Chapter 2. Pharmacokinetics I. Drug Administration, Absorption, and Distribution

Multiple Choice

1. All of the following are parenteral routes of drug administration EXCEPT the ____ route.
A. oral
B. inhalation
C. injection
D. topical
E. transdermal

Ans: A

2. The _____ effect occurs when drugs are transported initially to the liver where a significant amount of the drug may be metabolized and destroyed before the drug reaches its primary site of action.
A. malabsorptive
B. first pass
C. Bohr
D. bioequivalence
E. pharmacodynamic

Ans: B

3. Iontophoresis, phonophoresis, and medicated patches all use the _____ route to administer drugs.
A. oral
B. inhalation
C. injection
D. transdermal
E. rectal

Ans: D

4. This first pass effect is of particular concern when drugs are administered
A. topically
B. by intravenous injection
C. by subcutaneous injection
D. by inhalation
E. orally

Ans: E

5. The extent to which a drug reaches the systemic circulation is referred to as
A. bioequivalence
B. biotransformation
C. bioavailability
D. biodistribution
E. last pass metabolism

Ans: C

6. When crossing cell membranes, drugs will diffuse more readily through the lipid layer if they are
A. non-lipid soluble
B. in a neutral, nonionized form
C. in a charged, ionized form
D. large proteins

Ans: B

7. Osmosis refers to the special case of diffusion where the diffusing substance is
A. a lipid soluble drug
B. a non-lipid soluble drug
C. a protein
D. a carbohydrate
E. water

Ans: E

8. Carrier specificity, expernditure of energy, and ability to transport substances against a concentration gradient are all characteristics of
A. simple, passive diffusion
B. facilitated diffusion
C. active transport
D. endocytosis
E. exocytosis

Ans: C

9. A drug that has a volume of distribution of approximately 42 L will typically be
A. bound extensively to plasma proteins
B. retained in the bloodstream
C. concentrated in the tissues
D. stored in the liver and kidneys

E. distributed uniformly throughout all of the body fluids

Ans: E

10. The primary site for drug storage in the body is
A. muscle
B. bone
C. skin
D. adipose tissue
E. the brain

Ans: D

11. Drug developers are exploring nanotechnology (i.e., the use of very small particles with specific physical properties) as a way to
A. target and deliver drugs to specific tissues within the body
B. facilitate drug absorption from the GI tract
C. enable drugs to cross the blood brain barrier more easily
D. all the above
E. none of the above

Ans: D.