

Wilderness EMS Institute

Wilderness EMT Course Post-Test

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This is a closed-book exam. There is no time limit. **Please don't write on this test; write qualifications or comments next to your answer on the answer sheet if you wish.** Pick the **single** best answer for each question. For matching questions, use each possible answer once only or not at all, unless otherwise directed. Please sign the pledge at the end of the answer sheet when you finish.

If you believe a question asks about material not covered in class that should have been, please write a note on your answer sheet to that effect. We'd also appreciate any comments as to whether questions are appropriate for a WEMT student, or any improvements for the test.

I. Introduction to Wilderness EMS

1. Which of the following populations is **least** suited for a class based on the WEMSI WEMT Curriculum?
 - a. mountain rescue team EMTs.
 - b. rural rescue squad EMTs who have SAR responsibilities.
 - c. cave rescue team EMTs.
 - d. climbing and hiking club trip leaders who are EMTs but who have no other wilderness rescue responsibilities.

2. Those who complete a specified course of instruction, or pass a certain test, receive a _____; those with the appropriate credentials may receive, from the government, a _____ to practice a particular skill or profession.
 - a. certificate; certificate
 - b. certificate; license
 - c. license; license
 - d. license; certificate

3. If you, as an EMT, begin aiding a person in distress, you are legally responsible to continue in your attempts to aid this person.
 - a. true
 - b. false

I. Introduction

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4. Prerequisites for attending the WEMSI WEMT Curriculum include:
 - a. EMT training or equivalent knowledge
 - b. wilderness search and rescue training
 - c. PHTLS or BTLS training
 - d. a and b
 - e. a, b, and c

5. The WEMT's only legitimate role is in the field on a wilderness search and rescue mission.
 - a. true
 - b. false

6. Is there a legal requirement for you to aid a person in life-threatening danger? (Assume that you are just passing by and that you are not a local public safety officer or EMT.)
 - a. Yes.
 - b. No, unless you're in Vermont or Minnesota (or possibly Alaska).

7. Assume that you misdiagnose a medical condition, and the patient suffers as a result. Assume further this medical condition is a rare one, one that physicians learn about in medical school but not covered in EMT or paramedic training. Your missing the diagnosis might be negligent if you are an emergency physician, but probably not, if you are only an EMT.
 - a. true
 - b. false

8. Assume that you, a Wilderness EMT-Basic, are caring for a severely ill or injured patient in the backcountry. Assume that you are caring for a patient with hypothermia, and you turn the patient over to an EMT-Basic who is not a Wilderness EMT. Might you be guilty of abandonment if you did this?
 - a. probably yes
 - b. probably no

II. The Wilderness Environment

9. The specialized skills and knowledge of the wilderness EMT are specifically **designed** for which of the following?
- a. uninhabited natural areas
 - b. auto accidents on rural roads
 - c. caves
 - d. catastrophic disasters
 - e. All of the above are true.
 - f. All of the above are true, except for b.
10. Which of the following is **not** a normal human adaptation to high altitude?
- a. increased ventilation
 - b. blood composition changes
 - c. increased lung tissue growth
 - d. changed enzyme production
11. The percentage of oxygen in the atmosphere _____ as altitude increases.
(Think carefully before answering.)
- a. increases
 - b. decreases
 - c. stays the same
 - d. (I don't know.)
12. Of all the animal hazards, _____ cause the largest number of deaths each year.
- a. mammals
 - b. fish
 - c. reptiles
 - d. insects
13. The following are good lightning safety tips **except**:
- a. avoid tall objects
 - b. seek open spaces
 - c. have your body span as small a distance as possible
 - d. avoid open water

10/10/2010

1. The first part of the document is a list of items that have been identified as being of interest to the Commission. These items are listed in the following table:

2. The second part of the document is a list of items that have been identified as being of interest to the Commission. These items are listed in the following table:

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14. The best way to remove an embedded tick is to:
 - a. shoot it with a small-caliber firearm.
 - b. grab hold of it about the waist and rip it out.
 - c. grab it gently around the head with a pair of tweezers, then pull slowly and gently until its little jaws relax.
 - d. unscrew it clockwise.
 - e. unscrew it counterclockwise.
 - f. torture it with a hot object applied to the rear end.
 - g. smother it with ointment or Vaseline.

15. Bringing water to a boil will kill almost all germs that can cause disease if you drink the water; boiling water for 10 minutes will kill almost all spores and other germs that can cause wound infections if the water is used for irrigating a wound.
 - a. true, at least at sea level
 - b. false

16. High concentrations of DEET, a commonly used insect repellent, is effective against most biting flies and mosquitoes, but use of high concentrations can also cause neurological problems such as seizures.
 - a. true
 - b. false

III. Patient Assessment

17. Doctors estimate that about 80% of their diagnosis is made from the history, and only about 20% from the physical exam.
 - a. true
 - b. false

18. The WEMT should never talk with the patient while performing a physical exam; it may interfere with the accuracy of the exam.
 - a. true
 - b. false

19. The WEMT should develop a standard general physical exam. This one standard exam should be conducted on every patient, regardless of the patient's problem or condition; there should be no variation in the physical exam components from patient to patient.
 - a. true
 - b. false

III. Assessment

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20. Which of the following is **not** one of the standard modes of physical examination?
- a. inspection
 - b. palpation
 - c. perforation
 - d. auscultation
21. For most wilderness patients, which of the following monitoring equipment would have the best usefulness-to-weight ratio? (I.e., which would give you the most benefit for the least weight?)
- a. a portable EKG monitor
 - b. a portable pulse monitor
 - c. a continuous reading electronic rectal thermometer
22. When the WEMT charts EOMI, meaning that the eyes move in all directions, this is part of the neurological exam, as well as helping to check for signs of an orbital blowout fracture.
- a. true
 - b. false
23. Jugular venous distension in the neck ("JVD") and râles (fine crackles) in the bases of the lungs may be signs of fluid overload or congestive heart failure.
- a. true
 - b. false
24. A patient who had head trauma several days ago is now only slightly confused, but has decreased sensation and motor strength in his left hand and in his left leg. You find increased DTRs on left side, and the big toe on left foot goes up with the Babinski test. This is suggestive of a problem, possibly a subdural hematoma, near the right side of the brain.
- a. true
 - b. false

IV. Scene Management, Communications, Reporting, and Documentation

25. People who are lost or stranded for several days often have access to water but not to food. Most of our normal salt intake comes from food. Therefore, people who have been lost for several days tend to have a low level of sodium (salt) in the blood, and are good candidates for drinking an oral electrolyte solution such as Gatorade™ instead of plain water.
- a. true
 - b. false
26. At the end of World War II, starving concentration camp inmates who ate too much too fast reportedly developed shock and died. When you find a patient who has been starving (such as many search subjects) you should give him or her only small amounts of food at a time to start with.
- a. true
 - b. false
27. The Wilderness EMT needs to communicate more to the medical command physician than a "street" EMT. Which of the following are standard parts of a WEMT's report?
- a. a pertinent summary of medical equipment and supplies available at the scene
 - b. a brief overview of the environmental conditions at the scene
 - c. a realistic estimate of evacuation time and difficulty
 - d. a summary of what has happened since the illness or injury, and care already rendered
 - e. (All of the above items are appropriate in a WEMT's report.)

V. Wilderness Surgical Problems

28. Any patient with a closed head injury who has a decreasing level of consciousness, or who develops focal neurological signs, must be evacuated immediately, even if by an improvised method, regardless of other injuries. Such a patient will probably need neurosurgery quite soon, and delays in evacuation may mean death.
- a. true
 - b. false
29. A subdural bleed may develop slowly after a head injury, taking hours, days, or sometimes even weeks to show neurological findings.
- a. true
 - b. false

30. Which of the following are important parts of the exam of a patient who may have a face fracture?
- examining the nose for a septal hematoma
 - gently wiggling the upper jaw by holding the upper teeth
 - having the patient try to open the mouth widely
 - checking extraocular motions
 - All of the above are important.
31. As a Wilderness EMT, you may determine that a wilderness patient doesn't need cervical spine immobilization during evacuation, despite having a head injury or high-velocity accident. Which of the following criteria must be met to "clear" the cervical spine?
- no severe "distracting" injuries
 - patient is alert and not intoxicated
 - patient does not complain of neck pain
 - patient does not have any neck tenderness on exam
 - patient has painless full range of motion of the neck
 - All of the above must be met to forgo immobilization.
32. A patient with a possible myocardial contusion should be monitored for arrhythmias and for congestive heart failure.
- true
 - false
33. Rib fractures should generally not be taped, or splinted with an elastic band around the chest, because of the dangers of inadequate ventilation of the lung and pneumonia.
- true
 - false
34. A team member took a small fall while carrying the litter, hitting her left lower ribs. She has slight bruising and tenderness over the left lower ribs, and has slight left upper quadrant tenderness on exam, but her abdominal exam is otherwise benign. You allow her to continue with the team's task, but later she starts complaining of orthostatic lightheadedness. You should:
- tell her to quit complaining and take her turn carrying the litter.
 - recheck her abdominal exam, check orthostatic BP and pulse (or just pulse if you have no BP cuff), and consider immediate evacuation for a subcapsular hemorrhage of the spleen.

35. The principles of treatment for minor bruises, sprains, and strains include
 - a. elevation
 - b. cold applications for the first day or two
 - c. heat after the first day or two
 - d. All of the above are good treatment principles for minor injuries.

36. Subungual hematomas should be drained because drainage will greatly relieve pain. However, a subungual hematoma may be associated with a finger fracture, and draining the hematoma changes a closed fracture to an open one, so the finger must be kept scrupulously clean.
 - a. true
 - b. false

37. Tetanus is a life-threatening infection that can occur in puncture wounds. Therefore, you should virtually never close a wound (turning it into a puncture wound, in effect) unless the person has had a tetanus toxoid injection ("tetanus shot") within the last five to ten years.
 - a. true
 - b. false

38. A team member is lifting the litter and has a sudden pain in the low back radiating down the back of her left leg. The pain in the leg is worse with the straight-leg-raising test. She has localized weakness: she cannot stand on the toes of left foot, and they seem weaker than the other side when you have her press down with both feet. She probably has a "slipped disk" with nerve root compression and should be carried out, though not urgently.
 - a. true
 - b. false

39. The treatment for toe sprains and fractures is simply "buddy taping" to the next digit. Evacuation for an X-ray is not necessary. (However, the team member may be unable to continue functioning in the field due to pain, and might need to go back to Base.)
 - a. true
 - b. false

40. "Mallet finger" injuries, which is when the patient cannot actively extend the distal interphalangeal joint (the joint nearest the fingertip), should be splinted with the distal interphalangeal joint flexed to about 90 degrees.
 - a. true
 - b. false

41. Assume that you are midway through an eight-hour search task on a high-urgency search. Assume a team member has fallen on her outstretched hand. Assume you find bony point tenderness in the "anatomic snuffbox" at the base of the thumb. Assume you correctly diagnose that the patient may have a fracture of the scaphoid bone there. Assume you use some cast padding, "fiberglass" casting material, and an elastic bandage to immobilize the area, and the team member says it is quite comfortable, and she is willing to continue the task. Nonetheless, since she may have a fracture, you must tell her that she should stop the task and head back to base (with another team member for safety) immediately.
- true
 - false
42. A team member falls on his outstretched left hand. He didn't actually hit his elbow, but he has pain in the left elbow. He also has some mild swelling there, and a decreased range of motion of the elbow. Since there was no direct blow to the elbow, you can assure the patient that there is no chance of a fracture, and you don't need to splint the elbow.
- true
 - false
43. Never attempt reduction of an anterior shoulder dislocation in the wilderness without intravenous pain medication.
- true
 - false

VI. Thermal Regulation

(44- 47) Matching: Modes of Heat Loss (use each answer once and once only)

- conduction
 - radiation
 - convection
 - evaporation
- sleeping "under the stars" rather than in the forest or in a tent
 - sitting out in a cold breeze
 - skin and lungs
 - sitting on a cold rock

VI. Thermal Regulation

The first part of the report deals with the general conditions of the country and the progress of the war. It is a very interesting and well-written account of the situation in the West Virginia territory at that time. The author describes the various tribes and their customs, and also the progress of the war as it affected the territory. The report is a valuable contribution to the history of the West Virginia territory.

W. J. ...
 ...

The second part of the report deals with the progress of the war in the West Virginia territory. It is a very interesting and well-written account of the various battles and campaigns that took place in the territory during the war. The author describes the progress of the war as it affected the territory, and also the various tribes and their customs. The report is a valuable contribution to the history of the West Virginia territory.

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(48- 53) Matching: Thermal Regulation Concepts (use each answer once and once only)

- 48. Homeostatic mechanisms
- 49. Energy level
- 50. Exhaustion
- 51. Daily food energy requirement, in Kcal.
- 52. Daily water requirement, in liters (quarts)
- 53. Fatigue
 - a. amount of energy available to do work
 - b. tends to keep something at a preset level, much like a thermostat
 - c. 2-14
 - d. 1000-4000
 - e. buildup of waste products
 - f. lack of available energy

VII. Heat-Related Disorders

- 54. Heat cramps may be due to a salt/water imbalance and/or dehydration. The treatment is to give something to drink which has salt in it (but only slightly rather than very salty, to avoid stomach upset).
 - a. true
 - b. false
- 55. Severe dehydration should be treated the same as shock.
 - a. true
 - b. false
- 56. _____ is a life threatening emergency requiring immediate treatment to bring the victim's temperature down.
 - a. severe dehydration
 - b. heat exhaustion (mild heat illness)
 - c. heat cramps
 - d. heatstroke (severe heat illness)
- 57. A patient with classic (nonexertional) heatstroke most likely will show:
 - a. cool, clammy skin, and a rapid pulse.
 - b. hot, dry skin.

1. The following information is being furnished to you for your information:

- (a) The name of the person who provided the information.
- (b) The date when the information was obtained.
- (c) The source of the information.
- (d) The nature of the information.
- (e) The date when the information was last updated.

2. This information is being furnished to you for your information and is not to be disseminated outside your organization. It is to be used only for the purpose for which it was provided.

3. If you have any questions regarding this information, please contact the person who provided it.

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58. Dehydration plus overexertion in a hot environment causes mild heat illness ("heat exhaustion"): water and salt depletion when a large blood volume is needed for exercise, and for transferring heat to the periphery. Treatment includes rest, to decrease muscle demand for blood, and to decrease heat production.
- true
 - false
59. Heatstroke
- should be treated as a form of shock, with vigorous fluid resuscitation.
 - is a severe medical problem; the patient must be cooled to near-normal temperatures as soon as possible, to avoid further damage to vital organs.
 - is more common in people who are well-acclimatized to a hot environment, and who are working in dry (as opposed to humid) conditions.
 - requires immediate surgery in most cases.

VIII. Burns and Lightning

60. Proper immediate treatment of small second degree burns is:
- antimicrobial ointment (e.g., povidone-iodine ointment), butter, or lard.
 - immersion in cold water.
 - oral antibiotics (e.g., erythromycin).
 - antihistamines (e.g., chlorpheniramine)
61. Jewelry, especially rings and bracelets, should generally be removed from burned limbs, if it can be done without additional damage. This is important because of the possibility of swelling turning a ring or bracelet into a tourniquet.
- true
 - false
62. The **major** cause of **early** death from structure fires and similar burns is:
- "burn shock," a form of hypovolemic shock resulting from evaporation from burned skin and from fluids escaping from injured blood vessels into the skin.
 - breathing problems from poisonous gases from the fire, either directly or from damage to the airway.
 - cardiac arrest.
 - hiccups.

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63. Painful partial thickness burns (first or second degree burns) of a small area should be treated by immediate immersion in cold water. This treatment is good because (1) it quickly stops the burning process and (2) it relieves the pain. Why is this treatment not recommended for large partial thickness burns?
- the danger of causing hypothermia
 - the danger of infection
 - because someone important once said so
 - because it requires a larger bathtub than carried on most ambulances
64. In the routine prehospital environment (i.e. not in the wilderness) "burn ointments," butter or lard, or even approved burn treatments such as Silvadene® cream should not be placed on burns. This is because the burn will need to be cleaned once the patient reaches a medical facility, and the creams or ointments just get in the way.
- true
 - false
65. You are providing medical services at a forest fire forward station, and your team includes both Wilderness EMT-basics and Wilderness EMT-Ps. A smokejumper is brought to you with 20% body surface burns, including burns to the face, neck, both arms, and a portion of the chest. In the middle of a 14-hour evacuation to the Base Camp, you note the respiratory rate to be 48. Assume you are a Wilderness EMT-Paramedic. After assessing the patient and finding stridor but clear lungs, what is your **immediate** first action?
- Insert an oropharyngeal airway and provide artificial ventilation.
 - Intubate the patient's trachea and provide artificial ventilation.
 - Decompress the chest with a 14-gauge IV catheter in the second intercostal space in the midclavicular line.
 - Drop the patient and leave.
 - Place a nasogastric tube to decompress the stomach.
66. After burns or other trauma, it is common for patients to develop an "ileus." This means the gastrointestinal system is not working properly. Which of the following are good clues to an ileus?
- patient is nauseated
 - patient vomits any fluids or food taken in
 - patient not passing gas (farting) at all
 - no bowel sounds on your abdominal exam
 - patient is not hungry
 - All of the above are good clues to an ileus.

VIII. Burns/Lightning

IX. Cold Disorders

67. A person who has subacute (mountain/exhaustion) hypothermia with uncontrollable shivering should be put in dry clothes and put into a thick sleeping bag:
- a. alone.
 - b. with another warm body or two, or with hot water bottles or heat packs.
68. When transporting a person with severe or chronic hypothermia, which of the following cautions should be observed?
- a. keep the litter level or with the head down slightly, to avoid causing seizures
 - b. do not to bump or jostle the litter, as this may cause problems with the heart rhythm
 - c. keep the patient's legs bent to avoid stress on the spinal cord
 - d. a and b
 - e. a and c
 - f. b and c
69. A person may reputedly walk on frozen feet (feet with deep frostbite) with little additional damage, but certainly cannot walk if they are thawed.
- a. true
 - b. false
70. The proper treatment for deep frostbite, in a hospital or in a wilderness setting when rewarming must be performed, is immediate rewarming in water heated to about 110° F.
- a. true
 - b. false
71. On the march to Moscow, Napoleon's chief physician developed a treatment for frostbite: rub the affected parts with snow. Is this still an accepted treatment for frostbite in the field?
- a. yes
 - b. no
72. Frostbite of the feet is commonly caused by poor circulation, often from tight-fitting boots. Wearing two pair of socks under a pair of boots fitted for one pair of socks is an invitation to frostbite.
- a. true
 - b. false

1. The first step in the process of identifying a problem is to define the problem clearly. This involves identifying the symptoms of the problem and determining the scope of the problem. Once the problem has been defined, the next step is to identify the causes of the problem. This involves identifying the factors that are contributing to the problem and determining the underlying causes of the problem.

2. The second step in the process of identifying a problem is to identify the causes of the problem. This involves identifying the factors that are contributing to the problem and determining the underlying causes of the problem. Once the causes of the problem have been identified, the next step is to develop a plan of action to address the problem. This involves identifying the steps that need to be taken to address the problem and determining the resources that will be needed to implement the plan.

3. The third step in the process of identifying a problem is to develop a plan of action to address the problem. This involves identifying the steps that need to be taken to address the problem and determining the resources that will be needed to implement the plan. Once a plan of action has been developed, the next step is to implement the plan. This involves carrying out the steps that have been identified in the plan and monitoring the progress of the plan.

4. The fourth step in the process of identifying a problem is to implement the plan. This involves carrying out the steps that have been identified in the plan and monitoring the progress of the plan. Once the plan has been implemented, the next step is to evaluate the results of the plan. This involves comparing the results of the plan to the original problem and determining whether the plan has been successful in addressing the problem.

5. The fifth step in the process of identifying a problem is to evaluate the results of the plan. This involves comparing the results of the plan to the original problem and determining whether the plan has been successful in addressing the problem. Once the results of the plan have been evaluated, the next step is to identify any lessons learned from the process. This involves identifying the factors that contributed to the success or failure of the plan and determining how these factors can be used to improve future problem-solving efforts.

6. The sixth step in the process of identifying a problem is to identify any lessons learned from the process. This involves identifying the factors that contributed to the success or failure of the plan and determining how these factors can be used to improve future problem-solving efforts. Once lessons have been learned, the next step is to communicate the results of the process to the relevant stakeholders. This involves sharing the findings of the process and the lessons learned with the people who were involved in the process and with other people who may be interested in the results of the process.

7. The seventh step in the process of identifying a problem is to communicate the results of the process to the relevant stakeholders. This involves sharing the findings of the process and the lessons learned with the people who were involved in the process and with other people who may be interested in the results of the process. Once the results of the process have been communicated, the next step is to follow up on the plan. This involves checking back on the plan to see if it is still being implemented and if it is still addressing the problem.

73. If you are checking a **cold** person/body for a pulse, you should check for at least a minute for a carotid pulse before assuming it's not there; some authorities (including WEMSI) recommend an even longer time, up to three minutes.
- a. true
 - b. false
74. You should never place an endotracheal tube into a hypothermic patient, because it might cause ventricular fibrillation.
- a. true
 - b. false

X. Altitude

75. The symptoms of acute mountain sickness include:
- a. chest pain
 - b. Cheyne-Stokes breathing (periodic breathing, with waxing, waning, and periods of apnea.)
 - c. difficulty sleeping
 - d. weakness and dyspnea on exertion
 - e. anorexia (loss of appetite)
 - f. All of the above, except for (a), are symptoms of acute mountain sickness.
 - g. All of the above, except for (a) and (b), are symptoms of acute mountain sickness.
76. Significant confusion or ataxia (staggering walking gait) at altitude may be signs of severe acute mountain sickness or high altitude cerebral edema. Anyone with these signs must descend immediately or risk death.
- a. true
 - b. false
77. If you are at high altitude, eating a high carbohydrate diet will improve your performance and decrease possible symptoms of altitude illness.
- a. true
 - b. false
78. The best prevention for altitude illness is slow ascent, with adequate time for acclimatization. However, there is at least one medication that may help prevent acute mountain sickness, and speed acclimatization to altitude.
- a. true
 - b. false

X. Altitude

79. The main treatment for high altitude pulmonary edema and high altitude cerebral edema is descent. However, there are specific medications that will aid in the treatment of both of these conditions.
- a. true
 - b. false

XI. Bites and Stings

80. Any raccoon, skunk, or fox bite must be treated as an important medical problem, due to the risk of rabies.
- a. true
 - b. false
81. The proper initial step in management of a suspected pit-viper bite in the backcountry is:
- a. immediate incision and suction of the backcountry.
 - b. packing in ice.
 - c. cross-shaped (cruciate) incisions and suction, especially if the bite is on the hands or feet.
 - d. application of a tourniquet.
 - e. a careful check for signs of envenomation (marked redness, swelling, warmth, or pain).
82. The use of ice or cold packs for North American snakebites is useless and sometimes worse than useless.
- a. true
 - b. false
83. The cut-and-suck method of treatment for snakebite is almost always unnecessary when within an hour or two of a medical facility, but may be appropriate in the backcountry. All of the following are true statements about the cut-and-suck method **except:**
- a. Use of the mouth for suction will most likely cause the snakebite wound to become infected.
 - b. As the swelling spreads, the cut and suck method may be used to remove venom from the swollen parts of the limb, even if they are well away from the initial bite.
 - c. Cross-shaped ("cruciate") cuts should not be used; instead, make linear cuts along the axis of the limb. This minimizes the chances of cutting a nerve, blood vessel, or tendon.
 - d. The cut-and-suck method must be applied within the first few minutes after the bite to be effective.

84. Which of the following have been shown to be effective treatments for decreasing the illness or injury associated with North American pit viper bites?
- a. lymph constrictors
 - b. venous tourniquets
 - c. arterial tourniquets
 - d. the "Australian" pressure bandage
 - e. electric shock
 - f. None of the above have been shown effective.
85. A patient with a poisonous snakebite on the leg is being evacuated. Eighteen hours after the injury, you still have another 18 hours to the roadhead, and the patient complains of markedly increasing pain in the leg. He is unable to flex his great toe without greatly increasing the pain. What should you do?
- a. Pack the leg in ice.
 - b. Elevate the leg; monitor the pedal pulse and capillary refill in the toes, and alert your Wilderness Command Physician.
 - c. Perform immediate fasciotomy.
 - d. Perform immediate escharotomy.

XII. Wilderness Medical Problems

86. Proper treatment for muscle cramps includes all the following **except**:
- a. antihistamines (e.g., chlorpheniramine)
 - b. warmth (warm compresses)
 - c. stretching
 - d. massage
87. Conjunctivitis (inflammation of the lining of the eye and eyelids) may be caused by:
- a. allergy; the treatment includes the use of antihistamine (e.g., chlorpheniramine)
 - b. a foreign body in the eye (actually, in the conjunctival sac); treatment includes removal of the offending object with aid of a local anaesthetic (e.g., proparacaine)
 - c. a mild abrasion of the eye; treatment includes careful examination (under local anaesthetic) for a foreign object, application of an ophthalmic antibiotic ointment (e.g., Polysporin®), and application of a patch.
 - d. "snowblindness," which is a sunburn of the cornea; treatment includes cool compresses and application of a patch.
 - e. all the above answers are correct

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88. The most important treatment for diarrhea is fluid and electrolyte (salt) replacement.
- true
 - false
89. An important part of the treatment for snowblindness is patching of the eyes and rest.
- true
 - false
90. You encounter a person with some foreign fluid (stove fuel) in the eye. No sterile irrigation fluid is readily available. You should:
- Send for some sterile irrigating solution while arranging transport to the hospital.
 - immediately flush the eye with large amounts of clean water.
 - get a scrub-brush, and use it to scrub out the eye.
91. The ureter connects the kidneys to the urinary bladder, and the urethra connects the urinary bladder to the outside. A kidney stone impacted (stuck) anywhere along this course may cause severe pain and blood in the urine.
- true.
 - false.
92. Patients with "stable angina" may only need an occasional nitroglycerin tablet to help them when they overexert themselves. A patient with stable angina, who has only a few minutes of chest pain, relieved by a single sublingual nitroglycerine and rest, does not need any emergency care. However, the patient might need assistance in exiting the wilderness without exertion.
- true
 - false
93. A severe allergic reaction, such as to a bee sting, may cause damage to blood vessels' ability to keep fluid within them, resulting in:
- vaso-vagal shock.
 - psychogenic shock.
 - cardiogenic shock.
 - anaphylactic shock.
 - septic shock.
94. The **essential** treatment for an abscess is:
- oral antibiotics (e.g., erythromycin).
 - incision and drainage.
 - aspirin.
 - warm soaks.

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3. The third part of the book is devoted to a study of the early years of the American Republic. It covers the period from the signing of the Constitution in 1787 to the end of the War of 1812 in 1815.

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5. The fifth part of the book is devoted to a study of the mid-19th century. It covers the period from the beginning of the Mexican War in 1846 to the end of the Civil War in 1865.

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7. The seventh part of the book is devoted to a study of the Gilded Age. It covers the period from the beginning of the Gilded Age in 1877 to the end of the Progressive Era in 1914.

95. In anaphylaxis, a major problem is swelling of the lining of the airways.
- a. true
 - b. false
96. Subcutaneous administration of epinephrine (adrenaline) is the proper initial treatment for anaphylaxis.
- a. true
 - b. false
97. Once anaphylaxis has responded to the initial treatment, in a wilderness setting it is appropriate to give an antihistamine such as diphenhydramine (e.g., Benadryl®).
- a. true
 - b. false

XIII. Wilderness Trauma

98. All of the following are part of the proper treatment for shock **except**:
- a. position the patient lying but with the feet elevated
 - b. keep the patient from chilling
 - c. IF you are far from the road AND IF the patient is completely conscious AND IF the patient has no internal injuries, you may give small sips of Gatorade™ or similar fluids
 - d. give small sips of whiskey
99. A person has sustained a fracture of the midshaft (middle) of the femur (thighbone). After careful examination, you see no break in the skin; there no other evidence of external bleeding, and there is nothing to suggest bleeding into the abdomen or chest. Therefore, the patient has no reason to be in hypovolemic shock.
- a. true
 - b. false
100. An adult with a urine output of less than 30 cc/hr, and with no physical evidence of fluid overload (no bulging neck veins, no râles in the lungs) is probably dehydrated and needs more fluid.
- a. true
 - b. false
101. Most of the principles and protocols of the Advanced Trauma Life Support, Pre-Hospital Trauma Life Support, and Basic Trauma Life Support programs apply very well to wilderness trauma.
- a. true
 - b. false

102. Of the following, which is the best IV fluid for a wilderness trauma patient who is dehydrated, or has sustained blood loss?
- D5½NS (5% dextrose + 0.45% sodium chloride)
 - D5W (5% dextrose)
 - NS (Normal Saline: 0.9% sodium chloride)
 - WD-40
103. Significant injury to muscles can disrupt muscle cells, releasing a certain chemical (myoglobin) into the blood; this myoglobin can "clog up" the kidney, leading to kidney failure. Therefore, it is important to keep anyone with a crush injury **well-hydrated**.
- true
 - false
104. ARDS (adult respiratory distress syndrome), also known as "shock lung," usually occurs a day or so after shock. In ARDS, fluid leaks into the lung, causing pulmonary edema. Therefore, you should not give any fluids to trauma patients the day after they recover from shock.
- true
 - false
105. If you are treating a patient with both hypothermia and multiple trauma, do **not** add much heat to the patient; hypothermia helps protect against many of the ill effects of trauma.
- true
 - false
106. A patient with a crush injury to the leg is being evacuated. Eighteen hours after the injury, you still have another 18 hours to the roadhead, and the patient complains of markedly increasing pain in the leg, and it is very swollen and exquisitely tender. He is unable to flex his great toe without greatly increasing the pain. The big toe is numb. What should you do?
- Pack the leg in ice.
 - Monitor the pedal pulse and capillary refill in the toes, and alert your Wilderness Command Physician about a possible compartment syndrome.
 - Perform immediate fasciotomy.
 - Perform immediate escharotomy.

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XIV. Pharmacology

107. Treatment for a bad case of contact dermatitis, such as from poison ivy, might reasonably include:
- a. aspirin.
 - b. steroid cream.
 - c. an antihistamine (e.g., chlorpheniramine)
 - d. all the above answers are correct
108. The most important treatment for diarrhea is fluid and electrolyte (salt) replacement; but, in some wilderness situations, it may be appropriate to take a medication to slow down the frequency of bowel movements. Which of the following will **not** generally slow down bowel movements?
- a. loperamide (Imodium®)
 - b. diphenoxylate and atropine (e.g., Lomotil®)
 - c. acetaminophen and codeine (e.g., Tylenol #3®) or acetaminophen and hydrocodone (e.g., Vicodin®)
 - d. pseudoephedrine (Sudafed®)
109. Aspirin has many effects. Which of the following is **not** considered a significant effect of aspirin?
- a. reducing fever
 - b. relieving mild pain
 - c. causing intractable hiccups
 - d. in large doses, reducing inflammation (e.g., a sprained ankle)
 - e. "thinning the blood" slightly by decreasing platelet stickiness
 - f. irritating the lining of the stomach
110. An important part of the treatment for snowblindness is patching of the eyes and rest. The pain caused by spasm of the small muscles of the eye may be relieved by eye drops that paralyze these eye muscles such as cyclopentolate (e.g., Cyclogyl®)
- a. true
 - b. false
111. Acetaminophen (e.g., Tylenol®) has effects similar to aspirin as far as fever and pain, but has less anti-inflammatory effect.
- a. true
 - b. false

112. Narcotics, such as the codeine found in Tylenol #3[®] and the hydrocodone found in Vicodin[®], are effective for suppressing cough.
- a. true
 - b. false
113. Narcotics, such as the codeine found in Tylenol #3[®], the hydrocodone found in Vicodin[®], and most antihistamines such as diphenhydramine (e.g., Benadryl[®]) have a sedative effect and may be used to promote sleep.
- a. true
 - b. false
114. The preferred route of drug administration to a patient in shock is:
- a. PO (by mouth)
 - b. SQ (subcutaneously)
 - c. PR (by rectum)
 - d. IV (intravenous)
 - e. IM (intramuscularly)
 - f. all of the above

XV. Immobilization, Packaging, and Transportation of Wilderness Patients

115. Assume you're out hiking with a party of ten in an area with a good wilderness rescue capability (e.g., in the backcountry of Shenandoah National Park). With which of the following situations should you start an improvised evacuation, rather than simply sending for help and waiting for a rescue team with a Stokes litter?
- a. signs of deepening stupor and coma following a blow to the head
 - b. a spine injury
 - c. an open ankle fracture
 - d. an uncomplicated myocardial infarction
116. All of the following are considered a major danger area near most helicopters, **except:**
- a. to the right rear of the helicopter
 - b. to the left rear of the helicopter
 - c. uphill from the helicopter
 - d. downhill from the helicopter
117. When may you approach a helicopter?
- a. only after the skids are grounded
 - b. once the helicopter is settled and all lift is off the rotors
 - c. when the crew chief or pilot signal you to do so
 - d. only on Tuesday afternoons

118. When immobilizing a fracture, which of the following are important?
- 1 check neurovascular function distal the injury site before and after splinting
 - 2 don't tie the splints too tight
 - 3 immobilize the joint above and below the suspected fracture
 - 4 use axial "in line" traction as needed
- a. 1, 2, 3
 - b. 1, 2, 4
 - c. 2, 3
 - d. 1, 2, 3, 4
119. You can use the patient's body to serve as an anatomical splint for all of the below **except**:
- a. ribs
 - b. hip
 - c. spine
 - d. legs
 - e. upper arms
120. There are many ways to tie a patient into a Stokes basket litter. All of the following **correct except**:
- a. rope/webbing shouldn't be tied over the top rail (may cause abrasion on rocks)
 - b. rope/webbing should be loose enough to allow the patient to turn to either side
 - c. several segments of rope/webbing are better than one continuous length (for safety in case one should fail)
 - d. the feet of a patient should be tied to prevent slipping up or down in the basket.
121. Which of the following is **not** an appropriate part of patient packaging for a long semi-technical evacuation?
- a. blankets or sleeping bag
 - b. Ensolite™ or similar foam pad
 - c. helmet and goggles/face shield
 - d. waterproof tarp
 - e. All of the above are appropriate.

XVI. Disasters

(122- 125) **Matching** (give one answer for each question; may use one answer twice)

- 122. seven-day lost person search
- 123. two-day cave rescue .
- 124. backcountry commercial aircraft crash, with survivors
- 125. earthquake that severely damages all fire and ambulance stations and hospitals
 - a. catastrophic disaster
 - b. single-casualty/multiple resource incident
 - c. multi-casualty incident

- 126. Which of the following are similarities between wilderness search and rescue and a catastrophic disaster?
 - a. lack of food and safe water
 - b. lack of shelter; environmental stresses
 - c. medical services are distant or not available
 - d. communications are unreliable or absent, including medical command
 - e. overland ("wilderness") rescue skills are needed
 - f. rescuers must carry equipment on their backs
 - g. rescuers must have adequate personal equipment for survival
 - h. EMTs may need to provide care for long periods.
 - i. EMTs may be forced to provide "primary care" for problems they normally don't deal with "on the street"
 - j. All of the above are similarities between catastrophic disasters and wilderness search and rescue.

XVII. Advanced Skills

- 127. To assure that an IV is patent (still in the vein and flowing properly), you may lower the IV bag, or squeeze the IV tubing and release it, looking for a return of blood into the IV tubing.
 - a. true
 - b. false

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128. You are transporting a patient with an endotracheal tube in place. The patient, who has been relatively alert thus far, becomes agitated and has an increased respiratory rate. When you listen to the lungs, there are diminished breath sounds on the left. What should you do **first**?
- Decompress the chest with a 14-gauge IV catheter in the second intercostal space in the midclavicular line.
 - Pull the endotracheal tube back about an inch (after deflating the balloon) and then reinflate the balloon and retape.
 - Insert an oropharyngeal airway to act as a bite block.
 - Pull out the tube and check it for leaks.
 - Tell the patient to take two aspirins and call you in the morning.
129. You are transporting a trauma patient with a Foley catheter in place; ever since it was placed, it has been draining very bloody urine. During the last three hours, there has been only 20 ccs of output. The patient is now complaining of increasing lower abdominal pain and distension. What is the **most likely** explanation?
- the pubic bone is pressing on the Foley catheter
 - the balloon has been over-inflated
 - a clot has plugged the tube
 - the patient is in acute renal failure
 - the end of the Foley catheter is lying against the bladder wall

XVIII. Principles of General Medicine

130. The dextrose in an IV (e.g., D5LR, D5NS) will provide enough energy to keep the average patient from using up his or her own energy stores.
- true
 - false
131. Which of the following wilderness patients should **not** receive oral fluids? (Assume a 12-hour evacuation.)
- a patient who has had diarrhea for several days; his pulse is 72 while lying, but rises to 120 when standing
 - a patient who fractured his femur 12 hours ago; he sustained no other injuries, and has bowel sounds
 - a patient who took a leader fall and who fractured his helmet; he also is complaining of right-sided abdominal pain, and no bowel sounds can be heard in the belly
 - None of the above should receive oral fluids; the Wilderness EMT should **never** give a patient oral fluids.

XVII. General Medicine

XIX. *Stress Management and Critical Incident Stress Debriefing*

132. Critical Incident Stress Debriefing can decrease the incidence of delayed stress reactions after a psychologically stressful incident.
- true
 - false
133. An acute stress reaction occurs within 24 hours after an incident and may cause any of the following: fatigue; weakness; fainting; palpitations, chest pain, and dyspnea; nausea, vomiting and abdominal pain; and a "lump in the throat."
- true
 - false
134. If you are advising the IC at particularly grisly downed aircraft search and rescue operation, you should suggest that the mess tent serve which of the following (choose the one best choice):
- coffee
 - cola drinks
 - tea
 - fried chicken
 - fresh fruit and granola bars
 - "regular" candy bars
135. Whenever you see signs of stress in team members when in the field, you should try to start a group counseling session.
- true
 - false

[end]