Import Settings:

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Information Field: Complexity

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Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

**Chapter: Environmental Emergencies - Environmental Emergencies - TBNK**

**Multiple Choice**

1. Thermoregulation is a function of the:

A) diencephalon.

B) anterior hypothalamus.

C) peripheral vasculature.

D) posterior pituitary gland.

Ans: B

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1889

Feedback: Anatomy and Physiology Review, page 1889

2. Which of the following statements regarding thermoregulation is correct?

A) Thermogenesis is how the human body eliminates excess heat in order to maintain homeostasis.

B) At a constant temperature of 97.6°F, the metabolic reactions of the body proceed at their optimal level.

C) Temperature of the brain and thoracoabdominal organs varies widely, depending on the body's needs.

D) Skin temperature can fluctuate a great deal, which is why it plays a major role in thermoregulation.

Ans: D

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1890

Feedback: Anatomy and Physiology Review, page 1890

3. In situations where the environment is a factor, the MOST accurate means of determining a person's core temperature is to:

A) use a rectal thermometer that is capable of measuring extremes of temperature.

B) use a tympanic thermometer and then add two degrees to the reading that you obtain.

C) obtain a tactile temperature by placing the back of your hand on the patient's forehead.

D) place a mercury thermometer in the patient's axilla and wait 2 to 3 minutes before reading it.

Ans: A

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1890

Feedback: Anatomy and Physiology Review, page 1890

4. The thermolytic tissues in the hypothalamus are mediated by the:

A) endocrine system.

B) sympathetic nervous system.

C) parasympathetic nervous system.

D) signals of the adrenergic nervous system.

Ans: C

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1890

Feedback: Anatomy and Physiology Review, page 1890

5. The basal metabolic rate is MOST accurately defined as:

A) the expenditure of heat energy during strenuous exertion or exercise.

B) the heat energy produced at rest from normal body metabolic reactions.

C) the balance between heat production and heat elimination from the body.

D) a constant fluctuation in core body temperature to maintain homeostasis.

Ans: B

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1890

Feedback: Anatomy and Physiology Review, page 1890

6. Of the many factors that affect the basal metabolic rate, the MOST important factor is:

A) the person's age.

B) the person's sex.

C) the person's level of activity.

D) the person's body surface area.

Ans: D

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1890

Feedback: Anatomy and Physiology Review, page 1890

7. An increase in core temperature causes the:

A) anterior pituitary gland to send signals via afferent pathways in the sympathetic nervous system to increase the heart rate.

B) hypothalamus to send signals via efferent pathways in the autonomic nervous system, causing vasodilation and sweating.

C) anterior pituitary gland to send signals via efferent pathways in the sympathetic nervous system, causing widespread vasoconstriction.

D) hypothalamus to send signals via afferent pathways in the parasympathetic nervous system, resulting in vasoconstriction and sweat production.

Ans: B

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1891

Feedback: Anatomy and Physiology Review, page 1891

8. The transfer of heat from a hotter object to a cooler object by direct physical contact is called:

A) radiation.

B) convection.

C) conduction.

D) evaporation.

Ans: C

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1891

Feedback: Anatomy and Physiology Review, page 1891

9. A person blowing on hot food in an attempt to cool it is an example of:

A) radiation.

B) convection.

C) conduction.

D) passive cooling.

Ans: B

Complexity: Easy

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1891

Feedback: Anatomy and Physiology Review, page 1891

10. Which of the following factors decreases the body's ability to eliminate excess heat through evaporation?

A) High humidity

B) Wet clothing

C) Low wind chill

D) Hyperventilation

Ans: A

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Pages: 1891–1892

Feedback: Anatomy and Physiology Review, pages 1891–1892

11. When the outside temperature approaches or exceeds skin surface temperature, heat loss by \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ diminishes and eventually ceases.

A) convection, conduction

B) conduction, evaporation

C) evaporation, radiation

D) radiation, convection

Ans: D

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Pages: 1891–1892

Feedback: Anatomy and Physiology Review, pages 1891–1892

12. For evaporation of sweat to be an effective cooling mechanism:

A) the relative humidity must be greater than 90%.

B) the environmental temperature must be at least 95°F.

C) ambient air must be relatively unsaturated with water.

D) ambient air must be saturated with a great deal of water.

Ans: C

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1892

Feedback: Anatomy and Physiology Review, page 1892

13. In a cold environment, the body produces and conserves heat through all of the following mechanisms, EXCEPT:

A) shivering.

B) vasoconstriction.

C) hyperventilation.

D) thermogenesis.

Ans: C

Complexity: Moderate

Ahead: Anatomy and Physiology Review

Subject: Environmental Emergencies

Page: 1892

Feedback: Anatomy and Physiology Review, page 1892

14. An increase in core body temperature due to inadequate thermolysis is called:

A) heatstroke.

B) heat illness.

C) heat cramps.

D) heat exhaustion.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1892

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1892

15. Older people are at increased risk for heat-related illnesses because:

A) they are more likely to have chronic medical conditions that interfere with normal heat regulation.

B) they have proportionately higher metabolic heat production when compared to younger adults.

C) they are often taking beta adrenergic agonists, which can lessen a tachycardic response to heat.

D) they acclimatize more rapidly than younger adults, which results in faster heat production.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1892–1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1892–1893

16. Which of the following medications would be the LEAST likely to increase a person's risk for a heat-related illness?

A) Diuretics

B) Beta-blockers

C) Antihistamines

D) Alpha antagonists

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

17. A person taking a beta-blocker is at an increased risk for a heat-related illness secondary to:

A) lessened tachycardic response.

B) hypothalamic suppression.

C) an increased metabolic rate.

D) lowering of the blood pressure.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

18. Factors that increase internal heat production include all of the following, EXCEPT:

A) response to infection.

B) excess caffeine.

C) hypothyroidism.

D) Parkinson disease.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

19. Impaired vasodilation:

A) increases heat absorption.

B) interferes with heat dissipation.

C) decreases internal heat production.

D) is caused by beta blocker medications.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

20. All of the following factors contribute to heat cramps, EXCEPT:

A) gender.

B) dehydration.

C) salt depletion.

D) muscle fatigue.

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

21. Heat cramps are caused by:

A) sodium loss due to sweating.

B) failure of the hypothalamus.

C) increased potassium levels.

D) increased urinary frequency.

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1893

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1893

22. The FIRST step in treating a patient with a heat cramps is to:

A) ensure that the airway is patent.

B) assess the core body temperature.

C) employ active cooling measures.

D) move the patient to a cooler area.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1894

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1894

23. The MOST likely cause(s) of heat syncope is/are:

A) paroxysmal tachycardia.

B) vasodilation and dehydration.

C) underlying cardiovascular disease.

D) profound peripheral vasoconstriction.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1895

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1895

24. In contrast to sodium-depleted heat exhaustion, water-depleted heat exhaustion:

A) is much less likely to occur in a patient who takes diuretic medications for hypertension.

B) occurs primarily in geriatric patients and is due to factors such as decreased thirst sensitivity and immobility.

C) usually takes several hours or days to develop and occurs when regular water is used to replenish sodium and water.

D) is the result of prolonged exertion in a hot environment coupled with the excessive intake of hypotonic fluids.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1895

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1895

25. Which of the following clinical findings would you NOT expect to encounter in a patient with heat exhaustion?

A) Abdominal cramping

B) Mental disorientation

C) Hypertension upon standing

D) Body temperature of 103°F

Ans: C

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1896

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1896

26. The diagnosis of heatstroke is usually made when a patient has an elevated core body temperature and:

A) an altered mental status.

B) an absence of sweating.

C) a history of heat exposure.

D) a heart rate above 140 beats/min.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1896

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1896

27. Classic heatstroke:

A) is also called active heatstroke and is usually seen in diabetics.

B) presents with a high core body temperature and profuse sweating.

C) affects young people and is often accompanied by hypoglycemia.

D) typically affects older people and is not associated with exertion.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1896–1897

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1896–1897

28. In contrast to classic heatstroke, exertional heatstroke:

A) causes hyperglycemia.

B) presents with hot, dry skin.

C) affects young, healthy people.

D) is associated with diuretic use.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1896–1897

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1896–1897

29. Patients with heatstroke:

A) usually have a lowered ETCO2 reading.

B) are typically bradypneic and hypotensive.

C) have a core temperature greater than 106°F.

D) should routinely be given 50% dextrose.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1897

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1897

30. Which of the following clinical findings suggests a cause of a patient's hyperthermia other than heatstroke?

A) Dehydration

B) Intermittent chills

C) Moist, pale, hot skin

D) Pupillary constriction

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1897–1898

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1897–1898

31. The MOST important treatment for a patient experiencing heatstroke involves:

A) antipyretic administration and high-flow oxygen.

B) rehydration with IV fluids and ice water submersion.

C) rapid transport and cooling to the point of shivering.

D) removal from the hot environment and rapid cooling.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1898–1899

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1898–1899

32. Which of the following statements regarding frostbite is correct?

A) Frostbite is a superficial, partial-thickness, or full-thickness ischemic injury.

B) Frostbite most commonly affects the trunk and lower extremities.

C) Frostbite can only occur if the ambient temperature is below 40°F.

D) Increased blood flow to an extremity exacerbates deep frostbite.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1900

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1900

33. Cigarette smoking predisposes a person to frostbite because it:

A) causes arteriolar constriction.

B) decreases the blood pressure.

C) causes peripheral vasodilation.

D) increases peripheral blood flow.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1900

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1900

34. The MOST common symptom of superficial frostbite is:

A) localized edema.

B) white, waxy skin.

C) an altered sensation.

D) cyanosis of the skin.

Ans: C

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1900

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1900

35. Treatment for a superficial frostbite injury includes:

A) rewarming with radiant heat.

B) elevating the frostbitten part.

C) rewarming the area with hot water.

D) gently rubbing the frostbitten area.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1901

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1901

36. A deeply frostbitten extremity:

A) is typically bright red and painful.

B) usually heals well with rewarming.

C) requires amputation due to gangrene.

D) is cold, hard, and without sensation.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1900–1901

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1900–1901

37. When frozen tissues thaw slowly:

A) the risk of gangrene and subsequent amputation is much lower.

B) the resultant ice crystals are smaller in size and cause less damage.

C) the injured area becomes flushed or pale, but is relatively painless.

D) partial refreezing of melted water may cause greater tissue damage.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1901

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1901

38. In addition to your transport time to the hospital, prehospital treatment of a frostbitten body part is MAINLY dependent upon:

A) the percentage of the body surface affected and the patient's general underlying health.

B) whether the affected part has been partially or completely thawed prior to your arrival.

C) the patient's core body temperature and blood pressure at the time of initial patient contact.

D) the estimated length of exposure to the cold environment and the potential for other injuries.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1901

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1901

39. Hypothermia is defined as a decrease in core body temperature, generally starting at:

A) 96°F.

B) 95°F.

C) 94°F.

D) 93°F.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1902

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1902

40. A patient may become hypothermic for all of the following reasons, EXCEPT:

A) decreased thermolysis.

B) inadequate thermogenesis.

C) impaired vasoconstriction.

D) excess environmental cold stress.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1902–1903

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1902–1903

41. Alcohol predisposes a patient to hypothermia due to:

A) increased liver glycogen storage.

B) impaired shivering thermogenesis.

C) brain atrophy and impaired thermolysis.

D) widespread cutaneous vasoconstriction.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1902–1903

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1902–1903

42. What medication would MOST likely cause malignant hyperthermia?

A) Promethazine

B) Succinylcholine

C) Vecuronium

D) Amitriptyline

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1898

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1898

43. A patient with diabetes would MOST likely experience heat loss secondary to:

A) insulin use.

B) ketoacidosis.

C) acute hyperglycemia.

D) peripheral neuropathy.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1902

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1902

44. Liver disease predisposes a patient to hypothermia secondary to:

A) decreased glucagon uptake.

B) inadequate glycogen stores.

C) severe portal hypertension.

D) increased bilirubin production.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1902–1903

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1902–1903

45. In trauma patients with shock, hypothermia:

A) decreases internal hemorrhage.

B) enhances the shivering response.

C) facilitates the process of hemostasis.

D) interferes with the coagulation of blood.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1903

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1903

46. In mild hypothermia, an older person would likely present with all of the following, EXCEPT:

A) shivering.

B) dysarthria.

C) a flat affect.

D) noted ataxia.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

47. The effects of hypothermia are MOST dramatically apparent in the:

A) integumentary system.

B) cardiovascular system.

C) central nervous system.

D) hematopoietic system.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

48. Cold diuresis occurs when:

A) the initial peripheral vasoconstriction response in hypothermia is interpreted by the volume receptors as an increase in volume, causing the kidneys to produce more urine.

B) the sympathetic nervous system response in hypothermia increases blood flow to the kidneys, resulting in decreased sodium reabsorption and subsequent water excretion.

C) massive systemic vasoconstriction shunts cold body water to the renal system, where it is excreted from the body in an attempt to increase the core body temperature.

D) warmed IV fluids administered during severe hypothermia decrease the viscosity of the blood, resulting in an acute increase in output from the kidneys.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

49. In early hypothermia, the cardiovascular system typically responds with:

A) bradycardia.

B) tachycardia.

C) conduction delays.

D) atrial dysrhythmias.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

50. On the ECG, an Osborne wave can be recognized as:

A) a negative deflection that produces a biphasic P wave.

B) acute widening of the QRS complex during the R wave.

C) an upward slurring at the beginning of the QRS complex.

D) a positive deflection immediately after the QRS complex.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

51. At a core body temperature of 90°F:

A) hyperventilation is profound.

B) oxygen consumption decreases.

C) ventricular fibrillation is likely.

D) shivering becomes involuntary.

Ans: B

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1904

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1904

52. Which of the following is NOT a form of passive rewarming?

A) Removing wet clothing

B) Applying warm blankets

C) Applying chemical heat packs

D) Encouraging ambulation

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1904–1906

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1904–1906

53. Prehospital treatment for a patient with moderate hypothermia may include:

A) esophageal rewarming tubes.

B) warm IV fluids and heat packs.

C) caffeine to increase metabolism.

D) extracorporeal rewarming.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1906

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1906

54. If a patient with severe hypothermia is pulseless and apneic, you should:

A) attempt a single shock for V-fib or V-tach.

B) avoid placement of an advanced airway device.

C) infuse 4 L of warmed normal saline solution.

D) perform high-quality CPR at half the normal rate.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1904–1907

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1904–1907

55. If you are unsure if a patient became hypothermic prior to developing cardiac arrest, you should:

A) withhold resuscitation.

B) contact medical control.

C) transport with BLS only.

D) begin resuscitative efforts.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1907

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1907

56. When a person experiences a crisis in the water, the amount of time the person can hold his or her breath depends on all of the following factors EXCEPT:

A) the water's tonicity.

B) the victim's level of panic.

C) the victim's state of health.

D) the temperature of the water.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1908

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1908

57. Which of the following statements regarding freshwater and saltwater drownings is correct?

A) Freshwater drowning has a much higher mortality rate.

B) Patients with freshwater drowning often require diuresis.

C) Both freshwater and saltwater can lead to pulmonary injuries.

D) Normal saline should be avoided in saltwater drowning victims.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1908

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1908

58. If a small amount of water is aspirated into the trachea during a submersion event:

A) the victim asphyxiates, becomes profoundly acidotic, and dies.

B) laryngospasm occurs and temporarily protects the lower airway.

C) permanent laryngeal spasm occurs and requires cricothyrotomy.

D) resulting hypoxemia causes the body to shift to aerobic metabolism.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1908

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1908

59. The initial hypoxic insult associated with a drowning occurs from:

A) apnea.

B) lung injury.

C) pulmonary edema.

D) surfactant damage.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1908

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1908

60. While attempting to ventilate an unresponsive, apneic drowning victim, you notice poor lung compliance. Which of the following would be the MOST likely cause of this?

A) Acute pneumonitis

B) Diffuse alveolar collapse

C) Water within the pleural space

D) Excess pulmonary surfactant

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1908

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1908

61. In which of the following situations should cervical spine immobilization be considered in a patient involved in a water-related incident?

A) Age older than 45 years

B) Age younger than 25 years

C) Evidence of intoxication

D) Any single extremity fracture

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1909

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1909

62. Other than personal safety, your MOST immediate concern when caring for a submersion victim should be:

A) the risk of vomiting and aspiration.

B) determining what caused the event.

C) inserting an advanced airway device.

D) hypothermia-induced dysrhythmias.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1909

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1909

63. In drowning victims, positive end-expiratory pressure is used to:

A) prevent atelectasis and force fluid from the alveoli.

B) increase the rate and depth of the victim's breathing.

C) force fluid from the interstitium back into the alveoli.

D) increase cardiac contractility and improve stroke volume.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1909

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1909

64. During saturation diving:

A) the diver uses no equipment except a snorkel.

B) a self-contained underwater breathing apparatus is used.

C) air is piped to the diver through a tube from the surface.

D) the diver remains at depth for prolonged periods of time.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1911

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1911

65. The MOST popular form of diving is:

A) scuba diving.

B) saturation diving.

C) breath-hold diving.

D) surface-tended diving.

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1911

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1911

66. An estimate of the pressure to which a diver is exposed is based on the:

A) diver's heart rate.

B) depth of the dive.

C) water temperature.

D) length of time under water.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1912

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1912

67. Gas-filled organs are affected by the pressure changes experienced during descent and ascent through water because they:

A) expand rapidly.

B) contain oxygen.

C) are compressible.

D) do not compress.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1912

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1912

68. Nitrogen causes decompression sickness:

A) on descent because of the bubbles that form on reduction of pressure.

B) on ascent because of the bubbles that form on reduction of pressure.

C) on descent because of a progressive increase in atmospheric absolute.

D) on ascent because of a progressive increase in atmospheric absolute.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Pages: 1916–1917

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, pages 1916–1917

69. It is MOST pertinent to determine if the symptoms of a diving-related emergency began:

A) at the time of water entry.

B) before entering the water.

C) after the diver surfaced.

D) during ascent or descent.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1913

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1913

70. Other than using a Nitrox system, the only effective way to counteract nitrogen narcosis is to:

A) lower the nitrogen partial pressure through controlled ascent.

B) increase the nitrogen partial pressure through controlled descent.

C) lower the nitrogen partial pressure through controlled descent.

D) increase the nitrogen partial pressure through controlled ascent.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1913

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1913

71. Pulmonary overpressurization syndrome occurs when a diver:

A) holds his or her breath during ascent.

B) exhales constantly as he or she ascends.

C) panics and hyperventilates during descent.

D) experiences a pneumothorax under water.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1915

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1915

72. Any diver who loses consciousness immediately following a dive should be assumed to have experienced:

A) barotrauma.

B) nitrogen narcosis.

C) an air embolism.

D) decompression sickness.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1916

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1916

73. What is the pathophysiology of decompression sickness?

A) Diffusion of nitrogen out of the tissues during too slow of an ascent

B) An imbalance of nitrogen in the tissues and alveoli due to rapid ascent

C) Increasing quantities of nitrogen and oxygen in the blood during descent

D) Excess carbon dioxide accumulation in the muscles due to a rapid ascent

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Pages: 1916–1917

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, pages 1916–1917

74. The MOST common clinical finding observed in patients with type I decompression sickness is:

A) joint pain.

B) unsteadiness.

C) pruritus and rashes.

D) a cough and dyspnea.

Ans: A

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1917

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1917

75. Shallow water blackout occurs when:

A) voluntary hypoventilation causes a drop in the PaO2.

B) cerebral vasodilation causes syncope during ascent.

C) a decreasing PaO2 during descent results in syncope.

D) a swimmer hyperventilates prior to entering the water.

Ans: D

Complexity: Easy

Ahead: Pathophysiology, Assessment, and Management of Diving Injuries

Subject: Environmental Emergencies

Page: 1918

Feedback: Pathophysiology, Assessment, and Management of Diving Injuries, page 1918

76. Altitude illness is a problem caused by:

A) hypoxia due to low atmospheric pressures.

B) the effects of hyperbaric hypoxia on the central nervous system.

C) hypercarbia due to high atmospheric pressures.

D) a decreased PaO2 while descending from altitude.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Altitude Illness

Subject: Environmental Emergencies

Page: 1918

Feedback: Pathophysiology, Assessment, and Management of Altitude Illness, page 1918

77. Which of the following signs and symptoms is MOST indicative of acute mountain sickness?

A) A throbbing headache and fatigue

B) Chest congestion and dyspnea at rest

C) Audible wheezing and chest tightness

D) Excessive sleeping and abdominal pain

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Altitude Illness

Subject: Environmental Emergencies

Page: 1920

Feedback: Pathophysiology, Assessment, and Management of Altitude Illness, page 1920

78. A patient with high-altitude cerebral edema:

A) should be given 40 mg of Lasix to help reduce swelling in the brain and improve neurologic symptoms.

B) presents with ataxia and confusion after experiencing acute mountain sickness for greater than 24 hours.

C) should not receive hyperbaric therapy due to the risk of an acute increase in intracranial pressure.

D) typically presents with blurred vision, nausea, and dizziness within 15 minutes of reaching a high altitude.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Altitude Illness

Subject: Environmental Emergencies

Pages: 1920–1921

Feedback: Pathophysiology, Assessment, and Management of Altitude Illness, pages 1920–1921

79. A 45-year-old woman presents with severe cramps in her legs, nausea, and lightheadedness after running laps at the track. The temperature outside is 95°F and the relative humidity is 80%. The patient is conscious and alert and is sweating profusely. Her blood pressure is 100/60 mm Hg, pulse is 120 beats/min and weak, and respirations are 24 breaths/min and regular. The MOST appropriate treatment for this patient involves:

A) giving her a salt-containing solution to drink, applying chemical ice packs to the back of her neck, and discouraging further activity for the day.

B) administering high-flow oxygen, gently massaging her lower extremities to enhance circulation, administering 1 µg/kg of fentanyl IM, and transporting.

C) offering her oxygen, starting an IV with normal saline, giving a 250- to 500-mL fluid bolus, and recommending transport to the hospital for evaluation.

D) having her chew salt tablets, starting an IV with D5W at a keep-vein-open rate, administering 12.5 mg of promethazine IV, and transporting to the hospital.

Ans: C

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1894–1895

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1894–1895

80. You are dispatched to the city park on a hot summer day for a 39-year-old man who fainted. When you arrive, you find the patient sitting under a tree. According to his wife, he had been playing softball all day and has consumed a significant amount of alcohol. She further confirms that he did faint and was “out” for about 2 minutes. The patient is conscious and tells you that he does not remember what happened. His skin is cool, moist, and pale, and his pulse is weak and rapid. You should:

A) initiate immediate and aggressive cooling measures, begin transport, start two large-bore IV lines en route, and closely monitor his cardiac rhythm.

B) give oxygen, assess his blood glucose level, establish vascular access and give saline fluid boluses as needed, transport, and monitor his cardiac rhythm.

C) give oxygen via nasal cannula, start an IV of normal saline at a keep-vein-open rate, administer 50% dextrose IV, and transport with passive cooling en route.

D) administer oxygen, apply a cervical collar in case he injured himself when he fainted, start an IV with normal saline, give a 20-mL/kg fluid bolus, and transport.

Ans: B

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Page: 1896

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, page 1896

81. You are dispatched to a residence for an “ill person.” Upon arrival, you enter the residence and find the patient, a 72-year-old woman, lying on the couch; she is responsive to pain only. Her son, who arrived shortly before you, tells you that her air conditioner went out, and that he came over to her house to pick her up and found her in her present condition. He further tells you that his mother has diabetes, hypertension, and congestive heart failure. Assessment of the patient reveals that her skin is flushed, hot, and dry; her pulse is rapid and weak; and her blood pressure is low. After moving the patient to the ambulance and applying high-flow oxygen, you should next:

A) remove any bulky clothing, assess her temperature, begin active cooling if her temperature is greater than 105°F, and start a large-bore IV with normal saline.

B) intubate her to protect her airway, apply chemical ice packs to her trunk area only, start an IV and give a normal saline bolus, and assess her axillary temperature.

C) cover her with sheets that are soaked with water, start a large-bore IV and give a 20-mL/kg fluid bolus, and administer 50% dextrose for presumed hypoglycemia.

D) strip her to her underclothing, begin rapid cooling measures, assess her rectal temperature if possible, establish vascular access, and assess her blood glucose level.

Ans: D

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1898–1899

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1898–1899

82. A 19-year-old man presents with hot, moist skin; confusion; tachycardia; and tachypnea shortly after completing a marathon. According to his marathon registration form, he has no significant medical problems and takes no medications. Treatment for this patient may include all of the following, EXCEPT:

A) prostaglandin inhibitors.

B) immersion in ice water.

C) 25 g of 50% dextrose.

D) ventilation assistance.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Heat Illness

Subject: Environmental Emergencies

Pages: 1898–1899

Feedback: Pathophysiology, Assessment, and Management of Heat Illness, pages 1898–1899

83. You are caring for a young woman with a local cold injury to her hands. Your assessment reveals that her hands are hard to the touch, mottled, cold, and without sensation. Her body temperature is 96.3°F per tympanic thermometer. Your estimated transport time to the hospital is 45 minutes. The MOST appropriate treatment for this patient includes:

A) preventing further loss of body heat; protecting her hands from injury with dry, bulky dressings; and transporting without delay.

B) applying chemical heat packs to her axilla and groin, rapidly rewarming her hands with hot water, bandaging her hands, and transporting.

C) starting an IV and infusing warm normal saline, having her place her hands in her armpits to keep them warm, and transporting as soon as possible.

D) immersing her hands in water that is between 95°F and 104°F, starting an IV and administering fentanyl, bandaging her thawed hands, and transporting.

Ans: A

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1901

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1901

84. Law enforcement requests your assistance for a 40-year-old man whom they found in an alley. According to one police officer, the patient is “probably drunk.” The outside temperature is 37°F with a light wind and drizzle. The patient, who is conscious but confused, is shivering and has slurred speech. His skin is cold and pale, his heart rate is 68 beats/min and regular, and his respirations are 24 breaths/min and regular. After moving the patient into the warmed ambulance, you should:

A) assess his blood pressure, apply chemical heat packs to his neck, groin, and axillae, infuse 250 to 500 mL of warm normal saline, and administer one or two tubes of oral glucose.

B) remove his wet clothing, apply warm blankets, administer supplemental oxygen, assess his blood glucose level and blood pressure, and start an IV with warm normal saline.

C) apply warm layered blankets, administer 100 mg of thiamine IM, administer oxygen via nasal cannula, start an IV line with lactated Ringer solution, and administer 25 grams of 50% dextrose.

D) remove his wet clothing, apply chemical heat packs directly to the groin, assess his blood glucose level and treat with dextrose if it is less than 80 mg/dL, and administer high-flow oxygen.

Ans: B

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1902–1906

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1902–1906

85. A 39-year-old woman's car broke down, stranding her out in the country for approximately 18 hours. The outside temperature is 23°F. When you arrive and assess the woman, you determine that she is pulseless and apneic; her core body temperature is estimated to be below 86°F. CPR is immediately initiated and the woman is loaded into the ambulance quickly. The ECG reveals ventricular fibrillation. How should you proceed with the treatment of this patient?

A) Give a single monophasic shock at 360 joules, reassess the rhythm and pulse, continue CPR, place advanced airway, hyperventilate at 20 breaths/min, establish vascular access, give 300 mg of amiodarone, and provide rapid transport.

B) Perform CPR for 2 minutes, give up to three stacked shocks, immediately resume CPR, reassess in 30 seconds, place advanced airway, ventilate at 10 breaths/min, establish vascular access, give a saline bolus, and provide rapid transport.

C) Give a single shock, immediately resume CPR, place advanced airway, provide ventilations at 10 breaths/min with warm humidified oxygen if possible, establish vascular access, and provide rapid transport.

D) Provide immediate defibrillation with maximum energy, reassess the rhythm and pulse, continue CPR, place advanced airway, give one breath every 3 to 5 seconds, establish vascular access, administer a vasopressor, and provide rapid transport.

Ans: C

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Pages: 1905–1906

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, pages 1905–1906

86. Rewarming efforts of a patient with severe hypothermia should continue until the core body temperature is at least \_\_\_\_ degrees Fahrenheit.

A) 92

B) 95

C) 97

D) 99

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Cold Injuries

Subject: Environmental Emergencies

Page: 1905

Feedback: Pathophysiology, Assessment, and Management of Cold Injuries, page 1905

87. A 21-year-old man was removed from the water after being submerged for approximately 5 minutes. The patient's friend, who was with him at the time of submersion, states that there was no trauma involved. Your assessment reveals that the patient is apneic; however, he has a slow, weak carotid pulse. After preoxygenating the patient, you insert an endotracheal tube. During auscultation of the lungs, you hear coarse crackles in all fields; the epigastrium is quiet. As you ventilate the patient, you note decreased compliance. The MOST effective way to treat this situation is to:

A) attach a portable ventilator that provides positive end-expiratory pressure.

B) insert a nasogastric tube and remove any water from the patient's stomach.

C) increase your ventilation rate to 15 breaths/min and provide higher volume.

D) administer morphine sulfate to promote venous pooling and decreased preload.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1909

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1909

88. Approximately 5 minutes following ascent from the water, a 30-year-old diver complains of sharp chest pain and mild dyspnea. By the time you arrive at the scene, the patient is unresponsive. You should suspect:

A) nitrogen narcosis.

B) a tension pneumothorax.

C) decompression sickness.

D) an arterial gas embolism.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Drowning

Subject: Environmental Emergencies

Page: 1916

Feedback: Pathophysiology, Assessment, and Management of Drowning, page 1916

89. The hymenoptera family of insects includes \_\_\_\_\_\_\_\_\_\_\_, which usually cause death secondary to \_\_\_\_\_\_\_\_\_\_\_.

A) spiders, acute heart failure

B) yellow jackets, anaphylaxis

C) snakes, severe coagulopathy

D) centipedes, central nervous system depression

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1923

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1923

90. Which of the following statements regarding the black widow spider is correct?

A) The venom of a black widow spider contains a necrotoxin, which results in local tissue necrosis.

B) Because the mortality rate from a black widow spider bite is about 40%, a prehospital antidote is crucial.

C) Following a black widow spider bite, the patient's abdomen is often rigid due to severe muscle spasms.

D) The male black widow spider, which is the sex that poses a danger to humans, contains a red hourglass on its back.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1927

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1927

91. Pharmacologic management for a black widow spider bite may include:

A) atropine.

B) diazepam.

C) diltiazem.

D) etomidate.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1928

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1928

92. The bite of a brown recluse spider:

A) may not result in immediate symptoms but generally presents as a painful, reddened area with an overlying blister.

B) manifests with immediate and intense pain and the formation of a blister and a white surrounding area of ischemia.

C) most often causes severe central nervous system depression because its venom contains a powerful neurotoxin.

D) results in a local reaction only because the spider's venom is cytotoxic and spreads slowly throughout the bloodstream.

Ans: A

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1928

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1928

93. Mortality and morbidity are greatest following the bite of a:

A) coral snake.

B) copperhead.

C) rattlesnake.

D) cottonmouth.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1924

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1924

94. The venom from a pit viper causes all of the following effects, EXCEPT:

A) local tissue necrosis.

B) increased blood clotting.

C) neuromuscular dysfunction.

D) increased vascular permeability.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Pages: 1925–1926

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, pages 1925–1926

95. The MOST common and reliable sign of pit viper envenomation is:

A) tachycardia within 30 seconds of the bite.

B) patient anxiety and a slow, bounding pulse.

C) swelling of the tongue and marked hypertension.

D) rapidly developing edema around the bite area.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Pages: 1925–1926

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, pages 1925–1926

96. A 56-year-old diabetic woman presents with a painful, reddened area on her left forearm, which she first noticed a few days ago. Closer examination reveals a blister in the center of the affected area. The patient denies being bitten or stung by anything and states that the only thing she has been doing is storing boxes in the attic. You should suspect a/an:

A) poorly healed diabetic ulcer.

B) local reaction to an ant bite.

C) infection caused by a tick.

D) brown recluse spider bite.

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Pages: 1927–1928

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, pages 1927–1928

97. A hiker was bitten on the left lower leg by a rattlesnake. He is conscious and alert, but complains of nausea and generalized weakness. The affected area, which has two distinct puncture wounds, is swollen markedly. The patient's blood pressure is 114/66 mm Hg, pulse rate is 120 beats/min and regular, and respirations are 22 breaths/min and regular. The MOST appropriate treatment for this patient involves:

A) keeping him calm, administering high-flow oxygen, immobilizing the affected extremity and keeping it below heart level, and establishing vascular access.

B) applying venous tourniquets proximal and distal to the affected site, elevating the limb no more than 12 inches, applying a splint, and establishing vascular access.

C) administering oxygen, providing emotional support, establishing vascular access, administering a 250-mL saline bolus, and splinting the affected extremity.

D) placing him in a supine position, elevating the affected extremity and applying ice to reduce the swelling, establishing vascular access, and administering fentanyl for pain.

Ans: A

Complexity: Difficult

Ahead: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings

Subject: Environmental Emergencies

Page: 1926

Feedback: Pathophysiology, Assessment, and Management of Envenomation: Bites and Stings, page 1926

98. Which of the following statements regarding lightning strikes is correct?

A) Ventricular fibrillation is the most common dysrhythmia seen following a lightning strike.

B) Most lightning-related injuries occur when the person is standing near an object that is struck.

C) The Lichtenberg figure caused by a lightning strike is a full-thickness burn that resembles a fern.

D) Following a lightning strike, the person experiences apnea that typically resolves spontaneously.

Ans: B

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Lightning Strike

Subject: Environmental Emergencies

Pages: 1921–1922

Feedback: Pathophysiology, Assessment, and Management of Lightning Strike, pages 1921–1922

99. Which of the following locations would provide the BEST protection from a lightning strike?

A) An open shed or lean-to

B) A spot at least 5 miles away from the storm

C) Curled up in a ball in an open area

D) A car with the windows rolled up

Ans: D

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Lightning Strike

Subject: Environmental Emergencies

Page: 1922

Feedback: Pathophysiology, Assessment, and Management of Lightning Strike, page 1922

100. After an adult victim is struck by lightning and experiences cardiac arrest:

A) 5 minutes of CPR generally restores a pulse.

B) perform a compression to ventilation ratio of 15:2.

C) his or her heart may resume beating spontaneously.

D) the ECG usually shows an organized cardiac rhythm.

Ans: C

Complexity: Moderate

Ahead: Pathophysiology, Assessment, and Management of Lightning Strike

Subject: Environmental Emergencies

Pages: 1921–1922

Feedback: Pathophysiology, Assessment, and Management of Lightning Strike, pages 1921–1922