

Exercising in the Heat

Participating in athletic activities in a hot environment can put a lot of stress on the body. Air temperature, humidity, exposure to direct sunlight, and wind levels can affect the body's ability to cool itself effectively. Under hot air temperatures and humid conditions, the evaporation of the body's perspiration is decreased due to the high humidity. Sweat is the body's natural cooling response mechanism, and when hindered you are at an increased risk for a heat illness and dehydration. Understanding proper hydration as well as the various levels of heat related illness can help an athlete stay safe while participating in hot conditions.

Heat Stress – a heat-related illness caused by your body's inability to cool down properly. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Understanding heat stress signs, symptoms and actions can help keep yourself and others safe! Anyone can develop heat stress. However, the following groups of people have higher risks for experiencing heat stress or heat-related death:

- Infants and children up to four years of age
- Individuals 65 years of age and older
- Individuals who are overweight
- Individuals who are ill or on certain medications
- Individuals participating in exertional activity including helmets and/or padding

Heat Cramps – Profuse sweating, cramps involving abdominal muscles and/or extremities

- Treat by moving athlete to cool/shaded area, passively stretch the involved muscle, and give plenty of fluids

Heat Exhaustion – Profuse sweating, cold clammy skin, pale, weakness, light-headed, dizziness, nausea, headache, loss of appetite

- Treat by moving athlete to cool/shaded area, remove equipment/heavy clothing as able, discontinue activity, administer fluids, cool body with ice bags/cool wet towels, etc.

Heat Stroke – **(THIS IS A MEDICAL EMERGENCY – CALL 911)** Skin is hot, dry and red, sweating has STOPPED, irritability, aggressiveness, emotional instability, hysteria, apathy, disorientation, unsteady gait, glassy stare, drop in blood pressure, unconsciousness

- Treat by immersing athlete in cold water or with ice bags/wet towels and/or aggressively fanning, treat for shock, and administer fluids if patient is conscious. Immersion therapy is a priority over transporting him/her to the hospital and should last until the athlete's core temperature reaches 101-102 F° (approx. 10-12 minutes), then transport immediately!

Hydration

The body is over 60% water. Losing even a small amount of that fluid, 2% of body weight, can result in dehydration. This can increase effort, heart rate and risk of overheating. It can also impair performance and cause fatigue. Monitoring urine color is an easy way to assess hydration status; it should be pale yellow.

Before Activity

2-3 hours before	16-24 oz. of water, Non-fat milk, 100% fruit juice or sports drink
20 min before	5-10 oz. (each gulp is about 1 oz.) of water or sports drink

During Activity

If it is hot & humid, fluid needs to be increased

Every 15-20 min	4-8 oz. of water
More than 60 min	1-8 oz. of water or sports drink every 15-20 min

After Activity

How much did you lose?	For every pound of body weight lost during exercise, consume 16-24 oz. of water, chocolate milk, broth or vegetable juice for sodium replacement, or sports drink
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