HEAT ALERT — Avoiding and Preventing Heat Related Injuries When Playing Soccer

Proper Hydration to AVOID AND PREVENT HEAT RELATED INJURIES WHEN PLAYING SOCCER

The goal in participating in hot weather is to avoid fluid loss from the body or dehydration. Water not only accounts for some 98% of our body composition, but functions to help deliver oxygen to working muscles, and keeps the body from overheating during strenuous activity. Hard working muscles generate heat which is dissipated through the act of sweating.

To this end, after review of the available literature and after consultation of various medical authorities and officials it was felt that the following recommendations are some key guidelines for soccer participation in the heat:

1. Avoid dehydration and make sure you pre-hydrate: Don't wait till you feel thirsty because the body will not be able to tell you in time that you are dehydrated, here are some practical recommendations:
    - 2 hours before exercise, drink at least 16 oz or 500 ml (an average bottle of water)
    - 1 hour before exercise, drink at least 08 oz or 250 ml (half an average bottle of water
    - During the exercise, drink at least 4 to 8 oz every 15 – 20 minutes
    - Immediately after the exercise, drink at least 16 oz or 500 ml of water or an electrolyte replacing drink
    - 1 hour after a training session or game consider drinking 16 oz or 500 ml of skim milk or chocolate milk for protein and muscle repair
2. As a rule of thumb you should drink at least 500 ml for every 20 lbs of body weight, therefore, someone weighing 140 lbs needs to drink at least 3500 ml of fluid per day if training or playing that day.
3. Drinking carbohydrate and electrolyte fluids may be beneficial in avoiding heat trauma.
4. Wearing light breathable clothing is advised.

There are 3 main types of heat injury identified in the medical literature:

1. **Heat Cramps** – these are the mildest form of heat trauma and are commonly related to low body sodium and chloride levels.
   Signs & Symptoms include – weakness, muscle cramps, collapse with low blood pressure.
   Treatment – is aimed at replacing the salt loss and can be oral or by intravenous if vomiting is a problem. Having athletes put a little extra salt on their food the day before and day of game can be a helpful way to avoid this condition.
2. **Heat Exhaustion** – this is a more severe medical event as follows.
   Signs & Symptoms include – weakness, irritability, collapse, unable to sweat adequately to promote body cooling, may proceed in the more ominous heat stroke and a fine rash is often present.
   Treatment – remove athlete to a cooler environment, use ice baths, fans.
3. **Heat Stroke – THIS IS A MEDICAL EMERGENCY** – it is due to a failure of the heat-controlling mechanism. It may occur merely as a result of exposure to heat.
   Signs & Symptoms include – mental confusion, headache, poor coordination, delirium, convulsions and death. The body temperature may be 106 F or 40.5 C or higher, the skin is usually hot and dry as the sweating mechanism has failed.
   Treatment - **Call 911 and transport to a local Hospital.** Rapid cooling is the goal using wet towels, spray mist, sponge baths and removal from the heat. This condition could cause the athlete to go into shock and coma may follow so immediate medical attention is required.

**The above points are to help prepare for warm weather participation regarding sport related activities. **