

A Few More Toxicology Review Questions

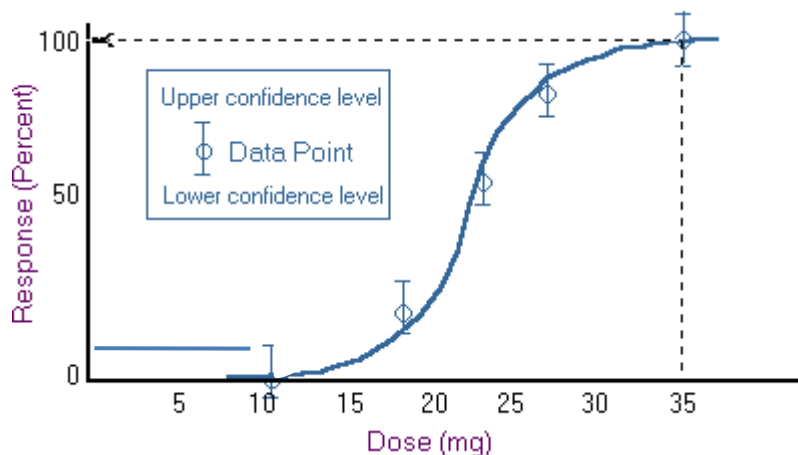
1. The LD₅₀ of a chemical is catalogued at 2mg/kg. A human can ingest 25% of the lethal dose before seeing any side effects. The average adult male weighs approximately 80kg. Based on this information, approximately what dose of cyanide would start to have adverse side effects in the average human male?
 - (A) 2mg
 - (B) 20mg
 - (C) 40mg
 - (D) 60mg
 - (E) 160mg
2. Which of the following metals was the cause of Minamata disease in Japan?
 - (A) lead
 - (B) mercury
 - (C) chromium
 - (D) potassium
 - (E) aluminum
3. Some studies have indicated that global amphibian populations are declining and that exposure to herbicides in agricultural runoff is implicated in the decline. Which of the following is the most likely explanation of how herbicides affect amphibians?
 - (A) The herbicides act as endocrine disruptors.
 - (B) The herbicides act as a plant nutrient, causing algal blooms.
 - (C) The herbicides are fat soluble and accumulate in groundwater.
 - (D) The herbicides are ingested by amphibians that mistake them for food.
 - (E) The herbicides contain heavy metals.
4. One of the major arguments against the use of pesticides is the fear of biomagnification. Biomagnification occurs when
 - (A) toxins get passed on to humans and other organism high on the food chain
 - (B) toxic compounds are ingested and retained in the tissues of secondary consumers
 - (C) synergism enhances the effects of the pesticide treadmill
 - (D) fat-soluble toxins build up in an organism's organ system
 - (E) multiple toxicants interact and have an additive effect on a specific organism
5. Which of the following a known irritant/allergen used in antibacterial/antifungal over-the-counter cleansers?
 - (A) asbestos
 - (B) thalidomide
 - (C) triclosan
 - (D) PCBs
 - (E) benzene
6. After 20 years of working in a factory and being exposed to asbestos, a person spends the rest of his life battling mesothelioma. Which dose-response classification best describes this worker?
 - (A) acute exposure and acute response
 - (B) acute exposure and chronic response
 - (C) sub-chronic exposure and acute response
 - (D) sub-chronic exposure and chronic response
 - (E) chronic exposure and acute response

Use the graph to the right for questions 7-9.

7. If the designated response of the organisms being tested is death, what is the approximate LD₅₀ of the toxicant?

8. What is the TLV of the toxicant?

9. What is the NOEL range?



Choose the best answer from the list below that fits the clues given for #10-12

- I. asbestos
 - II. BPAs
 - III. PCBs
 - IV. benzene
 - V. formaldehyde
10. carcinogen present in gasoline vapors _____
11. endocrine disruptor used in plastic containers _____
12. endocrine disruptor formerly used as a machine coolant that has been banned _____
13. Chemicals that specifically affect the development of an embryo are classified as
- (A) mutagens
 - (B) teratogens
 - (C) carcinogens
 - (D) neurotoxins
 - (E) endocrine disruptors
14. What law was enacted in 1976 to regulate poisonous chemicals before they entered the market?
- (A) GLWQA
 - (B) TSCA
 - (C) NEPA
 - (D) FIFRA
 - (E) USDA
15. The studies of Lake Apopka linked
- (A) BPAs to endocrine disruption in birds
 - (B) dioxins to endocrine disruption in fish
 - (C) DDT to endocrine disruption in alligators
 - (D) PCBs to endocrine disruption in birds
 - (E) mercury to endocrine disruption in fish