MULTIPLE CHOICE QUESTIONS. Each of the following numbered questions or incomplete statements is followed by suggested lettered answers or completions. Select the ONE which is BEST in each case, and mark its letter on the answer sheet next to the appropriate question number.

We'll post the answer key on the Medical Physiology e-bulletin board, right after the quiz.

Post challenges to quiz questions on the Medical Physiology e-bulletin board.


YOU MAY KEEP THESE QUESTIONS; hand in your scantron only.

Questions, Comments:

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1. Solute X is being infused at a steady rate. When the concentration of X in the plasma, \([X]\), reaches 10 mg/Liter, the disappearance rate of X, (= Rd), is 5 mg/min. When \([X]\) reaches 20 mg/Liter, Rd rises to 10 mg/min. Which of the following choices is correct?

   A. It is highly unlikely that doubling \([X]\) would ever double Rd.
   B. Since the infusion rate of X is the same in each case, then Rd must be equal to the cell uptake of X in each case.
   C. The MCR is 5mg X/min., at each concentration of X.
   D. When \([X] = 10 \text{ mg/L.}, \text{ MCR} = 1 \text{ L./min.} \) When \([X] = 20 \text{ mg/L.}, \text{ MCR} = 2 \text{ L./min.} \)
   E. MCR = 0.5 L/min., in each case.

2. The hormone Resistin:

   A. Is released by shrinking adipocytes. It stimulates feelings of hunger.
   B. Increases insulin resistance in adipocytes.
   C. Is released by sweat glands. It is a vasoconstrictor.
   D. Comes from the hypothalamus. It is the inhibiting hormone for Prolactin release.
   E. Is a product of the kidneys. It stimulates the production of Angiotensin-II.

3. When endogenous pyrogens are released by macrophages and monocytes,

   A. They stimulate the pineal gland to re-set temperature regulation by the hypothalamus.
   B. They change the surface-to-volume ratio, causing fever.
   C. They raise the thermoregulatory setpoint for core temperature, from 37 °C to a higher value.
   D. They cause vasodilation of skin blood vessels, as soon as the core temperature rises above 37 °C.
   E. They lower the thermoregulatory setpoint for core temperature, from 37 °C to a lower value.

4. Prolactin does all of the following, EXCEPT:

   A. Stimulate hypothalamic dopamine release.
   B. Stimulate breast growth.
   C. Stimulate milk production.
   D. Stimulate milk release, (= ejection).
   E. Inhibit ovulation.

5. Which of the following is most likely to cause hyperglycemia?

   A. SIADH.
   B. Central diabetes insipidus.
   C. Oxytocin injection.
   D. Growth Hormone injection.
   E. Leptin injection.