ASSIGNMENT 2

CLINICAL ASPECTS OF COLD WEATHER

NAVEDTRA 13147A

Reading Assignment: Clinical Aspects of Cold Weather, pages 14 - 33

2-1. The process whereby the body's physiological mechanism adapts to a new environment is called
1. adaptation
2. acclimatization
3. synergism
4. homeostasis

2-2. Acclimatization is best accomplished by gradually increasing the duration of exposure in cold environments over a period of
1. 1 to 4 days
2. 8 to 10 days
3. 1 to 2 weeks
4. 1 to 4 weeks

2-3. The cold-adapted person will
1. shiver less
2. conserve body heat better
3. be able to function more efficiently in the cold
4. do all of the above

2-4. Cold injuries can be divided into what two categories?
1. internal and external
2. thermal and nonthermal
3. freezing and nonfreezing
4. psychological and physical

2-5. An episode of chilblains in an operating unit indicates that
1. all personnel should conscientiously practice preventive measures
2. medical personnel should anticipate an increase in more severe injuries
3. unit discipline is deteriorating
4. severe snow storms will shortly follow the current high humidity weather

2-6. Immersion injuries are classified as what type of cold injury?
1. systemic
2. nonfreezing
3. generalized
4. freezing

2-7. The injury often seen in troops engaged in trench warfare where mobility is limited is similar in symptoms and treatment to immersion foot.
1. true
2. false

2-8. Which of the following signs or symptoms does not usually occur during the initial stage of an immersion injury?
1. swelling
2. skin that is waxy white and mottled with cyanotic burgundy to blue splotches
3. numbness
4. pain

2-9. Treatment of immersion injuries includes gentle drying, elevation, and exposure of the extremity in an environmental temperature of
1. 44 to 52 degrees F
2. 54 to 62 degrees F
3. 64 to 72 degrees F
4. 74 to 82 degrees F

2-10. One of the moderately severe cases of immersion foot, ___ recover sufficiently to return to full duty.
1. 10%
2. 25%
3. 50%
4. 90%

In items 2-11 through 2-16, select from column B the degree of severity of immersion foot that would produce the effect in column A. Items in column B may be used more than once.

	A. Effects	B. Degrees of Severity
2-11.	Irreversible tissue damage	1. Minimal
2-12.	Increased edema and paresthesia of tissue	2. Mild
2-13.	Days to weeks of hospitalization	3. Moderately severe
2-14.	Six months or more hospitalization	4. Severe
2-15.	Reversible tissue and nerve damage requiring hours of hospitalization	
2-16.	Gangrene	

2-17. An abnormal reduction of the body's core temperature below its maximum efficiency level, resulting in a progressive deterioration in the cerebral, musculoskeletal, and cardiac functions is called
1. hyperthermia
2. hypothermia
3. dehydration
4. pernio

2-18. A clear warning that a victim is on the verge of becoming hypothermic is
1. circumoral cyanosis
2. increased blood pressure
3. intense shivering
4. peripheral vasoconstriction

2-19. As the core temperature progressively drops, effective muscular activity virtually ceases at about
1. 94 degrees F
2. 92 degrees F
3. 90 degrees F
4. 88 degrees F

2-20. All of the following are considered ominous signs of progressive hypothermia EXCEPT
1. muscular weakness
2. stumbling gait
3. normal orientation
4. environmental disinterest

2-21. In the hypothermic patient with serious hypoxia, what will determine whether the heart and brain will survive?
1. vasoconstricting drugs
2. oxygen
3. stimulants
4. vigorous exercise

2-22. What is probably the most frequent cause of death among hypothermic victims?
1. cerebral vasoconstriction
2. peripheral vasodilation
3. atrial fibrillation
4. ventricular fibrillation

2-23. A victim with a core temperature of 82 degrees F whose pupillary and corneal reflexes are absent and whose blood pressure is unobtainable is beyond resuscitation.
1. true
2. false

2-24. What is the best method of rewarming a victim whose hypothermia was of short duration and the level was not deep?
1. steam-filled tents
2. rewarming blankets
3. immersion in warm water
4. exposure to warm room air

In items 2-25 through 2-30, select from column B the severity of hypothermia that produces the core temperature in column A. Items in column B may be used more than once.

A. Core Temperatures	B. Severity of Hypothermia
2-25. 24 degrees C	1. Mild
2-26. 31 to 27 degrees C	2. Moderate
2-27. 35 degrees C	3. Deep
2-28. 76 degrees F	4. Profound
2-29. 80.6 to 77 degrees F	
2-30. 89.6 to 80.6 degrees F	

2-31. Water that is to be used in the immersion treatment of general hypothermia should be maintained at a temperature of
1. 102 degrees F
2. 103 degrees F
3. 104 degrees F
4. 105 degrees F

2-32. What may be the major advantage of using external rewarming methods instead of internal rewarming methods for treating hypothermic victims?
1. They are easier to employ in the field.
2. They can be initiated by anyone.
3. Fluid and electrolyte balance are better monitored.
4. Problems associated with rewarming shock are reduced.

2-33. A highly effective method of internal rewarming available in almost any major medical facility is called
1. peritoneal dialysis
2. extracorporeal circulation
3. renal dialysis
4. inhalation rewarming

2-34. Which of the following can cause ventricular fibrillation in the severely hypothermic victim?
1. any changes in body position
2. pacemaker electrode irritation
3. a traumatic endotracheal intubation
4. All of the above

2-35. External pacemakers and cardioversion will have little effect on a hypothermic heart.
1. true
2. false

2-36. The central venous pressure of a hypothermic patient should be maintained between
1. 4 and 8 cm
2. 5 and 8 cm
3. 5 and 9 cm
4. 5 and 10 cm

2-37. To what temperature should peritoneal dialysis fluids for hypothermic patients be heated?
1. 98.6 degrees F
2. 100 degrees F
3. 104 degrees F
4. 108 degrees F

2-38. Victims hospitalized for severe hypothermia should initially be given ___ by mouth.
1. isotonic saline
2. warm broths
3. warm 5% glucose
4. nothing

2-39. All cases of hypothermia should be rewarmed as much as possible in the field.
1. true
2. false

2-40. The most serious complication that may occur in a hypothermic patient is
1. pneumonia
2. psychosis
3. renal failure
4. cardiac arrhythmia

2-41. An indication of impending renal failure in a hypothermic patient is severe
1. hypotension during the pre-rewarming period
2. hypertension during the pre-rewarming period
3. hypotension during the post-rewarming period
4. hypertension during the post-rewarming period

2-42. The DIC-like syndrome in hypothermic patients is treated with
1. vitamin K
2. heparin
3. cardioversion
4. pulmonary resuscitation

2-43. The most serious result of rough handling moderate to severe hypothermic patients is
1. atrial fibrillation
2. ventricular fibrillation
3. severe shock
4. thrombosis

2-44. The speed of onset, depth, and severity of injury in frostbite depend on
1. the temperature
2. the windchill
3. the duration of exposure
4. all of the above

2-45. The ice crystals that form in the exposed tissue during the onset of frostbite probably mechanically compress the surrounding cells and rupture the cell membranes.
1. true
2. false

2-46. The lowest temperature in which cells may be slowly frozen and still survive is
1. 30 degrees F
2. 27 degrees F
3. 23 degrees F
4. 20 degrees F

2-47. Early signs of frostbite include
1. mottled blue or purple skin
2. blisters beneath the outer layer of skin
3. tingling and stinging of the affected part
4. all of the above

2-48. The blisters that form beneath the outer layer of the skin in the more severe cases of superficial frostbite occur in
1. 1 to 2 hours
2. 12 to 24 hours
3. 24 to 36 hours
4. 3 to 7 days

2-49. In cases of severe frostbite, if some of the skin does not become red and blistered after thawing but turns a lifeless gray and continues to remain cold, it is an indication that this tissue
1. is not severely injured
2. will survive if kept at rest
3. suffered an immersion injury rather that frostbite
4. will be lost

2-50. In cases of acute deep frostbite of the foot, if some of the tissue becomes wet, soft, and inflamed, it is an indication that
1. healing is taking place
2. the tissue must be debrided
3. the tissue will slough off
4. infection has entered the picture

2-51. Surgical correction for frostbite injuries should rarely be considered for at least ___ after the initial injury.
1. 1 week
2. 2 weeks
3. 1 month
4. 2 months

2-52. Surgical amputation is always necessary following the development of wet gangrene.
1. true
2. false

In items 2-53 through 2-57, select from column B the degree of frostbite that matches the symptoms listed in column A. Items in column B may be used more than once.

	A. Symptoms	B. Degrees of Frostbite
2-53.	Involves the bone	1. First degree
2-54.	No eschars form, intense itching or burning, deep-seated ache	2. Second degree
2-55.	Large, clear blebs appear early and extend nearly to the tips of the involved digits	3. Third degree
2-56.	Involves whole skin thickness into subcutaneous tissue	4. Fourth degree
2-57.	Complete necrosis and loss of tissue occur	

In items 2-58 through 2-61, select from column B the type of prognostic indicator that applies to the sign in column A. Items in column B may be used more than once.

	A. Signs	B. Types of Prognostic Indicators
2-58.	Complete absence of edema	1. good prognostic indicator
2-59.	Dark hemorrhagic blebs	2. poor prognostic indicator
2-60.	Large, clear blebs develop early and extend to the tips of the digits	
2-61.	Rapid return of sensation	

2-62. The primary aim of field first aid for a frostbite victim is to
1. rewarm the victim
2. thaw frozen extremities
3. prevent infection
4. prevent further injury

2-63. When the victim arrives at a definitive care medical facility, rewarm the extremity
1. rapidly in water between 100 and 103 degrees F
2. slowly in water between 100 and 103 degrees F
3. rapidly in water between 104 and 108 degrees F
4. slowly in water between 104 and 108 degrees F

2-64. Slow thawing of frostbite injuries may cause more tissue damage than prolonged freezing
1. true
2. false

2-65. A dark red or purple color to the extremity following rewarming may indicate
1. incomplete thawing
2. return to normal circulation
3. a more serious injury
4. all of the above

2-66. Vesicles or blebs, if they appear, will be seen in about __ hours after the thaw is completed.
1. 1 to 2
2. 1 to 4
3. 2 to 3
4. 2 to 5

2-67. Following the completion of thawing, the patient must be given 20 minute whirlpool treatments twice daily in __ water.
1. 99 degrees F
2. 101 degrees F
3. 103 degrees F
4. 105 degrees F

2-68. Unless specifically contraindicated, therapy for all frostbite patients should include
1. antibiotics
2. vasodilators
3. anticoagulant infusions
4. a tetanus toxoid booster

2-69. Acute mountain sickness is caused by the
1. fear of heights
2. decreased partial pressure of oxygen
3. inability to digest food
4. increased oxygen in the red cells

2-70. Which of the following will minimize the development of HAPE in personnel operating in mountainous environmental?
1. prophylactic diuretics
2. daily oxygen therapy
3. incremental acclimatization
4. steroid therapy

2-71. Carbon monoxide gas is absorbed through the lungs and combines with
1. oxygen
2. carboxyhemoglobin
3. carbon dioxide
4. hemoglobin

2-72. A classic (often lethal) sign or symptom of carbon monoxide poisoning is
1. an intense headache
2. impaired vision
3. mental confusion
4. a cherry color of the lips and skin

2-73. Treatment of carbon monoxide poisoning requires immediate removal of the victim from the source and ventilation with ___ humidified oxygen.
1. 30 %
2. 50 %
3. 80 %
4. 100 %

2-74. Snow blindness is caused by damage to the __ by the ultraviolet rays from the sun.
1. retina and sclera
2. conjunctiva and cornea
3. pupil and lens
4. rods and cones

2-75. With early diagnosis and proper treatment, the recovery period for snow blindness usually is
1. 2 to 12 hours
2. 1 to 5 days
3. 1 to 2 weeks
4. 2 to 3 months

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