

Paramedic Care Principles and Practice V4, 5e (Bledsoe et al.)
Chapter 2 Mechanism of Injury

1) Vehicle supplemental restraint systems (air bags) are meant to:

- A) prevent unrestrained occupants from taking the down-and-under pathway in frontal impacts.
- B) protect infants and children who ride in the front seat of the vehicle.
- C) prevent injury from secondary impacts.
- D) absorb the energy exchange of rapid deceleration.

Answer: D

Diff: 1 Page Ref: 25

Standard: Trauma (Trauma Overview)

Objective: 5

2) When assessing a patient with a crush injury, which of the following findings would indicate that toxins have entered the central circulation?

- A) Hot, red skin
- B) Increased urine output
- C) Cardiac arrhythmia
- D) Central hyperventilation syndrome

Answer: C

Diff: 2 Page Ref: 40

Standard: Trauma (Soft Tissue Trauma)

Objective: 13

3) People in which of the following age groups are prone to significant trauma due to falls?

- A) College-aged adults
- B) Geriatric population
- C) Pediatric population
- D) Teenagers

Answer: B

Diff: 1 Page Ref: 34

Standard: Trauma (Special Considerations in Trauma)

Objective: 9

4) Which of the following is NOT a complication of crush injury?

- A) Renal failure
- B) Difficult-to-control hemorrhage
- C) Cardiac arrhythmias
- D) Systemic alkalosis

Answer: D

Diff: 1 Page Ref: 40-41

Standard: Trauma (Soft Tissue Trauma)

Objective: 13

5) The two factors that refer to the rate of change of speed are:

- A) deceleration and velocity.
- B) mass and weight.
- C) acceleration and deceleration.
- D) acceleration and inertia.

Answer: C

Diff: 1 Page Ref: 20-21

Standard: Trauma (Trauma Overview)

Objective: 2

6) Which of the following injuries is MOST likely in a rear-end collision?

- A) Thoracic and abdominal injuries
- B) Head and neck injuries
- C) Pelvic fractures
- D) Lumbar spine injuries

Answer: B

Diff: 1 Page Ref: 29

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 6

7) You are called to the scene of a vehicle crash in which a car was rear-ended while stopped at a stop sign. Which of the following laws of physics serves as the basis for analyzing the mechanism of injury and the associated index of suspicion for injuries?

- A) The amount of energy transmitted to an object is inversely proportional to its rate of deceleration.
- B) Energy can neither be created nor destroyed.
- C) A body at rest will remain at rest unless acted on by an outside force.
- D) A body in motion will remain in motion unless acted on by an outside force.

Answer: C

Diff: 2 Page Ref: 20

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 2

8) When a patient falls, which section of the spinal column is the most prone to compression injury?

- A) Sacral
- B) Cervical
- C) Thoracic
- D) Lumbar

Answer: D

Diff: 1 Page Ref: 34

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 9

9) Which of the following injuries is NOT associated with the use of vehicle restraint systems?

- A) Traumatic brain injury
- B) Abrasions and contusions to the clavicle and chest area
- C) Lumbar spine trauma
- D) Abdominal injury

Answer: A

Diff: 1 Page Ref: 25

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 5

10) Applying Newton's second law of motion to a vehicle traveling 70 miles per hour, crashing into which of the following would transfer the most force to the patient?

- A) Bridge abutment
- B) Shrubbery
- C) A body of water
- D) Signpost

Answer: A

Diff: 1 Page Ref: 34

Standard: Trauma (Trauma Overview)

Objective: 2

11) Which of the following is TRUE of the differences between adult and pediatric pedestrians when struck by a vehicle?

- A) Adults tend to be thrown under the vehicle.
- B) Children tend to be thrown onto the hood of the vehicle.
- C) Children tend to be thrown under the vehicle.
- D) Adults tend to have injuries higher on the body.

Answer: C

Diff: 1 Page Ref: 32

Standard: Trauma (Special Considerations in Trauma)

Objective: 6

12) Which of the following is MOST likely to be fractured from a fall onto outstretched hands?

- A) Carpals
- B) Metacarpals
- C) Clavicle
- D) Ulna

Answer: C

Diff: 1 Page Ref: 34

Standard: Trauma (Orthopedic Trauma)

Objective: 9

13) Your patient, a 23-year-old woman who is 6 months pregnant, was the unrestrained driver of a vehicle that rear-ended a parked car. The air bag deployed. Considering the likelihood of organ collision, for which of the following injuries should you maintain a high index of suspicion?

- A) Cardiac contusion
- B) Anterior flail segment
- C) Abruptio placentae
- D) Fractured sternum

Answer: C

Diff: 3 Page Ref: 25-26

Standard: Trauma (Special Considerations in Trauma)

Objective: 3

14) Which of the following best describes why the occupants of a vehicle moving at 50 miles per hour will be injured when the vehicle strikes a tree, but not when it brakes to a stop?

- A) Braking allows the kinetic energy to be absorbed evenly into the frame of the vehicle, rather than concentrating it at the point of impact.
- B) The energy gradually dissipates as heat due to the friction of braking, rather than transferring to the vehicle and its occupants.
- C) The inertia of the tree increases the kinetic energy transmitted to the occupants by a factor of 10.
- D) None of the above describes why.

Answer: B

Diff: 2 Page Ref: 20

Standard: Trauma (Trauma Overview)

Objective: 2

15) Which pathway of patient travel results in higher mortality with a frontal impact collision?

- A) Vertical
- B) Straight
- C) Up-and-over
- D) Down-and-under

Answer: C

Diff: 1 Page Ref: 27-28

Standard: Trauma (Trauma Overview)

Objective: 6

16) Upon arriving at the scene of a single-vehicle collision in which the vehicle struck a utility pole, you note that the windshield is "starred," and that the driver is not restrained. Which of the following injuries is MOST likely?

- A) Whiplash injury of the neck muscles
- B) Compression injury of the cervical spine
- C) Distraction injury of the cervical spine
- D) Ligamentous neck injury due to rotation beyond the range of motion

Answer: B

Diff: 2 Page Ref: 27

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 6

17) Which of the following factors is NOT a consideration in the severity of injury related to falls?

- A) Landing surface
- B) Wind resistance
- C) The initial point of impact
- D) Distance of the fall

Answer: B

Diff: 1 Page Ref: 34

Standard: Trauma (Trauma Overview)

Objective: 9

18) Which of the following is TRUE regarding a motorcycle collision?

- A) Frontal impact can result in intraabdominal, pelvic, and femur injuries.
- B) A rider who "lays down the bike" will generally receive more severe injuries than a rider who stays with the bike.
- C) The structural steel of the vehicle absorbs most of the kinetic energy in a motorcycle collision.
- D) The use of helmets has drastically reduced the incidence of cervical spine injuries.

Answer: A

Diff: 2 Page Ref: 31-32

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 8

19) For which of the following impacts should you maintain a higher index of suspicion because the degree of injury may be greater than the damage alone indicates?

- A) Rear-end
- B) Oblique
- C) Lateral
- D) Frontal

Answer: C

Diff: 1 Page Ref: 28

Standard: Trauma (Trauma Overview)

Objective: 6

20) Which of the following best defines the term *energy*?

- A) The ability to deform solid objects
- B) The rate of motion related to time
- C) The capacity to do work
- D) The amount of heat generated through friction

Answer: C

Diff: 1 Page Ref: 20

Standard: Trauma (Trauma Overview)

Objective: 1

21) Which of the following contributes to a greater degree of injury than anticipated from vehicle damage alone in a lateral-impact motor vehicle collision?

- A) Increased gravitational forces due to multiple changes in direction and velocity
- B) Lack of a crumple zone
- C) Taking the up-and-over pathway
- D) The force of side-impact air bag deployment

Answer: B

Diff: 2 Page Ref: 28

Standard: Trauma (Trauma Overview)

Objective: 5

22) Which of the following injuries is NOT commonly related to snowmobiling?

- A) Ejections
- B) Crush injuries
- C) Drowning
- D) Glancing blows against obstructions in the snow

Answer: C

Diff: 2 Page Ref: 33

Standard: Trauma (Trauma Overview)

Objective: 8

23) Which of the following is the most important priority when caring for a patient with a shallow-water diving injury?

- A) Assessing the cervical spine for deformity
- B) Maintaining cervical spine stabilization while opening the airway
- C) Removing the patient from the water as soon as possible
- D) Initiating rescue breathing once out of the water

Answer: B

Diff: 1 Page Ref: 34

Standard: Trauma (Environmental Emergencies)

Objective: 9

24) Which of the following affects the severity of injury sustained in a motor vehicle collision?

- A) Gross vehicle weight
- B) Rate of acceleration or deceleration
- C) Vehicle speed
- D) All of the above

Answer: D

Diff: 1 Page Ref: 20-21

Standard: Trauma (Environmental Emergencies)

Objective: 2

25) Which of the following is NOT a type of collision that must be considered when analyzing a motor vehicle collision?

- A) The vehicle strikes an object.
- B) The occupants' organs strike the interior of the body cavity.
- C) The body of the occupant strikes the interior of the vehicle.
- D) A hubcap flies off and strikes a tree.

Answer: D

Diff: 1 Page Ref: 24-25

Standard: Trauma (Environmental Emergencies)

Objective: 7

26) Which of the following best describes what happens to the kinetic energy of a vehicle traveling at 65 miles per hour when it collides into a concrete barrier wall?

- A) The energy dissipates as sound waves.
- B) The body of the vehicle and its occupants absorb the energy.
- C) The wall's foundation absorbs the energy.
- D) The energy converts to heat through friction.

Answer: B

Diff: 2 Page Ref: 21-22

Standard: Trauma (Environmental Emergencies)

Objective: 2

27) Which two of the following factors proportionately affect the kinetic energy of a bullet fired from a gun?

- A) Friction and distance
- B) Mass and friction
- C) Velocity and mass
- D) Friction and velocity

Answer: C

Diff: 1 Page Ref: 21

Standard: Trauma (Multi-System Trauma)

Objective: 17

28) Which of the following injuries is associated with the pressure wave produced by a blast?

- A) Pneumothorax
- B) Lacerated liver
- C) Fractures
- D) Ruptured spleen

Answer: A

Diff: 1 Page Ref: 36

Standard: Trauma (Chest Trauma)

Objective: 10

29) Axial loading is MOST likely to occur in which type of impact?

- A) Frontal with an up-and-over pathway
- B) Frontal with a down-and-under pathway
- C) Rear with the headrest too low
- D) Lateral on the side of the vehicle opposite the occupant

Answer: A

Diff: 2 Page Ref: 27

Standard: Trauma (Environmental Emergencies)

Objective: 3

30) Which of the following "paper bag syndrome" injuries may occur due to sudden compression of the thorax or abdomen?

- A) Pulmonary and myocardial contusions
- B) Pneumothorax and diaphragmatic rupture
- C) Cardiac tamponade and aortic dissection
- D) Pneumothorax and myocardial contusion

Answer: B

Diff: 2 Page Ref: 27

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 3

31) Which of the following statements about lateral impact collisions is TRUE?

- A) The substantial lateral crumple zone prevents most injuries.
- B) Damage to the vehicle is a reliable indication of the seriousness of injuries.
- C) The degree of injury may be greater than the damage alone would indicate.
- D) Fatalities are rare because the upper extremities absorb the energy.

Answer: C

Diff: 1 Page Ref: 28

Standard: Trauma (Multi-System Trauma)

Objective: 6

32) Which of the following mechanisms is most consistent with fractured vertebrae from a rapid lateral twisting motion?

- A) Direct trauma, such as from a blow to the head
- B) Low-velocity penetrating trauma from an ice pick
- C) High-velocity penetrating trauma from a gunshot wound
- D) Lateral-impact motor vehicle collision

Answer: D

Diff: 2 Page Ref: 28

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 7

33) Frontal impacts in which the patient takes a "down-and-under" pathway typically result in which of the following injury patterns?

- A) Traumatic brain injury
- B) Hip and femur fractures
- C) Rupture of the diaphragm
- D) Rupture of hollow organs

Answer: B

Diff: 1 Page Ref: 27

Standard: Trauma (Orthopedic Trauma)

Objective: 6

34) Which of the following scenarios would likely lead to the development of compartment syndrome?

- A) A crush injury to the lower leg
- B) A loose-fitting cast that covers the thigh and leg
- C) An excessive release of intracellular potassium
- D) A tennis shoe that doesn't fit correctly

Answer: A

Diff: 2 Page Ref: 41

Standard: Trauma (Soft Tissue Trauma)

Objective: 13

35) Which of the following is TRUE of the injuries sustained by the elderly due to falls?

- A) The injuries sustained by the elderly are less likely to result in hospitalization.
- B) Only more significant falls cause fractures.
- C) Less-significant falls may cause fractures.
- D) The elderly sustain injuries similar to other age groups in comparable falls.

Answer: C

Diff: 1 Page Ref: 34

Standard: Trauma (Special Considerations in Trauma)

Objective: 9

36) Which of the following is NOT one of the major types of recreational vehicles involved in crashes?

- A) Snowmobiles
- B) Jet skis
- C) All-terrain vehicles
- D) Go-karts

Answer: D

Diff: 1 Page Ref: 32-33

Standard: Trauma (Trauma Overview)

Objective: 8

37) Infants and very small children (up to two years of age) should have their child safety seat positioned where in a car?

- A) The front seating area, facing backward
- B) The rear seating area, facing backward
- C) The front seating area, facing forward
- D) The rear seating area, facing forward

Answer: B

Diff: 2 Page Ref: 26

Standard: Trauma (Special Considerations in Trauma)

Objective: 5

38) When the driver's chest strikes the steering wheel during a motor vehicle collision, what produces the next injury?

- A) The air bag deploys a second time.
- B) The steering column shears off, causing penetrating trauma.
- C) Unsecured objects in the vehicle become projectiles.
- D) The heart continues its forward motion until it strikes the chest wall.

Answer: D

Diff: 2 Page Ref: 27-28

Standard: Trauma (Chest Trauma)

Objective: 4

39) When inspecting the interior of a vehicle involved in a frontal collision, you note that the dash panel beneath the steering wheel is broken. Which of the following injuries might this indicate?

- A) Fracture of the acetabulum
- B) Femur fracture
- C) Knee injury
- D) All of the above

Answer: D

Diff: 2 Page Ref: 27-28

Standard: Trauma (Orthopedic Trauma)

Objective: 6

40) Which of the following injuries is associated with the tertiary phase of a blast?

- A) Crush injuries
- B) Barotrauma
- C) Burns
- D) Projectile injuries

Answer: A

Diff: 1 Page Ref: 37

Standard: Trauma (Soft Tissue Trauma)

Objective: 11

41) Which of the following statements about the impact of motorcycle helmet usage is TRUE?

- A) Helmet use moderately increases the incidence of cervical spine injury.
- B) Helmet use moderately decreases the incidence of cervical spine injury.
- C) Helmet use substantially decreases the incidence of cervical spine injury.
- D) Helmet use neither increases nor decreases the incidence of cervical spine injury.

Answer: D

Diff: 1 Page Ref: 32

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 8

42) Which of the following mechanisms in a motor vehicle collision would MOST likely result in a tear of the liver at the *ligamentum teres*?

- A) Gradual deceleration
- B) Sudden acceleration
- C) Sudden deceleration
- D) Gradual acceleration

Answer: C

Diff: 1 Page Ref: 22

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 3

43) Which of the following statements is NOT true of occupant ejection in motor vehicle collisions?

- A) Ejection accounts for 27 percent of motor vehicle fatalities.
- B) The number of occupant impacts increases with ejection.
- C) Ejection has not been reported with lateral-impact collisions.
- D) Ejection is most often associated with frontal-impact collisions.

Answer: C

Diff: 1 Page Ref: 28

Standard: Trauma (Trauma Overview)

Objective: 6

44) Which of the following may result from aggressive ventilation of the blast patient?

- A) Emboli
- B) Pericardial tamponade
- C) Hemorrhage
- D) Acidosis

Answer: A

Diff: 1 Page Ref: 39

Standard: Trauma (Multi-System Trauma)

Objective: 10

45) A vehicle is struck in its right front as it passes through an intersection, resulting in an oblique impact. Which of the passengers is subjected to the greatest acceleration forces?

- A) The right-rear passenger
- B) The left-rear passenger
- C) The front-seat passenger
- D) The driver

Answer: B

Diff: 2 Page Ref: 28-29

Standard: Trauma (Trauma Overview)

Objective: 6

46) You have responded to a soccer field on which two 13-year-olds have collided during a game. Which of the following findings in either patient requires ambulance transport for further evaluation in the emergency department?

- A) Weakness in the upper extremities
- B) Complaint of "getting the wind knocked out of me"
- C) Contusion to the thigh
- D) Minor epistaxis

Answer: A

Diff: 2 Page Ref: 40

Standard: Trauma (Special Considerations in Trauma)

Objective: 12

47) Which type of motor vehicle collision is most common in rural areas?

- A) Frontal
- B) Lateral
- C) Rollover
- D) Rear-end

Answer: A

Diff: 1 Page Ref: 27-28

Standard: Trauma (Trauma Overview)

Objective: 4

48) The branch of physics dealing with objects in motion and energy exchanges that occur as these objects collide is called what?

- A) Kinematics
- B) Kinetics
- C) Inertia
- D) Force

Answer: B

Diff: 2 Page Ref: 20

Standard: Trauma (Trauma Overview)

Objective: 1

- 49) Which of the following is TRUE of supplemental restraint systems?
- A) They may deploy during rescue operations, injuring the patient and/or EMS personnel.
 - B) When worn incorrectly, they may cause spinal injury or decapitation.
 - C) They guard against thoracic impact with the steering wheel.
 - D) They are primarily useful in preventing injury to infants and children riding in the front seat.

Answer: A

Diff: 1 Page Ref: 25-26

Standard: Trauma (Trauma Overview)

Objective: 5

- 50) Which of the following mechanisms may result in a conventional explosion?

- A) Fumes
- B) Dust
- C) Natural gas
- D) All of the above

Answer: D

Diff: 1 Page Ref: 35

Standard: Trauma (Multi-System Trauma)

Objective: 10

- 51) Which of the following statements about low-velocity penetrating trauma is TRUE?

- A) Shorter knives and ice picks may be removed if they are left in the wound.
- B) There is no pressure shock wave with a knife wound as there is with an arrow wound.
- C) More injuries are sustained from arrows than from knives.
- D) Knives, arrows, ice picks, and similar weapons cause damage only in their direct path.

Answer: D

Diff: 2 Page Ref: 41

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 17

- 52) Your patient is an 8-year-old boy with a pencil impaled 2 centimeters inferior to the xiphoid process. You note that the pencil is pulsating. Which of the following is the best action?

- A) Start an IV and request orders for analgesia and sedation.
- B) Remove the pencil and apply direct pressure to the wound; transport to a trauma center if the bleeding does not stop with direct pressure.
- C) Stabilize the pencil in place and transport to a trauma center.
- D) Stabilize the pencil in place and transport to the nearest medical facility.

Answer: C

Diff: 2 Page Ref: 53

Standard: Trauma (Chest Trauma)

Objective: 20

53) The pathway of injury left in the wake of a penetrating mechanism of injury is called:

- A) cone of injury.
- B) cavitation.
- C) profile.
- D) trajectory.

Answer: B

Diff: 1 Page Ref: 43

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 14

54) Which of the following statements is TRUE of the permanent cavity created by penetrating trauma?

- A) It is filled with disrupted tissues, some air, fluid, and debris.
- B) It is the damage done when the projectile fragments penetrate.
- C) It is a space created by a projectile as tissue moves rapidly away in its path.
- D) It is a potential space, not an actual space.

Answer: A

Diff: 1 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 17

55) Which of the following is TRUE of the pressure wave that accompanies high-velocity penetrating trauma?

- A) Hollow organs are less tolerant of the stress than solid organs are.
- B) Pressure waves cause no injury to surrounding tissues; they only momentarily disrupt function.
- C) Elastic tissues are less tolerant of the stress than non-elastic tissues.
- D) The pressure wave may be transmitted through blood, resulting in damage to blood vessels some distance from the primary wound.

Answer: D

Diff: 2 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

56) Your patient is a 50-year-old man with a gunshot wound to the right anterior chest. He is unresponsive. Which of the following should you do first?

- A) Check for a carotid pulse.
- B) Seal the chest wound.
- C) Auscultate breath sounds.
- D) Check for breathing.

Answer: D

Diff: 1 Page Ref: 52

Standard: Trauma (Chest Trauma)

Objective: 19

57) Your patient is a 30-year-old woman with a stab wound to the neck. She is sitting up and appears very anxious and short of breath. Minimal external bleeding is noted, but there is bubbling from the wound. Which of the following should you suspect, based on the mechanism of injury and assessment findings?

- A) Laceration of the trachea
- B) An injury to the spinal cord at the level of the stab wound
- C) Laceration of the ipsilateral carotid artery
- D) All of the above

Answer: A

Diff: 2 Page Ref: 52

Standard: Trauma (Head, Facial, Neck, and Spine Trauma)

Objective: 17

58) If you were to design a bullet to have the highest energy exchange, what would you do?

- A) Decrease the drag.
- B) Increase the caliber.
- C) Decrease the bullet's trajectory.
- D) Design the bullet to become more unstable.

Answer: D

Diff: 2 Page Ref: 42-44

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 15

59) Which of the following is most important when assessing the damage done by a gunshot?

- A) The type of gun used
- B) The size of the bullet
- C) The distance from the shooter
- D) Whether there was an upward or a downward trajectory when the bullet was fired

Answer: C

Diff: 2 Page Ref: 42-43

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

60) A penetrating injury to which of the following organs is LEAST likely to result in severe hemorrhage?

- A) Liver
- B) Kidney
- C) Spleen
- D) Ureter

Answer: D

Diff: 2 Page Ref: 48-50

Standard: Trauma (Bleeding)

Objective: 17

- 61) Which of the following is TRUE of shotgun ammunition?
- A) A shotgun may either fire one slug or use ammunition with multiple pellets.
 - B) The shot is dispersed from the cartridge with high velocity.
 - C) The closer the shooter is to the victim, the larger the area of visible damage.
 - D) "Double ought" or #00 shot contains a large number of relatively small pellets.

Answer: A

Diff: 2 Page Ref: 45-46

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 19

- 62) Which of the following abdominal organs is the LEAST affected by the pressure wave associated with penetrating trauma?

- A) Spleen
- B) Bowel
- C) Kidneys
- D) Liver

Answer: B

Diff: 2 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 15

- 63) The study of the characteristics of projectiles in motion and their effects on the objects they impact is called:

- A) trajectory.
- B) cavitation.
- C) ballistics.
- D) forensics.

Answer: C

Diff: 1 Page Ref: 42

Standard: Trauma (Trauma Overview)

Objective: 1

- 64) You have arrived on the scene of a 17-year-old male patient with a gunshot wound to the thigh. Police are on the scene. There is significant ongoing hemorrhage from the wound. The patient is screaming for someone to help him. Which of the following should you do first?

- A) Control hemorrhage with direct pressure.
- B) Perform a rapid trauma assessment.
- C) Ask the police if they have searched the patient for weapons yet.
- D) Begin high-concentration oxygen administration.

Answer: C

Diff: 1 Page Ref: 51-52

Standard: Trauma (Bleeding)

Objective: 18

65) As a bullet tumbles, the potential to inflict damage:

- A) increases.
- B) remains the same.
- C) is determined by the trajectory.
- D) decreases.

Answer: A

Diff: 1 Page Ref: 51

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

66) The path a projectile follows during a flight is called its:

- A) cavity.
- B) ballistics.
- C) trajectory.
- D) drag.

Answer: C

Diff: 1 Page Ref: 43

Standard: Trauma (Trauma Overview)

Objective: 1

67) Which of the following is TRUE of body armor use?

- A) There are no reported cases of penetrating trauma among victims who were shot while wearing body armor.
- B) Blunt trauma may be significant, but the potential for life-threatening injury is less than if armor had not been worn.
- C) Blunt trauma occurs only if ceramic inserts are placed in the vest.
- D) Ceramic inserts are dangerous and should not be used, because they generally fragment and create secondary projectiles when they are struck by a bullet.

Answer: B

Diff: 2 Page Ref: 44

Standard: Trauma (Trauma Overview)

Objective: 19

68) Which of the following is most susceptible to damage from the pressure wave when a bullet enters it?

- A) Intestines
- B) Femoral artery
- C) Liver
- D) Lungs

Answer: C

Diff: 2 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

69) Which of the following is TRUE about determining the pathway of the bullet when assessing a patient with a gunshot wound?

- A) You should try to determine the bullet's pathway.
- B) The purpose of determining the bullet's pathway is to anticipate which organs may have been affected, which will help to guide your priorities for on-scene care or rapid transport.
- C) It is difficult to determine the pathway of a bullet because it may not travel in a straight line, possibly being deflected by structures in its path or being shifted by natural movements of the diaphragm and other organs and structures of the body.
- D) All of the above

Answer: D

Diff: 3 Page Ref: 46-47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

70) Which statement about ballistics is TRUE?

- A) Damage is less when the bullet does not exit the body.
- B) When a bullet tumbles, it decreases the damage.
- C) In penetrating trauma, the mass of a projectile is more significant than its velocity when determining kinetic energy.
- D) When a bullet yaws, it increases the damage.

Answer: D

Diff: 2 Page Ref: 42-44

Standard: Trauma (Trauma Overview)

Objective: 16

71) When you are assessing someone with a gunshot wound from a rifle, which of the following is important to remember?

- A) The zone of injury is larger than that expected with other types of weapons.
- B) The muzzle velocity is less than that of a handgun.
- C) The trajectory is longer, allowing more energy to be dissipated by drag before it strikes the victim.
- D) The cavitation is limited to the direct path of the bullet.

Answer: A

Diff: 2 Page Ref: 45

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 17

72) Which of the following is typical of the trajectory of a knife when a female assailant stabs someone?

- A) The trajectory is lateral: right-to-left if she is right-handed and left-to-right if she is left-handed.
- B) The movement is downward, as the assailant raises the knife and swings downward.
- C) The movement is upward, as the assailant drives upward with the knife.
- D) The trajectory tends to be in a horizontal plane at the level of the assailant's shoulder.

Answer: B

Diff: 2 Page Ref: 48

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 19

73) Greater velocity of a bullet will cause a _____ path of travel and a _____ trajectory.

- A) wavier; straighter
- B) flatter; wavier
- C) more rounded; curved
- D) flatter; straighter

Answer: D

Diff: 1 Page Ref: 43

Standard: Trauma (Trauma Overview)

Objective: 15

74) Which of the following is TRUE of the temporary cavity formed by penetrating trauma?

- A) It heals more slowly than the permanent cavity because of the nature of the tissue damage.
- B) It fills with disrupted tissues, some air, fluid, and debris.
- C) It is a space indirectly created by a projectile as tissue moves rapidly away from its path.
- D) It is the damage that occurs when the projectile fragments.

Answer: C

Diff: 1 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 17

75) Which of the following is TRUE of defense wounds in the victim of a knife attack?

- A) They usually occur to the shoulder as the victim attempts to turn away from the attack.
- B) They often occur to the neck and head as the victim doubles over into a protective posture.
- C) They usually occur to the hands and arms as the victim raises them to ward off the attacker.
- D) They rarely occur because the victim is usually taken by surprise.

Answer: C

Diff: 2 Page Ref: 48

Standard: Trauma (Soft Tissue Trauma)

Objective: 19

76) To gain an appreciation for the potential for trauma from high-velocity projectiles, it is important to remember that the shock wave produced can exceed atmospheric pressure by up to _____ times.

- A) 25
- B) 100
- C) 50
- D) 80

Answer: B

Diff: 1 Page Ref: 47

Standard: Trauma (Trauma Overview)

Objective: 16

77) Which of the following is associated with assault rifle wounds but not hunting rifle wounds?

- A) Permanent cavitation
- B) Multiple wounds
- C) Smaller exit wounds
- D) Larger exit wounds

Answer: B

Diff: 2 Page Ref: 45

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

78) Which of the following statements about bullets is TRUE?

- A) A high-velocity bullet is three times less likely to do major harm.
- B) The larger the bullet, the smaller its energy.
- C) A small, light bullet can do significant harm.
- D) The hunting rifle's bullet is usually a lighter bullet, but it travels faster.

Answer: C

Diff: 2 Page Ref: 42

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 14

79) During the scene size-up on a call for a patient with penetrating trauma due to a stab wound, which of the following should you do?

- A) Collect anything that could be used as evidence.
- B) Check for weapons on or near the patient.
- C) Try to find out in which direction the assailant fled.
- D) Assume that the patient has no weapons if law enforcement is on the scene.

Answer: B

Diff: 2 Page Ref: 51-52

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 18

80) Which of the following statements about stab wounds is TRUE?

- A) The presence of defense wounds decreases the likelihood of trauma to the neck, thorax, and abdomen.
- B) Damage is usually limited to physical injury caused by direct contact between the blade and the victim's tissue.
- C) The size and shape of the weapon allow precise prediction of the injury.
- D) Stab wounds by female attackers are seldom lethal.

Answer: B

Diff: 2 Page Ref: 41

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 17

81) Which of the following statements about entrance and exit wounds is TRUE?

- A) Exit wounds are usually the size of the bullet's profile.
- B) Entrance wounds most often appear as stellate.
- C) Cavitational wave energy is greatest at a bullet's point of entrance.
- D) Only a thorough forensic examination by a qualified expert can determine with certainty whether a given wound is an entrance wound or an exit wound.

Answer: D

Diff: 2 Page Ref: 51

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 16

82) Which of the following is best described as "the area of contused tissue resulting from penetrating trauma that may be slow to heal due to disrupted blood flow and tissue damage"?

- A) Temporary cavity
- B) Zone of injury
- C) Zone of coagulation
- D) Permanent cavity

Answer: B

Diff: 1 Page Ref: 47

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 1

83) Penetrating trauma to the face can complicate airway management by which of the following mechanisms?

- A) Laryngotracheal edema
- B) Airway obstruction
- C) Destruction of anatomical landmarks
- D) Both B and C

Answer: D

Diff: 2 Page Ref: 52

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 20

84) The primary assessment of a patient with a gunshot wound to the chest should focus on detecting which of the following?

- A) Pancreatitis
- B) Tension pneumothorax
- C) Cardiac contusion
- D) Peritonitis

Answer: B

Diff: 2 Page Ref: 53

Standard: Trauma (Chest Trauma)

Objective: 20

85) Which two factors related to kinetic energy proportionately affect the damage a projectile will do?

- A) Velocity and yaw
- B) Velocity and mass
- C) Mass and fragmentation
- D) Fragmentation and velocity

Answer: B

Diff: 1 Page Ref: 42

Standard: Trauma (Trauma Overview)

Objective: 14

86) Which type of firearm usually limits trauma to direct injury?

- A) Hunting rifle
- B) Military rifle
- C) Automatic weapon
- D) Handgun

Answer: D

Diff: 1 Page Ref: 42

Standard: Trauma (Trauma Overview)

Objective: 16

87) Your patient is a construction worker who fell 15 feet and has a 3-foot metal concrete reinforcement bar (rebar) impaled in his right thigh. Which of the following is the best action?

- A) Administer sodium bicarbonate to combat acidosis resulting from the destruction of muscle tissue.
- B) If the proper tools and personnel are present, have rescuers cut the rebar to a manageable length.
- C) If you can see both ends of the rebar, gently remove it and irrigate the wound with sterile saline.
- D) Transport the patient without attempting to shorten or remove the rebar.

Answer: B

Diff: 2 Page Ref: 53

Standard: Trauma (Soft Tissue Trauma)

Objective: 20

88) Which of the following bullet characteristics would create the most damage?

- A) Lack of tumble
- B) A small profile
- C) A full metal jacket
- D) "Mushrooming" or flattening on impact

Answer: D

Diff: 1 Page Ref: 45

Standard: Trauma (Trauma Overview)

Objective: 16

89) As the mass of an object increases, which of the following occurs?

- A) The maximum speed it can attain increases.
- B) The amount of energy decreases.
- C) The maximum speed it can attain decreases.
- D) The amount of energy increases.

Answer: D

Diff: 1 Page Ref: 42

Standard: Trauma (Trauma Overview)

Objective: 14

90) Which of the following statements about rifles is TRUE?

- A) Assault rifles generally increase the number of wounds the victim sustains.
- B) Hunting rifles have larger magazines and operate semiautomatically.
- C) Assault rifles do not accept domestic hunting ammunition and thus create a projectile profile that is smaller and causes less damage.
- D) Assault rifles have greater velocity than hunting rifles and only operate automatically.

Answer: A

Diff: 2 Page Ref: 42

Standard: Trauma (Trauma Overview)

Objective: 16

91) Which of the following is NOT considered penetrating trauma?

- A) Receiving a wood splinter in the foot while walking on an unfinished deck
- B) A superficial wound resulting from a pellet from a pellet gun being lodged under the skin
- C) A laceration from a kitchen knife
- D) A laceration on the forehead as a result of being struck with a metal pipe

Answer: D

Diff: 2 Page Ref: 22

Standard: Trauma (Abdominal and Genitourinary Trauma)

Objective: 19

92) Which of the following increases a bullet's profile?

- A) "Mushrooming" on impact
- B) The use of rifling in the barrel of the firearm
- C) Tumbling 180 degrees on impact
- D) Both A and C

Answer: D

Diff: 2 Page Ref: 42-44

Standard: Trauma (Trauma Overview)

Objective: 16

93) As the energy from a medium- or high-velocity projectile pushes tissue from its path, which of the following occurs?

- A) Damage depends on the net difference between pressure at the entrance wound and pressure at the exit wound.
- B) No vacuum is created when there are both an entrance and an exit wound.
- C) Negative pressure is generated inside the cavity, drawing debris into the wound.
- D) There is negative pressure at the entrance wound and positive pressure at the exit wound.

Answer: C

Diff: 2 Page Ref: 46

Standard: Trauma (Trauma Overview)

Objective: 17

94) Which of the following is MOST likely to occur to the bullet when military ammunition is used?

- A) It will "mushroom" or flatten.
- B) It will remain intact.
- C) It will fragment.
- D) It will explode.

Answer: B

Diff: 2 Page Ref: 44

Standard: Trauma (Trauma Overview)

Objective: 16

95) Which of the following is considered a high-velocity weapon?

- A) Shotgun
- B) Arrow
- C) Handgun
- D) Rifle

Answer: D

Diff: 2 Page Ref: 44-45

Standard: Trauma (Trauma Overview)

Objective: 16