

HEAT ILLNESS

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What is it?

Environmental heat represents a significant challenge to the athlete. The body tries to maintain its temperature, through various means, within a healthy limit to permit exercise. When the body begins to lose its ability to prevent overheating, its core temperature rises, resulting in signs and symptoms commonly referred to as “heat illness.” Heat illness can be considered as a spectrum, ranging from mild (“heat cramps”) to severe (“heat stroke”), which, if left untreated, can result in death.

Risk Factors:

- Age. Heat illness is more common in the older population (the central nervous system begins to deteriorate, leading to impaired ability to cope with heat stress) and the very young (the central nervous system is not fully developed)
- Exercising in hot climates, especially when unaccustomed
- Sudden exposure to hot climates
- Humidity
- Heavy uniforms and/or exercise equipment



Symptoms/Signs

Minor:

- Swelling of the hands and feet
- Cramps, muscular tightening, and spasms
- Lightheadedness considered minor when occurring at the end of an endurance event and not associated with other symptoms

Moderate/Severe:

- Mental status changes (confusion, agitation, irritability, lack of coordination)
- Rectal temperature above 104° F (40.5° C)
- Excessive sweating, flushing - considered severe if sweating stops, skin is hot
- Fatigue
- Headaches
- Nausea and/or vomiting
- Chills, "goose bumps"
- Seizures

Evaluation and Treatment

Any athlete suspected of having severe heat illness requires immediate cooling. Treatment should not be delayed. Whole body immersion in cold water is key to treating severe heat illness. Fever-reducing medications should not be given. Mild symptoms are treated with fluid intake, rest in a cool area, massage, the stretching of cramping muscles, and elevation of swollen limbs.

Injury Prevention

- Acclimatization to heat and humidity for at least 10-14 days prior to competition.
- Clothing should be light-colored, lightweight, and protective against the sun.
- Hydration before, during, and after the activity, according to thirst
- Reviewing all medications (supplements and herbs as well) with a physician.
- Activity planning or avoidance of activity based on heat, humidity, athlete's history, and level of training.

Return to Play

If an athlete suffers a heat-related illness, he/she should be seen by a physician prior to returning to full physical activity. When returning to activity, exercise should begin in a cool environment and be increased gradually in intensity, duration, and heat exposure.

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References:

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