

EMT

Chapter 7 Review

1. Pharmacology is defined as the:
 - A. study of cells and tissues.
 - B. study of drugs and medications.
 - C. effects of medications in the lungs.
 - D. distribution of drugs to the body's tissues.

Answer: B

Rationale: Pharmacology is a field of science that deals with the study of drugs and medications.

1. Pharmacology is defined as the:

A. study of cells and tissues.

Rationale: This is physiology, which is a branch of biology.

B. study of drugs and medications.

Rationale: Correct answer

1. Pharmacology is defined as the:

C. effects of medications in the lungs.

Rationale: This is pharmacodynamics, which includes the processes of the body's response to medications.

D. distribution of drugs to the body's tissues.

Rationale: This is pharmacokinetics, which studies medication distribution within the body.

2. Which of the following statements regarding medications is FALSE?
- A. Many medications are known by different names.
 - B. Some medications affect more than one body system.
 - C. Over-the-counter drugs must be prescribed by a physician.
 - D. EMTs should ask about any herbal remedies or vitamins that the patient may be taking.

Answer: C

Rationale: Over-the-counter (OTC) drugs, such as aspirin, Tylenol, or Motrin, do not require a physician prescription. They can be purchased at a supermarket or drugstore. Most medications have a generic name and a trade name. For example, acetaminophen is the generic name for Tylenol, and ibuprofen is the generic name for Motrin.

2. Which of the following statements regarding medications is FALSE?

A. Many medications are known by different names.

Rationale: True, medications can have several different names.

B. Some medications affect more than one body system.

Rationale: True, medications can affect many different body systems.

2. Which of the following statements regarding medications is FALSE?

C. Over-the-counter drugs must be prescribed by a physician.

Rationale: Correct answer

D. EMTs should ask about any herbal remedies or vitamins that the patient may be taking.

Rationale: True, herbal remedies and vitamins can have interactions and effects on patient's health and condition.

3. Which of the following routes of medication administration has the fastest effect?
- A. Oral
 - B. Intravenous
 - C. Subcutaneous
 - D. Intramuscular

Answer: B

Rationale: Because its administration is directly into a vein it enters the body quickly. The intravenous route is the fastest acting of all the routes of medication administration.

3. Which of the following routes of medication administration has the fastest effect?

A. Oral

Rationale: The medication must be absorbed through the mucous membranes first to get to the circulatory system.

B. Intravenous

Rationale: Correct answer

3. Which of the following routes of medication administration has the fastest effect?

C. Subcutaneous

Rationale: The medication must pass through the layers of skin before reaching the circulatory system.

D. Intramuscular

Rationale: The medication needs to travel to the circulatory system.

4. When administered to a patient, a metered-dose inhaler will:

- A. deliver the same dose each time it is administered.
- B. be ineffective when given to patients with asthma.
- C. deliver a different dose each time it is administered.
- D. be delivered to the lungs over a period of 6 to 8 hours.

Answer: A

Rationale: The metered-dose inhaler (MDI) delivers the same dose of medication each time it is used. Drugs given via the MDI act very quickly and are commonly prescribed to patients with asthma, emphysema, and other airway diseases.

4. When administered to a patient, a metered-dose inhaler will:

A. deliver the same dose each time it is administered.

Rationale: Correct answer

B. be ineffective when given to patients with asthma.

Rationale: An inhaler is usually prescribed for patients with asthma.

4. When administered to a patient, a metered-dose inhaler will:

C. deliver a different dose each time it is administered.

Rationale: An inhaler is metered to deliver the same dose every time.

D. be delivered to the lungs over a period of 6 to 8 hours.

Rationale: The medication is delivered straight to the lungs, almost immediately, because it is inhaled.

5. You are managing a 62-year-old woman who is complaining of crushing chest pain. Her blood pressure is 84/64 mm Hg and her heart rate is 110 beats/min. Medical control advises you to assist her in taking her prescribed nitroglycerin. After receiving this order, you should:
- A. reassess the patient's heart rate and then assist with the nitroglycerin.
 - B. repeat the patient's blood pressure to the physician and confirm the order.
 - C. wait 10 minutes, reassess the blood pressure, and then give the nitroglycerin.
 - D. administer the nitroglycerin to the patient and then reassess her blood pressure.

Answer: B

Rationale: Nitroglycerin is a vasodilator and lowers the BP; therefore, it should not be given to patients with a systolic BP less than 100 mm Hg. If you receive an order to give nitroglycerin to a patient with a systolic BP less than 100 mm Hg, you should ensure that the physician is aware of the patient's BP, then reconfirm the order.

5. You are managing a 62-year-old woman who is complaining of crushing chest pain. Her blood pressure is 84/64 mm Hg and her heart rate is 110 beats/min. Medical control advises you to assist her in taking her prescribed nitroglycerin. After receiving this order, you should:

A. reassess the patient's heart rate and then assist with the nitroglycerin.

Rationale: Administration of nitroglycerin is based upon the patient's blood pressure and not the patient's heart rate.

B. repeat the patient's blood pressure to the physician and confirm the order.

Rationale: Correct answer

5. You are managing a 62-year-old woman who is complaining of crushing chest pain. Her blood pressure is 84/64 mm Hg and her heart rate is 110 beats/min. Medical control advises you to assist her in taking her prescribed nitroglycerin. After receiving this order, you should:

C. wait 10 minutes, reassess the blood pressure, and then give the nitroglycerin.

Rationale: You should ensure that the physician is aware of the patient's blood pressure and then reconfirm the order.

D. administer the nitroglycerin to the patient and then reassess her blood pressure.

Rationale: Nitroglycerin is a vasodilator and lowers the patient's blood pressure. This medication should not be given to patients with a systolic blood pressure less than 100 mm Hg.

6. Activated charcoal is indicated for patients who have ingested certain drugs and toxins because it:
- A. acts as a direct reversal agent for most medications.
 - B. induces vomiting before the chemical can be digested.
 - C. detoxifies the drug before it can cause harm to the patient.
 - D. binds to chemicals in the stomach and delays absorption.

Answer: D

Rationale: Activated charcoal is an adsorbent—that is, it binds to harmful chemicals that have been ingested. This binding effect delays digestion and absorption of the chemical by the body.

6. Activated charcoal is indicated for patients who have ingested certain drugs and toxins because it:
 - A. acts as a direct reversal agent for most medications.
Rationale: Activated charcoal binds with chemicals.
 - B. induces vomiting before the chemical can be digested.
Rationale: Activated charcoal is not the medication used to induce vomiting.

6. Activated charcoal is indicated for patients who have ingested certain drugs and toxins because it:
- C. detoxifies the drug before it can cause harm to the patient.
Rationale: Activated charcoal binds with chemicals, delays absorption, and helps in getting chemicals through the digestive system.
 - D. binds to chemicals in the stomach and delays absorption.
Rationale: Correct answer

7. With regard to pharmacology, the term “action” refers to the:
- A. ability of a drug to cause harm.
 - B. ability of a drug to produce side effects.
 - C. amount of time it will take the drug to work.
 - D. expected effect of a drug on the patient’s body.

Answer: D

Rationale: As it applies to pharmacology, the term “action” refers to the effect that a drug is expected to have on a patient’s body. Prior to administering *any* drug, the EMT must be aware of its action(s) on the body.

7. With regard to pharmacology, the term “action” refers to the:

A. ability of a drug to cause harm.

Rationale: This is called a contraindication.

B. ability of a drug to produce side effects.

Rationale: This is any action of a medication other than the desired ones.

C. amount of time it will take the drug to work.

Rationale: This is the onset of action.

D. expected effect of a drug on the patient’s body.

Rationale: Correct answer

8. Which of the following patients is the BEST candidate for oral glucose?
- A. Conscious patient who is showing signs of hypoglycemia
 - B. Unconscious diabetic with a documented low blood sugar
 - C. Conscious diabetic patient suspected of being hyperglycemic
 - D. Semiconscious patient with signs and symptoms of low blood sugar

Answer: A

Rationale: Oral glucose is given to diabetic patients with suspected or documented hypoglycemia (low blood sugar). It should not be given to unconscious patients or those who are otherwise unable to swallow because it may be aspirated into the lungs.

8. Which of the following patients is the BEST candidate for oral glucose?

A. Conscious patient who is showing signs of hypoglycemia

Rationale: Correct answer

B. Unconscious diabetic with a documented low blood sugar

Rationale: Oral glucose should not be given to unconscious patients.

8. Which of the following patients is the BEST candidate for oral glucose?

C. Conscious diabetic patient suspected of being hyperglycemic

Rationale: Oral glucose is used for the treatment of hypoglycemia (low blood sugar).

D. Semiconscious patient with signs and symptoms of low blood sugar

Rationale: Oral glucose should not be given to those patients who are unable or may become unable to swallow.

9. Epinephrine is given to patients with anaphylactic shock because of its effects of:
- A. bronchodilation and vasodilation.
 - B. bronchodilation and vasoconstriction.
 - C. vasodilation and bronchoconstriction.
 - D. bronchoconstriction and vasoconstriction.

Answer: B

Rationale: The two major complications associated with anaphylactic shock are bronchoconstriction, which impairs air movement in and out of the lungs, and vasodilation, which causes a drop in blood pressure. Epinephrine reverses these processes by causing bronchodilation and vasoconstriction, thereby improving breathing and increasing the blood pressure, respectively.

9. Epinephrine is given to patients with anaphylactic shock because of its effects of:

A. bronchodilation and vasodilation.

Rationale: Epinephrine dilates the bronchi but constricts the circulatory system.

B. bronchodilation and vasoconstriction.

Rationale: Correct answer

9. Epinephrine is given to patients with anaphylactic shock because of its effects of:

C. vasodilation and bronchoconstriction.

Rationale: Epinephrine constricts the circulatory system and dilates the bronchi.

D. bronchoconstriction and vasoconstriction.

Rationale: Epinephrine dilates the bronchi and constricts the circulatory system.

10. The process by which medications travel through body tissues until they reach the bloodstream is called:

- A. adsorption.
- B. onset of action.
- C. absorption.
- D. transformation.

Answer: C

Rationale: The process by which medications travel through body tissues until they reach the bloodstream is called absorption. Adsorption refers to the binding of one chemical to another. Activated charcoal, for example, delays absorption of certain chemicals into the bloodstream because it adsorbs (binds to) them in the stomach.

10. The process by which medications travel through body tissues until they reach the bloodstream is called:

A. adsorption.

Rationale: This is when particles bind to a surface.

B. onset of action.

Rationale: This is the time that it takes for a medication to start doing what it is prescribed for.

10. The process by which medications travel through body tissues until they reach the bloodstream is called:

C. absorption.

Rationale: **Correct answer**

D. transformation.

Rationale: **This has nothing to do with medication administration.**