

Appendix D-1

EMT-Basic Monitoring Pulse Oximetry Pre-Test

1. An unresponsive patient with shallow, gasping breaths at a rate of six per minute requires:
 - a. oxygen given via nasal cannula
 - b. immediate transport to a medical facility
 - c. immediate ventilations with a bag-valve-mask and supplemental oxygen
 - d. oxygen given via nonrebreather mask

2. If your patient is able to speak only in short choppy sentences, this may mean she:
 - a. may have a language problem
 - b. is unable to hear you clearly
 - c. is experiencing hypoglycemia
 - d. is experiencing breathing difficulty

3. If a patient has an SpO₂ of 91% and is breathing adequately, administer oxygen via:
 - a. nasal cannula
 - b. nonrebreathing mask
 - c. pocket face mask
 - d. bag-valve-mask with supplemental oxygen

4. If a patient is experiencing breathing difficulty and is breathing adequately, it is usually best to place him in the ____ position.
 - a. tripod
 - b. sitting up
 - c. supine
 - d. prone

5. The term “hypoxemia” refers to:
 - a. hypoventilation
 - b. decreased oxygen in the environment
 - c. decreased oxygen in the blood
 - d. increased CO₂ in the blood

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6. The gas exchange at the pulmonary capillaries is known as:
 - a. external respiration
 - b. internal respiration
 - c. external ventilation
 - d. total lung capacity

7. Pulse oximetry measures:
 - a. the adequacy of ventilation
 - b. the level of CO₂ in the blood
 - c. the oxygen dissolved in the plasma
 - d. the oxygen bound to hemoglobin

8. If the SpO₂ drops below 90%, the EMT-B should:
 - a. administer oxygen via a nasal cannula
 - b. administer oxygen via simple face mask
 - c. insure open airway and aggressively oxygenate the patient
 - d. ventilate the patient with low flow oxygen

9. A patient suffering from pulmonary edema may have a low SpO₂ because:
 - a. edema will result in failure of the sensor to detect a pulse
 - b. carbon dioxide will build up in the blood
 - c. external respiration is impaired causing decreased oxygen in the blood.
 - d. internal respiration is impaired causing decreased oxygen in the blood

10. A tripod position is a sign of:
 - a. severe respiratory distress
 - b. hypoglycemia
 - c. stroke
 - d. heat emergency

11. Carbon monoxide may affect pulse oximetry because:
 - a. carbon monoxide will bind to hemoglobin more readily than oxygen
 - b. carbon monoxide prevents internal respiration
 - c. carbon monoxide prevents oxygen from off-loading at the cellular level
 - d. carbon monoxide binds with oxygen to produce carbon dioxide

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12. If a patient has a SpO₂ of 100%, you should:
- withhold oxygen to prevent oxygen toxicity
 - withhold oxygen for 5 minutes to get another reading
 - assess the patient's clinical status to determine if oxygen administration is indicated.
 - give the patient low flow oxygen with a nasal cannula
13. SpO₂ and partial pressure oxygen measure the same thing:
- true
 - false
14. Most of the oxygen transported by the blood is:
- dissolved in the plasma
 - carried as bicarbonate ions
 - bound to hemoglobin
 - carried as carboxyhemoglobin
15. When using pulse oximetry in patient assessment, it is best to attach the sensor before starting the patient assessment to insure a baseline value.
- true
 - false
16. Pulse oximetry monitoring is not recommended for pediatrics.
- true
 - false
17. After administering a nebulized breathing treatment to a patient with chronic obstructive pulmonary disease, you would expect:
- the pulse oximetry reading to be lower
 - the pulse oximetry reading to be above 100%
 - the pulse oximetry reading to be higher
 - the pulse oximetry reading would not change

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18. If you palpate the pulse and it is considerably different than the heart rate reading on the pulse oximeter:
- you should document the heart rate on the oximeter as the pulse rate
 - the reading on the oximeter should be considered erroneous
 - the reading on the oximeter should is always accurate but do not use the heart rate as the pulse rate
 - remove oxygen from the patient and check it again in 5 minutes
19. Rib fractures may cause inadequate respiration due to:
- decreased oxygen at the tissue level
 - inadequate chest expansion
 - pain
 - b and c
20. Which of the following is a late sign of hypoxemia?
- restlessness
 - tachycardia
 - cyanosis
 - increased respiratory rate
21. In hypothermic patients, pulse oximetry:
- may read higher than actual saturation
 - may read lower than actual saturation
 - will not be affected
 - sensors should be place on the coldest extremity
22. Bright ambient lights:
- may affect the accuracy of pulse oximetry
 - will improve the accuracy of pulse oximetry
 - will cause the oximetry reading to be higher than actual oxygen saturation
 - will only affect oximetry in pediatrics
23. Heavy smokers may have a high pulse oximetry reading due to:
- increased levels of oxyhemoglobin in the blood
 - decreased levels of carbon dioxide
 - decreased levels of carboxyhemoglobin in the blood
 - increased levels of carboxyhemoglobin in the blood

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24. Light-emitting diodes in pulse oximeters produce red and infrared light.

- a. true
- b. false

25. Pulse oximeters will produce a SpO₂ during cardiac arrest:

- a. in pediatrics only
- b. if compressions produce a pulse
- c. in all patients
- d. if the patient is in PEA