

MCQ's

This tool has been designed for assessing your knowledge regarding different aspects of CPAP. Each question is followed by four alternatives & you have to select the best one.

1. CPAP refers to application of positive pressure to the airway of a spontaneously breathing infant
 - A. During the expiratory phase only
 - B. During the inspiratory phase only
 - C. Throughout the respiratory cycle
 - D. In between the inspiration & expiration
2. Following are the physiological effects of CPAP, **EXCEPT?**
 - A. Prevent the collapse of the alveoli
 - B. Decreases pulmonary compliance
 - C. Increases the functional residual capacity
 - D. Decreases the airway resistance
3. Following are the commonly used devices for CPAP, **EXCEPT?**
 - A. Nasal prongs
 - B. Nasal cannulae
 - C. Nasal mask
 - D. Endotracheal tubes
4. Following are the indications for CPAP, **EXCEPT?**
 - A. Respiratory distress syndrome
 - B. Apnea of prematurity
 - C. Transient tachypnea of newborn
 - D. Severe cardiovascular instability
5. Which is the best method of providing CPAP to the patient?
 - A. Nasal prongs
 - B. Nasal cannulae
 - C. Nasal mask
 - D. Endotracheal tubes
6. The following are the contraindications for CPAP, **EXCEPT.**
 - A. Meconium aspiration syndrome
 - B. Congenital diaphragmatic hernia
 - C. Progressive respiratory failure with PaCO₂ > 60mmHg
 - D. Tracheoesophageal fistula
7. The following are the complications of CPAP, **EXCEPT?**
 - A. Pulmonary air leak
 - B. Increased pulmonary vascular resistance

- C. Increased cardiac output
D. CPAP belly syndrome
8. What is the normal CPAP pressure range in cm H₂O?
- A. 3 - 5
B. 3 - 10
C. 3 - 15
D. 3 - 20
9. CPAP should be started with a FiO₂ of _____
- A. 21- 30 %
B. 30 - 40%
C. 50- 60%
D. 80 - 100 %
10. What is the optimal flow rate of air oxygen mixture for CPAP delivery?
- A. 2 - 6 L/min
B. 2 -10 L/min
C. 5 - 8 L/min
D. 5 - 10 L/min
11. Which of the following statements is **INCORRECT**, with regard to application of nasal prongs
- A. It should fill the nasal cavity completely
B. There should be blanching around the rim of nostrils
C. There should be no lateral pressure on septum
D. There should be a small space between the tip of the septum & the bridge of the prongs
12. The inspired gases should be optimally warmed to a temperature of
- A. 36.5 °C
B. 37 °C
C. 37.5 °C
D. 38 °C
13. How much should the expiratory limb be immersed under water to deliver a CPAP of 6 cm of water?
- A. 10 cm
B. 8 cm
C. 6 cm
D. 4 cm
14. All are true for nasal CPAP, **Except?**
- A. OG feeding is possible
B. Routine use of OG tube is recommended

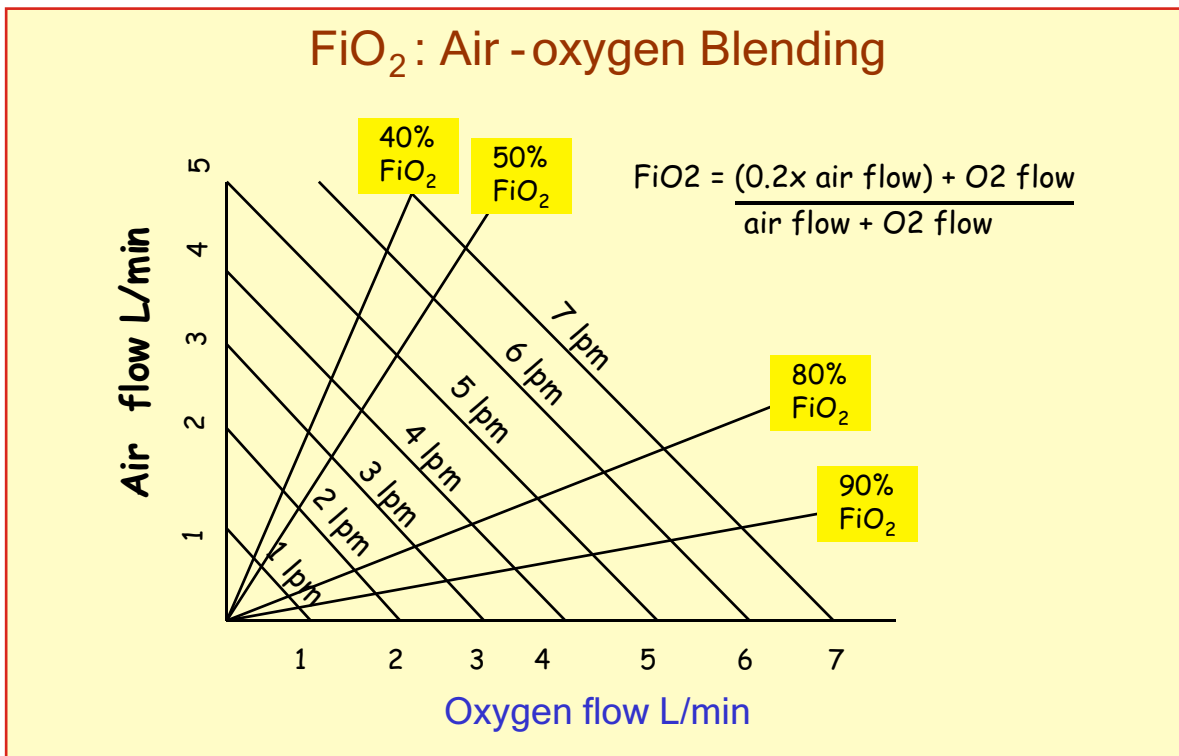
- C. KMC can be given
D. Long prongs are better than short binalasal
15. Where do you position the CPAP generator in bubble CPAP?
A. Parallel to the neonate
B. Above the level of the neonate
C. Below the level of the neonate
D. Proximal to the neonate
16. The following are the variables in the Downe's score **EXCEPT?**
A. Respiratory rate
B. Cyanosis
C. Nasal flaring
D. Grunting
17. The following are the variables in the Silverman score **EXCEPT?**
A. Lower chest retraction
B. Grunting
C. Nasal flaring
D. Respiratory rate
18. While weaning a baby from CPAP, which action you will perform first?
A. Reduce CPAP by 1 cm H₂O decrements to reach a level of 4 cm H₂O
B. Reduce FiO₂ by 0.05 decrements to reach 0.4
C. Reduce CPAP & FiO₂ simultaneously
D. Place the baby in oxygen hood
19. The CPAP is normally started at a pressure of
A) 3 cm H₂O
B) 5cm H₂O
C) 7 cm H₂O
D) 9cm H₂O
20. The following are certain conditions related to the care of a baby on CPAP & write the actions which you take in these conditions.
- A) If the nasal prongs don't stay in place
- _____
- _____
- _____
- _____
- B) If the baby is uncomfortable
- _____
- _____
- _____
- _____

C) For preventing nasal septal damage

D) Lack of bubbling in the CPAP generator

3. Supportive care and Monitoring

- A. Clinical, interface and equipment monitoring (what and how frequently)
- b. Monitoring chart
- c. CXR - Normal reading and differentiation of HMD / Pneumonia / TTNB / MAS / Malformations
- d. Capillary blood gas and its sampling
- e. Insertion of radial lines
- f. Prevention of pain and stress in a neonate
- g. Feeding/Nutrition
- h. Surfactant and INSURE use video preferably



Objectives of Miniworkshops

1. CPAP Equipment

- a. **Bubble CPAP/Ventilator CPAP/Infant Flow Driver**
 - i. To differentiate the concepts of pressure generation
 - ii. Parts of the machine
 - iii. Normal function
 - iv. Alarms
 - v. Trouble shoot
- b. **Circuit**
 - i. Assembly
 - ii. Maintenance
 - iii. Trouble shoot
 - iv. Disposable / reusable
 - v. Cleaning and sterilization
- c. **Humidification/warming**
 - i. Physiology, why it is essential
 - ii. Relative and absolute humidity
 - iii. Servo control of temperature at patient end
 - iv. Maintenance and trouble shoot
- d. **Blender/ Mixing of gases**
 - i. Principle of mixing gases
 - ii. Use of formula or charts (Figure)
- e. **Ideal equipment/ indigenous**
 - i. Blender
 - ii. Humidifier
 - iii. Pressure generator
 - iv. Measurement of pressure, FiO_2 monitoring
 - v. Temperature monitoring
 - vi. Compressor heavy duty

2. Fixation of patient interface (actual demonstration of all on stet)

- a. Hudson prongs/Fisher and Paykel Prongs/ Argyl Prongs / NP tube
- b. Choosing the right size cap, prongs, nasal tubings
- c. Developing caps locally with socks and strings
- d. Step by step fixation of each of above three
- e. Insertion of orogastric tube
- f. Maintenance of prongs (cleaning, preventing injury to columella)
- g. Stabilization of head and position of circuit in relation to prongs
- h. Ensuring leak proof