

TOXIC FUN

Following are five questions relating to BENZENE toxicity, which should test your knowledge on this subject matter. You will not be graded on this test. Take it for fun and submit your answers. The correct responses will be sent back to you.

TOXICOLOGY QUESTIONS

1. Which of the following statements about Benzene toxicity in animals is FALSE?
 - a. Pre-exposure of animals with rather large doses of benzene has a stimulatory effect on benzene metabolism on subsequent benzene exposure.
 - b. Pretreatment with Phenobarbital exerts a protective effect from the leukopenic action of benzene.
 - c. Pretreatment with Phenobarbital does not alter the acute toxicity of benzene.
 - d. Chronic benzene toxicity appears to be related to the levels and amounts of benzene metabolites present rather than the levels of benzene itself.
 - e. Severe impairment of liver function as with 75% hepatectomy interferes with benzene metabolism and results in greater hematopoietic activity.

2. While acute benzene exposure causes depression of the central nervous system, the most significant toxic effect of benzene involves:
 - a. the liver
 - b. the liver and spleen
 - c. the lymphatic system
 - d. the bone marrow
 - e. the kidney and urinary system

3. Human exposure to benzene often involves concomitant exposure to other solvents and animal exposures have not supported the view that benzene is a leukemogen. Clinical and epidemiologic data do however suggest a leukemogenic effect in humans, the leukemia most commonly being:
 - a. acute and myeloblastic
 - b. chronic and lymphocytic
 - c. acute and lymphocytic
 - d. chronic and myelomonocytic

4. Which of the following statements about the metabolism of benzene is FALSE?
 - a. The metabolism of benzene in humans has been shown to be essentially the same as that in animals.
 - b. Regardless of the route of administration, benzene is eliminated both in the expired air and in the urine.
 - c. Conjugated metabolic oxidation products of benzene including phenol and other secondary products are eliminated primarily via the urine.
 - d. The liver appears to be a secondary and relatively unimportant site of both oxidation and conjugation.

5. Long term exposures to low concentrations of benzene may be associated with which of the following:
 - a. Aplastic anemia
 - b. Pancytopenia
 - c. Thrombocytopenia
 - d. Leukemia
 - e. All of the above