

O-0003
PREVENT AND TREAT HOT WEATHER INJURIES

CONDITIONS

You are part of a ground team on a mission during on a hot day. Members of your team begin to exhibit symptoms of heat-related injuries.

OJECTIVES

Take steps to prevent hot weather injuries and recognize and treat those that do occur.

TRAINING AND EVALUATION

Training Outline

1. Heat injuries (sometimes called heat stress) are the result of overexertion and dehydration. These conditions can occur at any time during the year, but are most common during the summer months with high temperatures and humidity.

2. To prevent heat stress:

a. Ensure you are drinking enough water per day. Two quarts per day is the absolute minimum on a mild day. On a hot summer day, drink 6-8 quarts a day or 1 quart an hour. Frequent sipping is better than trying to drink an entire quart at a time.

b. Monitor the color of your urine. It should be almost clear in color. If it is brown or dark yellow, you are becoming dehydrated.

c. Wear loose fitting and open clothing.

d. Do not overexert yourself. Know your limits and do not exceed them. Take frequent breaks.

e. Avoid sunburn by using sunscreen or keeping your sleeves down.

f. Watch other members of the team for beginning signs of heat stress. Immediately stop, rest and drink some water. Once a person succumbs to a heat injury, he will not be back for the rest of the day.

g. Use the buddy system -- assign everyone a partner to watch for heat stress and to monitor water intake.

3. There are three major types of heat injuries: heat cramps, heat exhaustion, and heat stroke.

a. Heat cramps are usually the first stage of heat stress. They are the result of dehydration and loss of electrolytes in body tissues.

1). Symptom of heat cramps:

a) Severe muscle cramps, usually in the legs and abdomen.

- b) General Weakness
- c) Sometimes dizziness and faintness.

2) Treatment of heat cramps:

- a) Move the patient to a cool, shady place.
- b) Provide salted water or a commercial electrolyte (i.e. Gatorade).
- c) Massage the cramped area.
- d) Apply some pressure to the cramped area, but stop if it makes the patient more uncomfortable.
- e) Apply moist towels to the patient's forehead and the cramped muscle.
- f) If symptoms worsen, immediately transport the person to a medical care facility.

b. Heat exhaustion is the next phase of heat stress (although some individuals may never develop heat cramps before going into heat exhaustion).

1). Symptoms of heat exhaustion:

- a) Rapid and shallow breathing.
- b) Weak pulse.
- c) Cold and clammy skin.
- d) Heavy perspiration
- e) Weakness and dizziness that may lead to unconsciousness

2) Treatment of heat exhaustion:

- a) Move the patient to a cool, shady place and keep him at rest.
- b) Remove enough clothing to cool (not chill) the patient.
- c) Fan the patient's skin to promote sweat evaporation.
- d) If the patient is conscious, provide salted water or a commercial electrolyte (i.e. Gatorade).
- e) Treat for shock and transport the patient to a medical care facility.

c. Heat Stroke is the final phase of heat stress. It is a life-threatening condition. It is the result of the body's absolute failure to regulate heat, and as a result the body's core temperature starts to rise (hyperthermia).

This leads to the rapid destruction of body tissues and brain cells. Permanent brain damage and death are possible outcomes of heat stroke. Even if successfully treated, it will take days for the patient to recover.

1) Symptoms of heat stroke:

- a) Deep breathing becoming progressively shallower.
- b) A rapid, strong pulse becoming weaker.
- c) Dry and hot skin
- d) Dilated pupils.
- e) Possible unconsciousness, seizures, and muscular twitching.

2) Treatment of heat stroke. The key is to cool the patient as rapidly as possible.

- a) Remove the person from any heat sources and remove clothing.
- b) If possible immerse the patient in cool water, or use cold wet towels or ice packs in the patient's armpits, groin, under neck and behind knees..
- c) Treat for shock and transport the patient to a medical care facility.

Additional Information

More detailed information on this topic is available in Chapter 2 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to answer the questions listed below, one at a time.

Evaluation

<u>Performance measures</u>	<u>Results</u>	
The individual:		
1. Describes three ways to help prevent heat stress	P	F
2. Describes three signs of heat cramps	P	F
3. Describes three treatment steps for heat cramps	P	F
4. Describes three signs of heat exhaustion	P	F
5. Describes three treatment steps for heat exhaustion	P	F
6. Describes three signs of heat stroke	P	F
7. Describes three treatment steps for heat stroke	P	F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.