrit at the low end of normal hemoglobin level
   C. Administering indomethacin
   D. Administering digoxin

28. For which of the following congenital cardiac defects may spontaneous closure of the ductus arteriosus be catastrophic?
   A. Tetralogy of Fallot with pulmonary atresia
   B. Hypoplastic left heart syndrome
   C. Severe coarctation of the aorta
   D. All of the above

29. The therapist is reviewing the chest radiograph of a newborn, preterm infant and observes diffuse, fine, reticulogranular densities, which provide a ground-glass appearance. On the basis of these radiographic findings, which of the following conditions should the therapist suspect is present?
   A. Persistent pulmonary hypertension of the newborn
   B. Respiratory distress syndrome
   C. Bronchopulmonary dysplasia
   D. Pulmonary interstitial emphysema

30. In addition to Group B Streptococcus, which of the following microorganisms are responsible for nosocomial pneumonia acquired after delivery?
   A. RSV
   B. Escherichia coli
   C. Pseudomonas spp.
   D. Haemophilus influenza

31. Which of the following risk factors contribute to the pathogenesis of BPD?
   A. Lung immaturity
   B. Respiratory failure
C. Oxygen supplementation
D. All of the above

32. What is the significance of an infant with RDS demonstrating a grunt during each exhalation?
   A. Resolution of the RDS
   B. An effort to maintain its functional residual capacity (FRC)
   C. An attempt to overcome increased airway resistance
   D. Impending death

33. The therapist is assessing a newborn on the mechanical ventilator. The neonate shows clear signs of respiratory distress, and lung auscultation reveals shifting of the PMI towards the left and breath sounds decreased on the right. What should the therapist suspect this newborn developed?
   A. Right-sided pneumothorax
   B. Severe right lung atelectasis
   C. Right pleural effusion
   D. Left-sided atelectasis

34. When neonatal pneumonia is suspected, how long does an infant generally receive broad-spectrum antibiotics?
   A. 24 hours
   B. 48 hours
   C. 72 hours
   D. 96 hours

35. Identify the following congenital cardiac anomaly:
   A. Truncus arteriosus
   B. Hypoplastic left ventricle
   C. Transposition of the great vessels
   D. Ventricular septal defect

36. Which of the following medications is the most common preoperative treatment to minimize preductal constriction until surgical correction of coarctation of the aorta can be achieved?
A. Indomethacin  
B. Prostaglandin E1  
C. Negative inotropes  
D. Diuretics  

37. When should a therapist consider intubation and mechanical ventilation for a newborn with respiratory distress?  
   A. FiO2 > 40% to 70%  
   B. SpO2 < 85%  
   C. CPAP of 5-10 cm H2O  
   D. All of the above  

38. When should a therapist consider CPAP for a newborn with respiratory distress?  
   A. FiO2 > 40% to 70% and SpO2 < 85%  
   B. FiO2 > 90% and SpO2 < 95%  
   C. Respiratory rate of 40 breaths per minute  
   D. PaO2 50 to 60 mm Hg  

39. A therapist monitoring an infant after a Blalock-Tausig shunt placement notices a significant drop in the end-tidal carbon dioxide (ETCO2) despite no changes in the infant’s respiratory rate. How should the therapist interpret this change?  
   A. The infant has dramatically improved ventilation by breathing deeply.  
   B. The ETCO2 monitor is not accurate.  
   C. Loss of pulmonary blood flow through the shunt  
   D. Tricuspid regurgitation  

40. Which of the following blood flow patterns occurs in complete transposition of the great arteries?  
   A. The systemic venous blood passes through the right heart chambers.  
   B. The pulmonary venous blood traverses the left side of the heart and then returns to the systemic circulation.  
   C. When PVR increases relative to SVR, blood flow increases through the ductus arteriosus.
D. Systemic venous blood flows to the lungs after leaving the right ventricle.

41. Which of the following clinical pathophysiologic manifestations are consistent with a large ventricular septal defect (VSD)?
   A. The majority of the blood flow is shunted from left right to right left.
   B. Shunting typically occurs during ventricular diastole, which causes left atrial enlargement.
   C. Chest radiography reveals a decreased cardiac silhouette and decreased pulmonary vascular markings, decreasing pulmonary blood flow.
   D. Thickening and fibrosis of the pulmonary veins develop, decreasing pulmonary artery pressure.

42. A newborn suspected of having a pneumothorax is rapidly deteriorating. What should the therapist suggest at this time?
   A. Intubation and mechanical ventilation
   B. Mask CPAP
   C. Needle aspiration
   D. Confirm air leak with a chest X-ray and place a chest tube afterwards

43. What should the therapist select as target gas exchange parameters after surgical intervention for infants with hypoplastic left ventricular syndrome HLHS?
   A. pH < 7.35
   B. PaO2 of 60 mm Hg and PaCO2 of 60 mm Hg
   C. pH > 7.45
   D. PaO2 of 40 mm Hg and PaCO2 of 40 mm Hg

44. How should the therapist interpret the lack of foam appearing during the shake test?
   A. The test needs to be redone
   B. The unborn infant’s lungs have matured
   C. The infant’s lungs are immature
D. The patient has a 50% chance of developing RDS

45. Which of the following vessels return blood to the right atrium?
   A. Coronary sinus
   B. Inferior vena cava
   C. Superior vena cava
   D. All of the above

46. Which of the following conditions increase the risk for developing RDS?
   A. Maternal diabetes
   B. Cesarean delivery
   C. Multiple births
   D. All of the above

47. Identify the congenital cardiac defect depicted in the following illustration:
   A. Atrial septal defect
   B. Hypoplastic left ventricular syndrome
   C. Hypoplastic right ventricular syndrome
   D. Atrioventricular canal defect

48. Why must supplemental oxygen be judiciously administered to patients with an atrioventricular canal defect?
   A. To prevent the development of retinopathy of prematurity
   B. To avoid oxygen-induced hypoventilation
   C. To minimize pulmonary vascular dilation
   D. To reduce oxidative stress

49. The therapist is contemplating the possibility of intubating and suctioning a non-vigorous newborn with MAS. Which of the following clinical parameters confirms the indication for the procedure?
   A. Good muscle tone
   B. Presence of dark green meconium on the skin
   C. Heart rate < 100 beats per minute
D. Presence of coarse crackles on auscultation

50. A neonate diagnosed with a pneumothorax was treated with a chest tube. After 36 hours, the therapist noticed that bubbling is present in the chest tube system. What should the therapist do at this time?
   A. Suggest removal of the chest tube in 24 hours
   B. Clamp the tube and obtain a CXR
   C. Keep the chest tube until bubbling stops
   D. Remove the chest tube and obtain a follow-up CXR

51. A therapist is monitoring a child on the mechanical ventilator who is hemodynamically stable. The PetCO2 is 48 mm Hg. If accurate, what should be the PaCO2?
   A. 43-48 mm Hg
   B. 45-48 mm Hg
   C. 50-53 mm Hg
   D. None of the above

52. What is volumetric capnography able to determine?
   I. Airway dead space
   II. Alveolar tidal volume
   III. Shunt fraction
   IV. Alveolar minute volume
   A. II, III, and IV only
   B. I only
   C. I, II, and IV only
   D. I, II, III, and IV

53. The respiratory therapist has initiated iNO at 20 ppm for an infant with pulmonary hypertension. After 2 hours a blood gas test reveals a 10% improvement in SaO2. What should the therapist do?
   A. Keep iNO at 20 ppm and wait at least 2 hours before considering any change.
   B. Increase iNO to 30 ppm and keep the same FiO2.
   C. Keep iNO at 20 ppm and wean the FiO2 by 10%.
D. Increase iNO to 30 ppm with no changes in FiO2.

54. Vascular smooth muscle is largely dependent on which of the following intracellular ions?
   A. Na+
   B. K+
   C. Ca2+
   D. Mg2+

55. Which of the following medications contributes to an increased right-to-left intrapulmonary shunting?
   A. Dobutamine
   B. Dopamine
   C. Prostacyclin
   D. Prostaglandin A

56. The therapist is performing a routine assessment and ventilator check on a patient who is receiving heliox near the wye adapter of the ventilator circuit. He notices a serious discrepancy between the set tidal and the exhaled volume. What should the therapist do to correct this situation?
   A. Administer heliox through the heliox-approved inlet of the mechanical ventilator
   B. Add a 16-inch piece of corrugated tubing between the wye adapter and the place on the inspiratory limb where heliox is administered
   C. Reduce the liter flow on the heliox
   D. Adjust ventilator settings to compensate for the lower viscosity of heliox

57. The therapist taking care of an infant on iNO observes that the NO2 levels have been increasing. In order to correct the situation, he increases the inspiratory flow of the ventilator. What will be some of the limitations associated with this change?
   I. It reduces time of contact between NO and O2.
II. It affects the mean airway pressure because it changes the inspiratory time.
III. It may increase the delivered tidal volume.
IV. It reduces the mean airway pressure and increases the inspiratory time.
A. I only
B. II and IV only
C. I, II, and III only
D. II, III, and IV only

58. Which of the following features or characteristics apply to mainstream capnography?
I. The mainstream capnograph contains narrow tubing that can become occluded with mucus.
II. Mainstream capnography generally employs infrared spectrometers.
III. The mainstream capnograph does not add much weight to the breathing circuit.
IV. The mainstream capnograph is placed at the proximal end of the endotracheal tube.
A. I and II only
B. II and IV only
C. I, II, and III only
D. I, III, and IV only

59. During the administration of aerosol therapy, how does a heliox mixture compare with an air–oxygen mixture as a carrier gas?
A. Less aerosol is deposited with heliox.
B. More aerosol is deposited with heliox.
C. The two gas mixtures are equally efficient.
D. Definitive data are not available.

60. An infant on high-flow nasal cannula also requires administration of albuterol every 6 hours. The flow of the cannula was adjusted from 4 to 5 liters per minute. How could this affect the aerosol delivery to this infant?
A. It will be unchanged.
B. It will decrease.
C. It will increase.
D. None of the above

61. Which of the following parameters of mechanical ventilation are affected negatively by the use of heliox?
   A. PEEP
   B. Plateau pressure
   C. Peak pressure
   D. Volume

62. What is the purpose of administering helium–oxygen gas mixtures to patients?
   A. To reduce the work of breathing
   B. To improve gas exchange
   C. To increase the functional residual capacity
   D. To improve pulmonary compliance

63. What is the normal gradient between PaCO2 and end-tidal CO2 (PaCO2 minus end-tidal CO2)?
   A. -2 to -5 mm Hg
   B. 2 to 5 mm Hg
   C. -5 to -10 mm Hg
   D. 5 to 10 mm Hg

64. What is the primary physiologic activity of inhaled nitric oxide?
   A. Bronchodilation
   B. Pulmonary vasodilation
   C. Systemic vasodilation
   D. Cerebral vasodilation

65. What clinical parameter is critically important to monitor when mechanical ventilation is administered?
   A. Blood pressure
   B. Heart rate
C. Temperature
D. Respiratory rate

66. The therapist is treating a very irritable young child with upper airway obstruction. Which oxygen device will be the most appropriate to administer the greatest concentration of helium?
   A. Close-fitting nonrebreathing mask
   B. Close-fitting partial rebreathing mask
   C. Nasal cannula
   D. High flow nasal cannula

67. Why do transcutaneous oxygen tension (PO2) and carbon dioxide tension (PCO2) values differ from PaO2 and PaCO2 measurements?
   A. Because of the lag time between the cardiac output and the time the blood reaches the transcutaneous electrode site
   B. Because the skin is much more permeable to oxygen than carbon dioxide
   C. Because oxygen is consumed and carbon dioxide is produced in transit from the left ventricle to the electrode site
   D. Because metabolism in the tissue consumes oxygen and produces carbon dioxide at the site of the electrode

68. As the therapist applies a pulse oximeter finger probe to a neonate who is receiving supplemental oxygen, she notices that the SpO2 reading is 100%. What should the therapist do in this situation?
   A. The therapist should continue monitoring the patient because the reading is accurate.
   B. The therapist should obtain an arterial blood sample to confirm PaO2 level.
   C. The therapist should switch to using a capnometer.
   D. The therapist should reduce the fraction of inspired oxygen.
69. Inhaled NO has been administered to an infant for nearly 4 hours. The respiratory therapist notices suboptimal response and suggests HFOV. What is the principle behind the potential benefit of adding this ventilatory modality to this infant?
   A. HFOV improves ventilation and reduces the formation of NO2.
   B. Lung volumes are optimized with HFOV and further enhance the effects of iNO.
   C. The high frequency accelerates the diffusion of NO through the alveolar surface.
   D. HFOV reduces the need for higher doses of iNO.

70. An infant has been receiving iNO for the last 3 days. Which important level should be monitored when ordering a co-oximetry?
   A. Methemoglobin
   B. Carboxyhemoglobin
   C. Reduced hemoglobin
   D. Oxyhemoglobin

71. How is the percentage of functional hemoglobin that is saturated with oxygen determined via pulse oximetry?
   A. The percentage of red light that lands on the photodiode represents the SpO2 (oxygen saturation as determined by pulse oximetry).
   B. The percentage of infrared light that reaches the photodetector reflects the SpO2.
   C. The ratio of the red and infrared light that reaches the photodiode signifies the SpO2.
   D. None of the above

72. Which of the following conditions will preclude the use of indirect calorimetry?
   I. Cuffed endotracheal tubes
   II. Circuit leaks
   III. FiO2 40%
IV. HFOV
A. I, II, and III only
B. II and III only
C. II and IV only
D. I, III, and IV only

73. The therapist has applied a bandage-type pulse oximetry probe too tightly to an infant’s finger. What problem can be expected to occur in this situation?
A. The SpO2 will read erroneously low.
B. The SpO2 will read erroneously high.
C. The monitor will display a message indicating inadequate pulse.
D. The monitor will display fluctuating SpO2 values between being erroneously low and high.

74. Which of the following is the main physiologic factor responsible for deriving accurate transcutaneous data?
A. Heart rate
B. Minute ventilation
C. Peripheral perfusion
D. Ventilation-perfusion ratios

75. Which of the following substances prevents the release of Ca2+ from the sarcoplasmic reticulum?
A. Intracellular cGMP
B. EDRF
C. cGMP-dependent kinase
D. Calmodulin

76. Which of the following inhaled anesthetic gases has/have demonstrated the possibility to treat status asthmaticus?
I. Halothane
II. Thromboxane
III. Isofluorane
IV. Sevoflurane
A. II only
B. I, II, and III only  
C. I, III, and IV only  
D. II, III, and IV only

77. What is the potential benefit of adding heliox to patients who have status asthmaticus while undergoing mechanical ventilation?
   A. To improve pulmonary compliance  
   B. To reverse bronchospasm  
   C. To minimize air trapping  
   D. To facilitate the removal of tracheobronchial secretions

78. While attending to a neonatal patient in the neonatal intensive care unit (NICU), the therapist notices that a transcutaneous electrode is affixed to the upper chest of the neonate. What should the therapist do at this time?
   A. The therapist should only continue monitoring the patient since the transcutaneous electrode is properly placed.  
   B. The therapist should reposition the electrode on the neonate’s abdomen.  
   C. The therapist needs to move the transcutaneous electrode to the infant’s right shoulder.  
   D. The therapist should relocate the electrode on the sternum as close as possible to the heart.

79. The therapist is evaluating a small tachypneic infant receiving heliox mixture 70:30 through an infant hood. Although the SpO2 has improved, the child shows signs of worsening work of breathing. What is the most probable mechanism to explain this situation?
   A. The FiHe is too low in a 70:30 mixture to change work of breathing in this infant.  
   B. The flow going through the infant hood is inadequate.  
   C. A greater concentration of helium is present at the top of the hood and away from the infant’s nose and mouth.  
   D. The infant is breathing too fast; thus heliox is not reaching the airways.
80. Although very small amounts of NO2 are present at the bedside, which health care workers need to exert special precautions to minimize exposure to NO2?
   A. Nurses in the NICU
   B. Air transport team members
   C. Ground transport team members
   D. Respiratory therapists in the NICU

81. What is the purpose of indirect calorimetry?
   A. To measure heat produced and lost from the body
   B. To calculate energy expenditure by measuring VO2 and VCO2
   C. To calculate resting energy expenditure
   D. To measure gas exchange

82. A patient who has been admitted with status asthmaticus is receiving beta adrenergics every 2 hours and heliox with very limited response. What should the therapist suggest at this time?
   A. Change heliox to 100% helium
   B. Administer nitrogen
   C. Administer inhaled anesthetics
   D. Add iNO

83. Which of the following inhaled anesthetics should the therapist recommend to administer via a face mask to a conscious, spontaneously breathing pediatric patient who has status asthmaticus?
   A. Isoflurane
   B. Enflurane
   C. Sevoflurane
   D. Halothane

84. What is the product of the reaction between oxygen and nitric oxide?
   A. Oxygen radicals
B. N2O
C. NO2
D. The two molecules do not react with each other.

85. The therapist is using an oxygen flowmeter to deliver an 80:20 heliox mixture to a patient. The reading on the flowmeter is 10 L/minute. What is the actual flow received by the patient?
   A. 5.5 L/minute
   B. 10 L/minute
   C. 12.5 L/minute
   D. 18 L/minute

86. The therapist has been asked to measure preductal oxygen saturation. Where could the therapist place the pulse oximeter probe?
   A. Right thumb
   B. Left thumb
   C. Forehead
   D. Left earlobe

87. After increasing the inspiratory flow of the ventilator to decrease the generation of NO2 the therapist notices many changes in the ventilator parameters. The therapist adds the NO into the inspiratory limb of the ventilator circuit close to the patient. What will be a limitation of the procedure?
   A. A larger number of oxygen radicals are produced at this position.
   B. Adding NO too close to the patient reduces proper mixing, which is necessary to ensure accurate NO measurement.
   C. Adding NO in this position of the circuit is contraindicated.
   D. The contact time between NO and O2 is too long to be clinically useful.

88. The respiratory therapist has initiated nitric oxide for an infant with severe refractory hypoxemia. The initial dose was 20 ppm and titrated up to 30 ppm for the last 4 hours due to lack of
response. However, there still is no response. What should the therapist do?

A. Increase iNO to 40 ppm  
B. Increase iNO to 60 ppm  
C. Increase iNO to 80 ppm  
D. Discontinue iNO and consider a different therapeutic intervention

89. The therapist is assessing a mechanically ventilated infant and observes that the transcutaneous electrode temperature is set between 41° C and 44° C. What action does the therapist need to take at this time?

A. The temperature range set is appropriate; therefore, no action is necessary.  
B. The therapist should increase the temperature range to 47° C to 48° C.  
C. The temperature of the transcutaneous electrode needs to be reduced to 36° C to 38° C.  
D. The electrode needs to be repositioned and maintained at the same temperature.
So there you have it! Wow, you made it all the way to the end — that’s impressive!

By doing so, that lets me know that you have what it takes to become a successful Respiratory Therapist.

You’re definitely on the right track, so keep working and studying hard and you’ll be just fine.

And not to worry — we’re going to be with you every step of the way along your journey.

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Breathe easy, my friend! 🙏

Johnny Lung

Johnny Lung RRT
One more thing!

How would you like to get new TMC Practice Questions sent to your inbox every single day?

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As I mentioned before, going through practice questions is one of the most effective strategies when it comes to passing the TMC Exam.

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Let's go through an example so that you can see what I'm talking about.

Here’s an example of a TMC Practice Question:

You are called to the NICU for the assessment of a premature infant. The infant is receiving positive pressure ventilation and exhibits the following: acute respiratory distress, hypotension, and asymmetrical chest motion. Which of the following procedures would you initially recommend?
   
   A. An arterial blood gas  
   B. A chest radiograph  
   C. A capillary heel stick  
   D. Chest transillumination
Do you know the answer? Not to worry, let’s break it down!

The explanation that you get along with each practice question is the most important part!

To get this one correct, you have to be able to interpret the signs that were given to you in the question and determine how to treat the infant.

In this case, you should know that these signs likely indicate that a pneumothorax may be present.

Transillumination is a procedure where you shine a light through the infant’s chest in order to inspect for a pneumothorax. It is performed in high-risk infants that are showing signs of respiratory distress.

You should recommend this test to see if the infant has a pneumothorax. When there is a “halo” sign through the neonate’s chest wall, this confirms that a pneumothorax is present. In this case, immediate chest tube insertion would be indicated.

On the other hand, if transillumination is negative but the infant still exhibits these signs, you should recommend an immediate chest X-ray.

So while each of the tests that are listed in the answer choices may be indicated, the best answer for this question is D.

The correct answer is: D. Chest transillumination

Well, what did you think? Do you see how valuable this information can be??
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References


