

EMT

Chapter 18 Review

1. The signs and symptoms of an allergic reaction are caused by the release of:
 - A. histamine.
 - B. adrenalin.
 - C. epinephrine.
 - D. glucagon.

Answer: A

Response: The two chief chemicals released by the body that result in the signs and symptoms of an allergic reaction are histamines and leukotrienes. Epinephrine (adrenalin) is used to treat allergic reactions.

1. The signs and symptoms of an allergic reaction are caused by the release of:

A. histamine.

Rationale: Correct answer

B. adrenalin.

Rationale: Adrenalin is also called epinephrine and, along with Benadryl, is used to treat anaphylaxis.

1. The signs and symptoms of an allergic reaction are caused by the release of:

C. epinephrine.

Rationale: Epinephrine is used to treat anaphylaxis.

D. glucagon.

Rationale: Glucagon is a hormone produced by the pancreas that helps in the control of metabolism.

2. The negative effects associated with anaphylactic shock are the result of:
- A. severe internal fluid loss.
 - B. inadequate pumping of the heart.
 - C. vasodilation and bronchoconstriction.
 - D. the nervous system's release of adrenalin.

Answer: C

Rationale: Anaphylaxis is an extreme allergic reaction that is life threatening and involves multiple organ systems. In severe cases, anaphylaxis can rapidly result in death. One of the most common signs of anaphylaxis is wheezing, a high-pitched, whistling breath sound that is typically heard on expiration, usually resulting from bronchospasm/ bronchoconstriction and increased mucus production.

2. The negative effects associated with anaphylactic shock are the result of:

A. severe internal fluid loss.

Rationale: The body does not lose fluid; blood pools in the dilated circulatory system and causes less blood flow back to the heart.

B. inadequate pumping of the heart.

Rationale: Inadequate pumping is not the problem; the cardiac output is decreased due to poor return to the heart.

2. The negative effects associated with anaphylactic shock are the result of:

C. vasodilation and bronchoconstriction.

Rationale: Correct answer

D. the nervous system's release of adrenalin.

Rationale: Adrenalin is the treatment for anaphylaxis.

3. You are called to a local baseball park for a 23-year-old man with difficulty breathing. He states that he ate a package of peanuts approximately 30 minutes ago and denies any allergies or past medical history. Your assessment reveals widespread urticaria, tachycardia, and a BP of 90/60 mm Hg. You can hear him wheezing, even without a stethoscope. You should be MOST suspicious of a(n):
- A. acute asthma attack.
 - B. mild allergic reaction.
 - C. severe allergic reaction.
 - D. moderate allergic reaction.

Answer: C

Rationale: The patient's signs and symptoms indicate a severe allergic reaction, which is rapidly progressing to anaphylactic shock. Signs and symptoms of a severe allergic reaction include difficulty breathing, urticaria (hives) over large parts of the body, and signs of shock (eg, tachycardia, hypotension). Certain foods, such as shellfish and nuts, may result in a relatively slow onset of symptoms, but the symptoms can become just as severe.

3. You are called to a local baseball park for a 23-year-old man with difficulty breathing. He states that he ate a package of peanuts approximately 30 minutes ago, and denies any allergies or past medical history. Your assessment reveals widespread urticaria, tachycardia, and a BP of 90/60 mm Hg. You can hear him wheezing, even without a stethoscope. You should be MOST suspicious of a(n):

A. acute asthma attack.

Rationale: Asthma presents with difficulty breathing, but patients will not have urticaria (hives).

3. You are called to a local baseball park for a 23-year-old man with difficulty breathing. He states that he ate a package of peanuts approximately 30 minutes ago, and denies any allergies or past medical history. Your assessment reveals widespread urticaria, tachycardia, and a BP of 90/60 mm Hg. You can hear him wheezing, even without a stethoscope. You should be MOST suspicious of a(n):

B. mild allergic reaction.

Rationale: Mild reactions usually appear with urticaria, itching, and some swelling, but not hypotension and breathing difficulties.

3. You are called to a local baseball park for a 23-year-old man with difficulty breathing. He states that he ate a package of peanuts approximately 30 minutes ago and denies any allergies or past medical history. Your assessment reveals widespread urticaria, tachycardia, and a BP of 90/60 mm Hg. You can hear him wheezing, even without a stethoscope. You should be MOST suspicious of a(n):
- C. severe allergic reaction.

Rationale: Correct answer

3. You are called to a local baseball park for a 23-year-old man with difficulty breathing. He states that he ate a package of peanuts approximately 30 minutes ago and denies any allergies or past medical history. Your assessment reveals widespread urticaria, tachycardia, and a BP of 90/60 mm Hg. You can hear him wheezing, even without a stethoscope. You should be MOST suspicious of a(n):

D. moderate allergic reaction.

Rationale: The designation is mild or severe—
not moderate.

4. What is a wheal?

- A. a raised, swollen, well-defined area on the skin
- B. a poison
- C. small areas of generalized itching or burning that appear as multiple, small, raised areas on the skin
- D. an exaggerated immune response to any substance

Answer: A

Rationale: Insect stings and bites can cause a wheal, which is a raised, swollen, well-defined area on the skin. There is no specific treatment for these injuries, although applying ice sometimes makes them less irritating.

4. What is a wheal?

A. a raised, swollen, well-defined area on the skin

Rationale: Correct answer

B. a poison

Rationale: This is the definition of a toxin.

4. What is a wheal?

C. small areas of generalized itching or burning that appear as multiple, small, raised areas on the skin

Rationale: This is the definition of urticaria.

D. an exaggerated immune response to any substance

Rationale: This is the definition of an allergic reaction.

5. You are treating a woman who was stung numerous times by hornets. On assessment, you note that some of the stingers are still imbedded in her skin. You should:
- A. leave the stingers in place.
 - B. scrape the stingers from her skin.
 - C. pull the stingers out with tweezers.
 - D. cover the stings with tight dressings.

Answer: B

Rationale: Because of the venom left in the sac located at the end of the stinger, you should not grab the stingers in an attempt to remove them. Instead, scrape them off with a rigid object such as a credit card.

5. You are treating a woman who was stung numerous times by hornets. On assessment, you note that some of the stingers are still imbedded in her skin. You should:

A. leave the stingers in place.

Rationale: A stinger will continue to inject venom even when the stinger is no longer attached to the insect.

B. scrape the stingers from her skin.

Rationale: Correct answer

5. You are treating a woman who was stung numerous times by hornets. On assessment, you note that some of the stingers are still imbedded in her skin. You should:

C. pull the stingers out with tweezers.

Rationale: Using tweezers may squeeze more venom into the patient.

D. cover the stings with tight dressings.

Rationale: Remove the stingers—do not leave them in place.

6. A young male is experiencing signs and symptoms of anaphylactic shock after being stung by a scorpion. His level of consciousness is diminished, his breathing is severely labored, you can hear inspiratory stridor, and his face is cyanotic. The patient has a prescribed epinephrine auto-injector. What should you do first?
- A. Assist him in administering his epinephrine.
 - B. Apply high-flow oxygen via nonrebreathing mask.
 - C. Provide ventilatory assistance with a bag-mask device.
 - D. Elevate his legs and cover him with a warm blanket.

Answer: C

Rationale: The patient is not breathing adequately, as noted by his decreased level of consciousness, severely labored breathing, inspiratory stridor, and cyanosis. Therefore, you should first assist his ventilations with a bag-mask device. He clearly requires epinephrine, but not before restoring adequate breathing first. Regardless of the situation, a patient's airway must be patent and his or her breathing must remain adequate at all times.

6. A young male is experiencing signs and symptoms of anaphylactic shock after being stung by a scorpion. His level of consciousness is diminished, his breathing is severely labored, you can hear inspiratory stridor, and his face is cyanotic. The patient has a prescribed epinephrine auto-injector. What should you do first?

A. Assist him in administering his epinephrine.

Rationale: This is part of the treatment, but only after the breathing has been addressed.

B. Apply high-flow oxygen via nonrebreathing mask.

Rationale: Respirations need assistance due to diminished breathing.

6. A young male is experiencing signs and symptoms of anaphylactic shock after being stung by a scorpion. His level of consciousness is diminished, his breathing is severely labored, you can hear inspiratory stridor, and his face is cyanotic. The patient has a prescribed epinephrine auto-injector. What should you do first?

C. Provide ventilatory assistance with a bag-mask device.

Rationale: Correct answer

D. Elevate his legs and cover him with a warm blanket.

Rationale: You should treat for shock, but breathing is the first priority.

7. The MOST reliable indicator of upper airway swelling during a severe allergic reaction is:
- A. stridor.
 - B. anxiety.
 - C. cyanosis.
 - D. wheezing.

Answer: A

Rationale: Stridor is a high-pitched sound that is most often heard during inhalation. It indicates swelling of the upper airway.

Wheezing, a whistling sound, is caused by narrowed bronchioles; it indicates narrowing or swelling of the lower airway. Anxiety and cyanosis can occur from a variety of causes; they are not exclusive to airway swelling.

7. The MOST reliable indicator of upper airway swelling during a severe allergic reaction is:

A. stridor.

Rationale: Correct answer

B. anxiety.

Rationale: This is typically a symptom of hypoxia or decreased oxygenation to the brain.

7. The MOST reliable indicator of upper airway swelling during a severe allergic reaction is:

C. cyanosis.

Rationale: This is a sign of hypoxia and inadequate tissue perfusion.

D. wheezing.

Rationale: This is a sign of lower airway constriction or narrowing.

8. What is the best tool or method for assessing a patient's perfusion status?
- A. small-volume nebulizer
 - B. bag-mask device
 - C. pulse oximetry
 - D. auto-injector

Answer: C

Rationale: In a patient experiencing an allergic reaction, pulse oximetry is a useful method that you can use to assess the patient's perfusion status. By using pulse oximetry, you can determine the percentage of oxygen saturation in the bloodstream, which will assist in identifying the degree of respiratory distress.

8. What is the best tool or method for assessing a patient's perfusion status?

A. small-volume nebulizer

Rationale: This device holds liquid medicine that is turned into a fine mist. It treats conditions like asthma.

B. bag-mask device

Rationale: This device delivers supplemental oxygen.

8. What is the best tool or method for assessing a patient's perfusion status?

C. pulse oximetry

Rationale: Correct answer

D. auto-injector

Rationale: This device is designed to deliver a single dose of a particular drug, such as epinephrine.

9. The adult EpiPen system delivers _____ mg of epinephrine, and the infant-child system delivers _____ mg.

A. 0.15, 0.3

B. 0.3, 0.15

C. 0.15, 0.5

D. 0.5, 0.2

Answer: B

Rationale: The adult EpiPen system delivers 0.3 mg of epinephrine via an automatic needle and syringe system; the infant-child system delivers 0.15 mg.

9. The adult EpiPen system delivers _____ mg of epinephrine, and the infant-child system delivers _____ mg.

A. 0.15, 0.3

Rationale: This is not the correct dosage.

B. 0.3, 0.15

Rationale: Correct answer

C. 0.15, 0.5

Rationale: This is not the correct dosage.

D. 0.5, 0.2

Rationale: This is not the correct dosage.

10. When administering epinephrine by auto-injector, the EMT should hold the injector in place for:
- A. 5 seconds.
 - B. 10 seconds.
 - C. 20 seconds.
 - D. 30 seconds.

Answer: B

Rationale: When administering epinephrine via auto-injector, push the injector firmly against the thigh until it activates. Hold the injector in place for 10 seconds to ensure that all the medication is injected.

10. When administering epinephrine by auto-injector, the EMT should hold the injector in place for:

A. 5 seconds.

Rationale: The injector should be held in place for 10 seconds.

B. 10 seconds.

Rationale: Correct answer

10. When administering epinephrine by auto-injector, the EMT should hold the injector in place for:

C. 20 seconds.

Rationale: The injector should be held in place for 10 seconds.

D. 30 seconds.

Rationale: The injector should be held in place for 10 seconds.