FEATURED ARTICLE QUIZ #1

Carbon Monoxide Exposure Potential Associated With the Use of Recreational Watercraft

Quiz effective date: July 1, 2021 | Quiz deadline: October 1, 2021

1. Carbon monoxide (CO) is a colorless and odorless gas generated from incomplete combustion of hydrocarbon-based fuels.
   a. True.
   b. False.

2. CO affinity for hemoglobin is __ times greater than oxygen.
   a. 50
   b. 110
   c. 210
   d. 250

3. In 2017, more than __ million people in the U.S. participated in recreational boating.
   a. 92
   b. 142
   c. 192
   d. 242

4. From 2002–2011, the number of CO-related deaths associated with recreational boating in the U.S. averaged __ per year.
   a. 3.7
   b. 4.7
   c. 5.7
   d. 6.7

5. From 2005–2018, there were __ CO-related accidents, __ CO-related injuries, and __ CO-related deaths reported to the U.S. Coast Guard.
   a. 167; 324; 78
   b. 78; 324; 167
   c. 342; 167; 78
   d. 167; 78; 324

6. National Institute for Occupational Safety and Health (NIOSH) research shows that concentrations present in engine and generator exhaust emitted from houseboats often exceeded NIOSH’s immediately-dangerous-to-life-or-health (IDLH) value of
   a. 1,000 ppm.
   b. 1,100 ppm.
   c. 1,200 ppm.
   d. 1,300 ppm.

7. The authors performed CO monitoring on and adjacent to __ boats using portable CO analyzers.
   a. two
   b. three
   c. four
   d. five

8. For all boats, CO concentration maximums occurred proximal to the engine.
   a. True.
   b. False.

9. CO concentrations ranged from __ when using boats 3 and 4 to simulate teak surfing at speeds of 5, 7, and 10 mph.
   a. 56–302 ppm
   b. 155–700 ppm
   c. 155–1,000 ppm
   d. 300–1,000 ppm

10. For all boats, this study showed that persons using the swim ladder or hanging from the stern or swim platform could be exposed to CO levels that __ the IDLH level.
    a. exceed
    b. do not exceed

11. The CO concentrations observed for the teak surfing scenario for boats 3 and 4 would exceed the acute exposure guideline level (AEGL)-2 if __ of sustained teak surfing occurred.
    a. 5 min
    b. 10 min
    c. 15 min
    d. 20 min

12. The following could be considered as intervention opportunities to reduce CO-related accidents related to recreational watercraft use:
    a. signage.
    b. decals.
    c. regulations.
    d. all the above.
    e. none of the above.