

# Fire Safety in the Perioperative Setting

## Test

\*Note-Successful completion is indicated by a minimum score of (90%).

Choose the **best** answer and indicate on your answer sheet.

1. An "Oxygen Enriched Environment" is defined as:
  - a. Any environment where oxygen is present
  - b. Any environment which has a n oxygen concentration greater than 21%
  - c. The operating room
  - d. Any special procedure area
  
2. Identify the 3 components of the fire triangle
  - a. Head & neck procedures, bowel procedures, & incision site fires
  - b. Ignition sources, body hair and flammable gases
  - c. Fuels, oxidizers, and ignition sources
  - d. Sparks and glowing tissue embers, lasers, fiberoptic cables
  
3. Which of the following is **not** an **ignition source**?
  - a. Gastrointestinal gases
  - b. Lasers
  - c. Fiberoptic cables
  - d. Electrocautery devices
  
4. Which of the following **does not** describe a fuel?
  - a. Barrier materials (gowns, gloves, drapes, etc.)
  - b. Gases present in surgical smoke
  - c. Prepping agents
  - d. Oxygen
  - e. Hair on the patient's head and body
  
5. Oxidizers support combustion and increase the rate at which fuels burn. Identify two oxidizers.
  - a. Halothane and Oxygen
  - b. Oxygen and Nitrous Oxide
  - c. Medical grade air and Oxygen
  - d. Forane and Halothane
  
6. If a **small** fire is encountered on the drapes covering a patient, which of the following should be done?
  - a. Any team member should use their gloved hands to pat out the fire
  - b. A wet towel or sponge from the back table should immediately be used to put out the fire
  - c. Immediately evacuate the procedure area
  - d. Call 911 to report a fire to the fire department
  
7. In order to control ignition sources electrocautery handpieces should always be placed in a nonconductive holster when not in use.
  - a. True
  - b. False

8. In order to manage fuels, it is necessary to prevent pooling of prep solutions under the patient and/or under the group pad as well as waiting for vapors from prep solutions to dissipate prior to draping the patient.
  - a. True
  - b. False
9. In order to minimize oxidizers, utilize pulse oximetry to determine the need for supplemental oxygen during procedures.
  - a. True
  - b. False
10. It is an acceptable practice to lubricate the patient's lips w/petroleum jelly if they are complaining of chapped lips.
  - a. True
  - b. False
11. Because of the close proximity of all three components of the fire triangle, electrocautery must never be used for which purpose?
  - a. Making a skin incision
  - b. Controlling bleeding
  - c. Incising tracheal rings during tracheostomy
  - d. Removing a skin tag
12. A small fire can progress to life threatening in as little as 30 seconds.
  - a. True
  - b. False
13. At the **first sign** of an endotracheal tube fire
  - a. Bag the patient with 100% O<sub>2</sub>
  - b. Disconnect the breathing circuit from the endotracheal tube
  - c. Perform a bronchoscopy to evaluate damage to the lung tissue
  - d. Dial 6# to notify the hospital operator of a "Code Red"
14. The most appropriate fire extinguisher for an operating room fire is an ABC extinguisher.
  - a. True
  - b. False
15. It is the responsibility of everyone connected with a procedure (nursing, anesthesia, surgeon, etc.) to work towards minimizing the risks of fire in an oxygen enriched environment.
  - a. True
  - b. False
16. Virtually all operating room fires ignite in or on the patient.
  - a. True
  - b. False
17. It is possible to **eliminate** one or more component(s) of the fire triangle and therefore this should be done regularly in order to minimize the risk of fire.
  - a. True
  - b. False

18. In the event of a fire on a patient, fire blankets should be utilized.
  - a. True
  - b. False
  
19. A rule of thumb regarding vapors from prepping agents (especially alcohol based) is, if you can smell it the vapors are still present and can ignite.
  - a. True
  - b. False
  
20. A patient comes to HMH as a "Code Trauma". They have been involved in a motor vehicle accident where the car rolled over and the patient's clothes are wet and smell of gasoline. The patient is brought to the operating room with an acute abdomen (intra-abdominal hemorrhage). The patient's clothes are removed, but the odor of gasoline remains. The patient remains at high risk for fire until the gasoline is washed away and the fumes dissipate.
  - a. True
  - b. False
  
21. One strategy to minimize the risk of fire, is to discontinue the use of supplemental oxygen several minutes before the surgeon uses the laser or electrocautery. This will give any oxygen that has built up time to dissipate which would greatly reduce the risk of fire.
  - a. True
  - b. False
  
22. For all cases prior to draping, the following should be reviewed by the team members:
  - a. Draping options to prevent tenting
  - b. Oxygen delivery
  - c. Electrocautery/laser device use with oxygen administration and when to turn off oxygen during procedure
  - d. All the above
  
23. For cases with an open airway source (e.g. mask, cannula), the surgeon will direct the Anesthesiologist to turn off the oxygen source just prior to when an electrocautery/laser device is in use.
  - a. True
  - b. False

# Fire Safety in an Oxygen Enriched Environment

## Answer Sheet

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Date: \_\_\_\_\_

Dept: \_\_\_\_\_

1. A B C D
2. A B C D
3. A B C D
4. A B C D E
5. A B C D
6. A B C D
7. A B
8. A B
9. A B
10. A B
11. A B C D
12. A B
13. A B C D
14. A B
15. A B
16. A B C D
17. A B
18. A B
19. A B
20. A B
21. A B
22. A B C D
23. A B