

Chapter 24

Review

1. A young male was struck in the forearm with a baseball and complains of pain to the area. Slight swelling and ecchymosis are present, but no external bleeding. What type of injury does this describe?

- A. abrasion
- B. contusion
- C. hematoma
- D. avulsion

Answer: B

Rationale: A contusion (bruise) is caused by direct blunt force trauma. The epidermis remains intact, but small blood vessels in the dermis are injured. The depth of the injury varies, depending on the amount of energy absorbed. Pain and swelling occur as fluid and blood leak into the damaged area. The buildup of blood produces a characteristic blue and black discoloration called ecchymosis.

1. A young male was struck in the forearm with a baseball and complains of pain to the area. Slight swelling and ecchymosis are present, but no external bleeding. What type of injury does this describe?

A. abrasion

Rationale: An abrasion is a wound of the superficial layer of skin, caused by friction.

B. contusion

Rationale: Correct answer

1. A young male was struck in the forearm with a baseball and complains of pain to the area. Slight swelling and ecchymosis are present, but no external bleeding. What type of injury does this describe?

C. hematoma

Rationale: Hematoma is blood that has collected within damaged tissue or in a body cavity, associated with large blood vessel damage.

D. avulsion

Rationale: An avulsion is an injury that separates various layers of tissue.

2. A compression injury that is severe enough to cut off blood flow below the injury is called:

- A. a contusion.
- B. a hematoma.
- C. a local thrombus.
- D. compartment syndrome.

Answer: D

Rationale: Compartment syndrome can occur when a part of the body has been compressed for a prolonged period of time—usually greater than 4 hours. The injured tissue begins to swell, which can impede arterial blood flow and venous return. As a result, the part of the body distal to the compression site becomes hypoxic and metabolic waste products (ie, lactic acid) begin to accumulate.

2. A compression injury that is severe enough to cut off blood flow below the injury is called:

A. a contusion.

Rationale: This is a bruise.

B. a hematoma.

Rationale: This is blood that has collected within damaged tissue. A hematoma occurs when a large blood vessel is injured.

2. A compression injury that is severe enough to cut off blood flow below the injury is called:

C. a local thrombus.

Rationale: This is a blood clot.

D. compartment syndrome.

Rationale: Correct answer

3. A 45-year-old convenience store clerk was shot in the right anterior chest during a robbery. Your assessment reveals that the wound has blood bubbling from it every time the patient breathes. Your MOST immediate action should be to:
- A. prevent air from entering the wound.
 - B. cover the wound with a bulky dressing.
 - C. assess the patient's back for an exit wound.
 - D. transport promptly to the closest trauma center.

Answer: A

Rationale: Immediate treatment for a sucking chest wound (open pneumothorax) involves covering the wound with an occlusive dressing. This will prevent air from being drawn into the chest cavity. After covering the wound, assess for an exit wound, apply high-flow oxygen (if not already done), and transport promptly.

3. A 45-year-old convenience store clerk was shot in the right anterior chest during a robbery. Your assessment reveals that the wound has blood bubbling from it every time the patient breathes. Your MOST immediate action should be to:

A. prevent air from entering the wound.

Rationale: Correct answer

B. cover the wound with a bulky dressing.

Rationale: You must use an occlusive dressing.

3. A 45-year-old convenience store clerk was shot in the right anterior chest during a robbery. Your assessment reveals that the wound has blood bubbling from it every time the patient breathes. Your MOST immediate action should be to:

C. assess the patient's back for an exit wound.

Rationale: Do this after the anterior chest wound is covered.

D. transport promptly to the closest trauma center.

Rationale: Do this after the initial treatment of an open chest wound.

4. What effects will the application of an ice pack have on a hematoma?
- A. vasodilation and reduction of pain
 - B. vasodilation and decreased bleeding
 - C. vasodilation and reduction of swelling
 - D. vasoconstriction and decreased bleeding

Answer: D

Rationale: Applying an ice pack to a closed wound, such as a hematoma, will decrease bleeding, pain, and swelling by causing constriction of the blood vessels.

4. What effects will the application of an ice pack have on a hematoma?

A. vasodilation and reduction of pain

Rationale: An ice pack causes vasoconstriction and will reduce pain.

B. vasodilation and decreased bleeding

Rationale: An ice pack causes vasoconstriction and will reduce bleeding.

4. What effects will the application of an ice pack have on a hematoma?

C. vasodilation and reduction of swelling

Rationale: An ice pack causes vasoconstriction and will reduce swelling.

D. vasoconstriction and decreased bleeding

Rationale: Correct answer

5. The primary reason for applying a sterile dressing to an open injury is to:
- A. prevent contamination.
 - B. control external bleeding.
 - C. reduce the risk of infection.
 - D. minimize any internal bleeding.

Answer: B

Rationale: Although prevention of contamination is an important reason for applying a sterile dressing to an open injury, the primary reason is to control the external bleeding associated with it.

5. The primary reason for applying a sterile dressing to an open injury is to:

A. prevent contamination.

Rationale: This is important, but not the primary reason.

B. control external bleeding.

Rationale: Correct answer

5. The primary reason for applying a sterile dressing to an open injury is to:

C. reduce the risk of infection.

Rationale: The prevention of contamination will result in the reduction of potential infection risks.

D. minimize any internal bleeding.

Rationale: Internal bleeding is minimized by the application of a pressure bandage to an open wound.

6. The MOST appropriate way to dress and bandage an open abdominal wound with a loop of bowel protruding from it is to:
- A. cover the wound with a dry, sterile dressing and apply firm pressure.
 - B. apply a moist, sterile dressing to the wound and apply firm pressure.
 - C. apply a moist, sterile dressing to the wound and secure with an occlusive dressing.
 - D. carefully replace the protruding bowel into the abdomen and cover the wound.

Answer: C

Rationale: Treatment for an abdominal evisceration includes applying a moist, sterile dressing to the wound and covering the moist dressing with an occlusive dressing. Do not replace a protruding bowel back into the wound or apply firm pressure, which may force the bowel back into the wound; these actions increase the risk of infection.

6. The MOST appropriate way to dress and bandage an open abdominal wound with a loop of bowel protruding from it is to:

A. cover the wound with a dry, sterile dressing and apply firm pressure.

Rationale: You must use a moist dressing.

B. apply a moist, sterile dressing to the wound and apply firm pressure.

Rationale: You should not apply pressure.

6. The MOST appropriate way to dress and bandage an open abdominal wound with a loop of bowel protruding from it is to:

C. apply a moist, sterile dressing to the wound and secure with an occlusive dressing.

Rationale: Correct answer

D. carefully replace the protruding bowel into the abdomen and cover the wound.

Rationale: Never force a bowel back into the abdominal cavity.

7. A 22-year-old male was attacked by a rival gang and has a large knife impaled in the center of his chest. Your assessment reveals that he is apneic and pulseless. You should:
- A. carefully remove the knife, control any bleeding, begin CPR, and transport.
 - B. stabilize the knife in place, provide rescue breathing, and transport at once.
 - C. remove the knife and control any bleeding, apply the AED, and analyze his rhythm.
 - D. begin CPR, control any external bleeding, and transport rapidly to a trauma center.

Answer: A

Rationale: As a rule, impaled objects should be stabilized in place. However, if they interfere with the patient's breathing or your ability to perform CPR, they should be removed. *You cannot perform CPR on a patient if a knife is impaled in the center of the chest.* Carefully remove the knife, control any bleeding, begin CPR, and transport at once. The AED is not indicated for patients with traumatic cardiac arrest; their arrest is usually caused by massive blood loss, not a primary cardiac dysrhythmia.

7. A 22-year-old male was attacked by a rival gang and has a large knife impaled in the center of his chest. Your assessment reveals that he is apneic and pulseless. You should:

A. carefully remove the knife, control any bleeding, begin CPR, and transport.

Rationale: Correct answer

B. stabilize the knife in place, provide rescue breathing, and transport at once.

Rationale: The knife must be removed in order to provide effective CPR.

7. A 22-year-old male was attacked by a rival gang and has a large knife impaled in the center of his chest. Your assessment reveals that he is apneic and pulseless. You should:

C. remove the knife and control any bleeding, apply the AED, and analyze his rhythm.

Rationale: An AED is not recommended in traumatic arrest, but CPR must be initiated.

D. begin CPR, control any external bleeding, and transport rapidly to a trauma center.

Rationale: The impaled object must be removed prior to the initiation of chest compressions.

8. Which of the following is considered a severe burn?
- A. any full-thickness burn
 - B. 20% partial-thickness burn
 - C. 10% full-thickness burn with abrasions
 - D. 5% full-thickness burn with a fracture

Answer: D

Rationale: Severe burns include the following: full-thickness burns involving the hands, feet, face, airway, or genitalia; full-thickness burns covering more than 10% of the body's total surface area (BSA); partial-thickness burns covering more than 30% of the BSA; burns involving the respiratory tract (eg, smoke inhalation); burns complicated by fractures; and burns on patients younger than 5 years or older than 55 years that would otherwise be classified as "moderate" burns on younger adults.

8. Which of the following is considered a severe burn?

A. any full-thickness burn

Rationale: A full-thickness burn is severe if it covers more than 10% of the body or involves the hands, face, feet, and genitalia.

B. 20% partial-thickness burn

Rationale: This burn must be greater than 30% BSA.

8. Which of the following is considered a severe burn?

C. 10% full-thickness burn with abrasions

Rationale: This burn must be greater than 10% BSA.

D. 5% full-thickness burn with a fracture

Rationale: Correct answer

9. A 5-year-old boy was burned when he pulled a barbecue pit over on himself. He has partial and full-thickness burns to his anterior chest and circumferentially on both arms. What percentage of his body surface area has been burned?

A. 18%

B. 27%

C. 36%

D. 45%

Answer: B

Rationale: Using the pediatric rules of nines, the anterior chest accounts for 9% of the BSA (the *entire anterior trunk*, which includes the *chest and abdomen*, account for 18% of the BSA), and each arm accounts for 9% of the BSA. Therefore, this child has experienced 27% BSA burns.

9. A 5-year-old boy was burned when he pulled a barbecue pit over on himself. He has partial and full-thickness burns to his anterior chest and circumferentially on both arms. What percentage of his body surface area has been burned?

A. 18%

Rationale: 18% would indicate the patient's arms only.

B. 27%

Rationale: Correct answer

9. A 5-year-old boy was burned when he pulled a barbecue pit over on himself. He has partial and full-thickness burns to his anterior chest and circumferentially on both arms. What percentage of his body surface area has been burned?

C. 36%

Rationale: The patient's chest is 9% and both arms are 18%.

D. 45%

Rationale: The patient's chest is 9% and both arms are 18%.

10. Which of the following statements regarding chemical burns is FALSE?

- A. Most chemical burns are caused by strong acids or alkalis.
- B. Fumes of strong chemicals can cause burns to the respiratory tract.
- C. Prior to removing a dry chemical, flush the area with sterile water.
- D. Do not attempt to neutralize an acid burn with an alkaline chemical.

Answer: C

Rationale: Dry chemicals should be brushed off of the patient before irrigating the wound with sterile water or saline. Failure to do so may increase the burning process and cause further tissue damage.

10. Which of the following statements regarding chemical burns is FALSE?

A. Most chemical burns are caused by strong acids or alkalis.

Rationale: Chemical burns are caused by acids and alkalis.

B. Fumes of strong chemicals can cause burns to the respiratory tract.

Rationale: Chemicals are in the fumes and will cause respiratory tract burns.

10. Which of the following statements regarding chemical burns is FALSE?

C. Prior to removing a dry chemical, flush the area with sterile water.

Rationale: Correct answer

D. Do not attempt to neutralize an acid burn with an alkaline chemical.

Rationale: It would take a chemist to perform this procedure. Too much alkaline would cause burning to the patient's skin.