

***Berne and Levy Physiology 7th edition Koeppen Test
Bank***

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Koeppen: Berne and Levy Physiology, 7th Edition

Chapter 02: Homeostasis of Body Fluids

Test Bank

Multiple Choice

1. A 100 mmol/L solution of MgCl_2 would be expected to have an osmolality of which of the following?

- A. 50 mOsm/kg H_2O
- B. 100 mOsm/kg H_2O
- C. 200 mOsm/kg H_2O
- D. 300 mOsm/kg H_2O
- E. 350 mOsm/kg H_2O

ANS: D

2. Three individuals, each weighing 55 kg and each having a plasma $[\text{Na}^+]$ of 145 mEq/L, receive infusions of different solutions. Individual A receives 1 L of isotonic NaCl (290 mOsm/kg H_2O); individual B receives 1 L of a mannitol solution (290 mOsm/kg H_2O); and individual C receives 1 L of a 5% dextrose in water (D_5W) solution (290 mOsm/kg H_2O). Assuming that there is no urine output, and after complete equilibration of the extracellular and intracellular fluid, which of these individuals will have a lower plasma $[\text{Na}^+]$?

- A. Individual A (NaCl infusion).
- B. Individual B (mannitol infusion).
- C. Individual C (D_5W infusion).
- D. Individuals A, B, and C will have the same plasma $[\text{Na}^+]$.

ANS: B

3. Intravenous infusion of 2 L of which of the following solutions will lead to the largest increase in intracellular fluid volume?

- A. D_5W
- B. Isotonic NaCl
- C. Hypotonic NaCl
- D. Hypertonic NaCl

ANS: A

4. Intracellular fluid volume is normally what percentage of body weight?

- A. 60%
- B. 40%
- C. 20%
- D. 10%
- E. 5%

ANS: B