



How to Beat the Heat

An Introduction to Heat Illness for Young Athletes

What is heat illness and how do I get it?

Heat illness, which may come in the form of heat cramps, heat exhaustion, or heatstroke, is the result of your body overheating. Normally, your body is cooled in hot weather by the evaporation of sweat off your skin, but the combination of unusually high temperatures, high humidity, and/or vigorous physical activity can cause this natural cooling system to shut down. As a result, your body temperature rises and you may feel ill.

What symptoms should I look out for?

Common signs of heat illness include headache, nausea, dizziness, faintness, fatigue, thirst, vomiting, rapid and weak pulse, pale or flushed skin, and muscle weakness. *You do not need to experience several of these symptoms to still be experiencing heat illness.* The following symptoms indicate more serious forms of heat illness:

- Heat cramps are marked by sharp, painful muscle contractions in the arms, legs, and abdomen.
- Athletes who experience heat exhaustion usually are bothered by several of the aforementioned symptoms simultaneously and are seriously dehydrated.
- Clinically, heatstroke is no different from heat exhaustion, yet the symptoms of heatstroke are much more intense and can be deadly.

Is everyone susceptible to heat illness?

Yes. Young, healthy athletes tend to believe that they are immune to such bodily responses to their environments, yet even the most fit athlete can experience heat illness if he or she is not well adjusted to the climate in which he or she will be doing vigorous physical activity. In fact, heat illness is most likely to strike the athlete who has suffered from heat illness before and/or is in return-to-sports mode (ie, participating in late-summer team preseason sessions after an extended time away from his or her sport).

How can I avoid getting heat illness?

Awareness of, and respect for, the temperatures in which you will be physically active are the best ways to avoid heat-related problems. Sports medicine doctors and trainers recommend that you observe the following guidelines to stay healthy in the heat:

- *Acclimatize yourself to your environment.* Over a period of 7 to 14 days, gradually increase the intensity and duration of your workout so that your body has a chance to adjust to unusually high temperatures and humidity levels. By the end of your 2-week acclimatization period, your activity should be comparable in length and degree to that likely to occur in competition.
- *Wear lightweight and light-colored clothing and sunscreen.* Light-colored gear reflects the sun's heat rays (as opposed to dark clothing, which absorbs them) and lightweight apparel encourages sweat evaporation, which, as previously mentioned, help keep your body cool. Sunburn causes your body to lose fluids, too, so it is important to wear sunscreen with a sun protection factor of 15 or higher.
- *Drink plenty of water before, during, and after your workout, even if you do not feel thirsty.* The moisture that your body loses by sweating must be replenished to keep it cool, and, even in the absence of thirst, dehydration can and will occur. Experts recommend that you drink 2 to 3 cups of water (or fruit juice, seltzer, lemonade, milk, or tea—all of which are healthy alternatives to water) a couple hours before exercising, 1 cup about 10 minutes prior to your workout, and another cup every 15 to 20 minutes during your training. After your workout session, you should drink at least as much water as you lost as sweat while exercising for full rehydration. Remember that beer, coffee, and caffeinated soda draw fluid out of the body (because of their alcohol and caffeine content) and, consequently, should not be consumed as substitutes for water or any of the aforementioned water alternatives.
- *Know when and where to exercise.* Heat is at its peak in the middle of day, so it isn't a terrific idea to work out at 2:00 in the afternoon. Try to schedule your activity for the early morning or early evening in places that afford shade (such as a park) and/or satisfactory air ventilation (such as a gym with powerful air-conditioning).
- *Exercise with a friend.* Frequently, those around you can better judge that your performance is being affected by the heat than you can, especially if you are experiencing heatstroke and your mental clarity has diminished.

What should I do if I am experiencing heat illness?

If you or someone with whom you are training is experiencing heat illness, cease activity immediately, and move yourself (or him or her) to a cool area. Drink plenty of water to decrease your body temperature and splash cold water on your skin. Remove any clothing or gear that may be hampering the evaporation of sweat.

If rest and rehydration do not seem to be alleviating the problems, be sure to call your doctor or emergency medical services for professional consultation.