

## **How to Help Your Kids Beat the Heat**

With the summer months right around the corner, warmer, more humid conditions are sure to follow. Summer youth sports leagues will be starting soon, making this a good time to review the types of heat-related illness, first-aid, and methods for prevention of these common medical conditions.

It is estimated that 240 persons die each year in the United States of heat-related illness. Heat stroke is ranked third in cause of death of U.S. high school athletes behind head and neck injuries and cardiac conditions. This becomes an even greater concern in younger athletes.

"Youth and adolescent athletes sweat less, create more heat per body mass, and acclimate much slower than adults to warmer environments, putting them at greater risk for heat-related injuries in hot and humid temperatures," states Thomas Pommering, D.O., Medical Director for Children's Sports Medicine.

### **How to Recognize Heat-Related Illness**

There are several types and degrees of seriousness of heat-related illness. Each can be differentiated by various signs and symptoms:

- Heat Cramps - painful cramping of the muscles of the limbs and abdomen caused by excessive sweating (due to the depletion of salt and water from the body)
- Heat Syncope - weakness, fatigue, and fainting due to loss of salt and water
- Heat Exhaustion - cool and pale skin, headache, nausea, chills, weakness, unsteadiness, dizziness, rapid pulse, excessive thirst, and muscle cramps
- Heat Stroke - hot and dry skin, incoherent speech, disorientation, unconsciousness or coma, nausea, seizures, and rapid or irregular pulse

Heat stroke is the failure of the body's heat-control mechanism, which can cause other organ systems to shut down and cause a life-threatening emergency.

### **What Should Be Done?**

The basic first aid for heat cramps, heat syncope, and heat exhaustion is to cool the athlete as quickly as possible. Fluid replacement by drinking water is one step. The administration of IV fluids, by medical professionals, in more severe cases is another step. Cool the athlete rapidly by moving them to a cool location (shade, air conditioning, etc.), remove sweat saturated clothes (if appropriate), and apply cold towels/water/ice to the athlete's body. If these conditions go untreated for too long, they can gradually progress to a full blown case of heat stroke.

"Early recognition and intervention are key in avoiding such a situation," says Pommering.

The treatment of heat stroke is much the same as that outlined above, except that it must happen as quickly as possible. Emergency Medical Services (911) should be activated immediately and the athlete transported to the nearest hospital for more sophisticated treatment.

### **How Can This Be Prevented?**

Several measures can be taken to prevent heat illness with athletes. Athletes should gradually acclimate or adjust to the heat. A graduated conditioning program should be implemented and acclimatization can be underway within 7 to 10 days. Coaches should avoid practicing during peak temperatures (i.e. 11am to 3pm) if possible on hotter, more humid days. Athletes should wear clothing that is light in weight and color, because darker clothes attract heat. Water breaks should be given at least every 15 to 30 minutes (more frequently in warmer, more humid weather - every 10 minutes) and athletes should be encouraged to drink more water before and after practices. The use of salt tablets is not recommended. Modest salting of food at meals can accomplish the same effect. Lastly, identification of more at-risk athletes (i.e. overweight, out of shape, those who seem to sweat less) may be key in the prevention of heat-related illnesses. Additionally, athletes who take certain blood pressure or cold medications may be at higher risk for heat illness due to impaired cooling abilities.

### **Weather Guide for Activities in Hot, Humid Weather**

<u>Temperature</u>	<u>Humidity</u>	<u>Recommendation</u>
80° - 90° F	< 70%	Monitor overweight and/or out of shape athletes for signs of heat illness
80° - 90° F	> 70%	Athletes should take a 10 minute rest every hour.
90° - 100° F	< 70%	Change wet t-shirts for dry ones. Keep all athletes under constant and careful supervision.
90° - 100° F	> 70%	Practice should be altered (shortened or discontinued).

*Consult your primary care physician for more serious injuries that do not respond to basic first aid. As an added resource, the staff at Nationwide Children's Sports Medicine is available to diagnose and treat sports-related injuries for youth or adolescent athletes. Services are now available in four locations, to make an appointment, call 614-355-6000.*