

## Warm Weather Hiking

As hikers and backpackers head into the mountains during the height of summer heat, many may be put at risk by heat related stress disorders. When heat and hard work combine to drive body temperature up, the temperature regulating mechanism begins to fail, leading to dangerous and sometimes deadly consequences. The risk is great in our region due to excessive summer heat and high humidity levels. As heat and humidity rise, the risk of heat related stress disorder increases.

The first sign of problems is *heat cramps*, which results from body's inability to replace salt lost in sweating. This usually results in painful muscle cramps, but can be combatted by drinking lemonade, tomato juice or athletic drinks. Muscles should be stretched to help relieve the cramping.

Continued strenuous activity without fluid/salt replacement can lead to *heat exhaustion*, which results from the body's inability to replace salt AND water lost in sweating. This can result in weakness, unstable gait, extreme fatigue, wet clammy skin, headache, nausea and even collapse. If these symptoms surface, hikers/backpackers should immediately rest in a shady location and drink lightly salted fluids or sports drinks.

Continued strenuous activity over many days can lead to *dehydration exhaustion*, where the body fails to replace water losses over many days. This condition can lead to weight loss and excessive exhaustion. The condition can be corrected by drinking fluids and resting until weight and water losses are restored.

The most serious and potentially deadly form of heat stress is *heat stroke*, where there is a total collapse of the body's temperature regulating mechanisms. This can result in hot skin, high body temperature (106°F or higher), mental confusion, delirium, loss of consciousness and convulsions. This condition can be potentially fatal to the victim if not treated quickly. Individuals with heat stroke should be rapidly cooled either by immersing in cold water or soaking clothing with cold water and fanning the victim vigorously. This treatment should be continued until the body temperature drops to 102°F. Under certain conditions, the victim may also go into shock. Since heat stroke is a medical emergency, *medical help should be sought immediately*. Heat stroke victims who are not treated and cooled can suffer brain damage and death.

Drinking plenty of fluids and pacing yourself during hot, humid weather can help combat the effects of heat, but there are also two other ways to prepare - maintain fitness, and acclimate your body prior to your trip.

The bodies of physically fit individuals work at a lower heart rates and body temperatures. They start to sweat at lower body temperatures. Physically fit individuals also acclimatize to heat almost twice as fast as unfit individuals. You can help maintain fitness by exercising regularly during the week. One hour of brisk walking every other day can go along way towards maintaining fitness. Maintaining ideal body weight through proper diet is also highly recommended.

You can help acclimate your body by working 1-1/2 hours a day in the heat. Acclimatization can also be hastened by taking 250mg of vitamin C daily. The body adjusts to hot work in four to eight days, which will result in increases sweat production, improved blood distribution, decreased skin and body temperature, and decreased heart rate. Acclimatization can last for several weeks, but a tough weekend can lead to some loss.

Two final points - in extremely hot and humid weather, conditions may be such evaporative cooling may not exist. These are conditions where outside air temperatures near body temperatures (98.7(F) and humidity levels are high. These temperature/humidity conditions are generally reported by the media as being "dangerous". Hiking and backpacking where heavy exertion is expected is not recommended under these conditions. Finally, if you hike with your family pet, don't forget to keep an eye on their needs as well. The cooling mechanisms for dogs are nowhere near as efficient as those for humans. Frequent stops, feeding plenty of cool fluids, and even cool fluid poured on the underside of your pet's body can promote cooling.