



RAYMOND W. BLISS ARMY HEALTH CENTER

Heat Injury

What are heat injuries?

Heat injuries are when the body temperatures soar above normal, or when the body loses its ability to regulate heat due to exertion or exposure to a hot climate. There are many forms of heat injury, three basic forms are:

Heat cramps –thought to occur with sodium depletion. DO NOT take salt tablets without a doctor’s orders. Symptoms are muscle cramps, thirst, moist or dry skin, body temperature may be normal or slightly elevated. DO NOT rule out heat exhaustion, heat cramps and heat exhaustion may coexist.

Treatment – Move affected person to shade, loosen clothing, have them sip on water, seek medical help.

Heat Exhaustion – caused by prolonged exposure to heat and depletion of sodium and dehydration. Symptoms are profuse sweating with pale, moist and cool skin, headache, weakness, dizziness, and loss of appetite, nausea with or without vomiting, and confusion or disorientation.

Treatment – move to cool, shady area and have them lie down in a resting position. Loosen or remove clothing and boots and have the affected person sip on water if tolerated. **Person must have immediate medical treatment.**

Heat Stroke – caused by failure of the temperature regulating system in the brain. Usually involves excessive exposure to strenuous physical activity under hot conditions. Symptoms may or may not include sweating, skin in red and hot, headache, dizziness and nausea, confusion, weakness, seizures, may progress to coma. **Heat Stroke is a medical emergency that will result in death if treatment is delayed.**

Treatment – act quickly, remove from environment, remove clothing, mist with water or pat water on person while fanning and evacuate immediately to emergency care.

Preventing Heat Injury

Drink plenty of water. The average recommendation for the minimum amount of water daily is eight, 8 ounce glasses of water a day. However, according the RWBAHC’s registered dietician, CPT Ogunsanya, the minimum amount for Arizona should be ten 8 ounce glasses of water a day. She also stresses this should not include juices and sports drinks. During strenuous exercise or physical work in a hot environment an individual should drink about 16 – 32 ounces of water an hour, but not exceed 1 ½ quarts an hour or more than 12 quarts a day.

Replace Salts and Minerals. The easiest way to replace salts and minerals is through your diet. Eating a balanced diet and drinking plenty of water is the optimum for salt and mineral replacement for most individuals. You should not take salt tablets without a doctor’s order. You may also drink fruit juices or a sports beverage to supplement your diet but these should not be the primary source of salt and mineral replacement.

Wear Appropriate Clothing. When possible, choose lightweight, light-colored, loose fitting clothing. Loosen BDU trousers and remove layers when appropriate. Limit sun exposure during mid-day hours between the hours of 1000 and 1600. Sunburn damages your skins ability to cool your body and protect against water loss. Use sunscreen with an SPF of at least 15 and apply according to directions.

Adjust to the Environment. Any sudden change in temperature will be stressful to your body. Your tolerance will grow if you limit your physical activity and allow yourself time to become accustomed to the heat. Utilize appropriate work/rest cycles.

Monitor those at high risk. Use the battle buddy system, when it comes to any type of health or safety risk we are all leaders. Check on your co-workers and encourage healthy behaviors. If you are a leader or supervisor know your personnel, ensure you are properly educated on what to watch for and enforce policies and procedures to protect the health of your soldiers.

What color is your urine? A great indicator of proper hydration is urine color and odor. A good rule of thumb is to hit the latrine about every 90 minutes to two hours. The color of your urine should not be a concentrated yellow color or you should not notice an odor. There’s an old saying “peeing white, ready to fight!”

Medications. Many medications may further dehydrate, cold medications and allergy medicines, high blood pressure medications, and others may cause an increased risk for heat injury. Advise soldiers to increase water intake if they are on any type of medication and if you are in doubt seek medical advice. Ask your pharmacist or practitioner.

Hyponatremia. Hyponatremia results from over hydration and can cause death. Many of the symptoms are similar to heat injury. Cases in the U.S. Army have declined the past two years partly due to changes in fluid replacement guidelines. Remember a maximum of 1 ½ quart of water an hour and no more than 12 quarts a day. Only a blood test can differ between over hydration and heat injury, so if in doubt get emergency medical treatment. If you suspect over hydration talk to the affected person concerning their fluid intake and inform medical personnel.

If you're a leader, check on your troops. If you think you aren't a leader, think again. Look out for your battle buddy and yourself. Drink water, avoid strenuous work in the heat of the day, and acclimatize before stressing your troops.

This information is brought to you by the Health Education and Public Affairs Office at Raymond W. Bliss Army Health Center. If you have any health education/information needs for your unit or yourself please contact Ms. Selina Jeanise @ 533-5668 or email at selina.jeanise@us.army.mil

Author:
Selina Jeanise
Chief, Health Education Resource Center
Preventive Medicine, Wellness and Readiness Services
May 2004