

STANDARD OPERATING PROCEDURE
RECOGNITION OF AND FIRST AID FOR
HEAT INJURIES

Heat injuries can occur during hot weather and temperate conditions when normal temperature control mechanisms of the body are overwhelmed. This occurs when fluids are not adequately replaced, the body is not properly rested or body heat is not dissipated. Heat injury categories include: *heat cramps, heat exhaustion and heat stroke*.

Prevention of heat injuries includes:

- hydrate through frequent consumption of water and non-alcoholic beverages
- ensure adequate rest
- remain cool, through shade, air conditioning and fans
- avoid over-exertion
- seek medical attention if symptoms of heat injuries

I. Heat Cramps

A. Signs/Symptoms

1. Grasping or massaging a limb (arm or leg) or bending over in an effort to relieve the pain of an abdominal cramp.
2. Skin wet with perspiration.
3. Unusual thirst.

B. Treatment

1. Move the individual to a cool, shaded area or tent, fixed or temporary facility.
2. Loosen the clothing around the individual's neck and waist and loosen shoestrings or remove shoes.
3. Have the individual slowly drink one quart of cool water.
4. Seek medical help or evacuate the casualty if the cramps continue.

II. Heat Exhaustion

A. Signs/Symptoms

1. Profuse sweating with pale, cool skin
2. Weakness or faintness
3. Dizziness
4. Headache
5. Loss of appetite
6. Heat cramps
7. Nausea and possible vomiting
8. Chills ("gooseflesh")
9. Rapid breathing
10. Urge to defecate
11. Tingling in hands or feet
12. Mental confusion

B. Treatment

1. Move the individual to a cool shaded area to rest. Improvise shade if necessary.
2. Position the individual on back with legs elevated (normal shock position).
3. Remove clothing around individual's neck and waist and loosen shoestrings or remove shoes.
4. Pour water over the individual and fan him/her to cool the body.
5. Have the individual slowly drink one quart of cool water.
6. If the individual cannot drink because of nausea or vomiting, insert an intravenous line and evacuate
7. Once the individual recovers, advise no exertion for the remainder of the day.

III. Heat Stroke

A. Signs/Symptoms

1. Skin that is hot, dry and red
2. Absence of or extreme decrease in normal perspiration. (This indicates a collapse in the body's cooling mechanism. Also...observe/ notice an individual who perspires little or not at all, when others performing the same tasks are perspiring.)
3. Headache
4. Weakness
5. Dizziness
6. Mental confusion
7. Nausea or stomach pain

8. Seizures
9. Weak/rapid pulse and respirations
10. Sudden loss of consciousness

B. Treatment

Heat stroke is a medical emergency. In heat stroke, the body's internal (core) temperature increases to dangerous levels. If the casualty's body temperature is not lowered quickly, brain injury or death may result.

1. Send someone to get medical help while you work with the individual.
2. Move the individual to a cool, shaded area or improvise a shade.
3. Loosen or remove the individual's outer garments.
4. Position the individual on his/her back with his/her feet elevated while pouring cool water over the individual, fanning him vigorously, and massaging arms and legs with cool water. Mist is more effective than pouring water.
5. Have the individual slowly drink one quart of cool water if he/she is able. If unable to drink, insert an intravenous line.
6. Evacuate/transport the individual to a hospital as soon as possible.
7. Do not delay evacuation in order to start cooling measures. Perform cooling measures en route to the medical treatment facility.
8. Monitor the individual's breathing. Administer mouth-to-mouth resuscitation if needed.

**Any heat injury victim should be examined by medical personnel even if he/she appears to recover fully. Heat injuries can be avoided by adequate rest, proper clothing, and adequate fluids.