

# SPORTS MEDICINE

## Hydration and its Importance for the Soccer Athlete

### Dehydration & its Consequences

Water accounts for approximately 73% of the human body. Maintaining this level of water in the body is critically important for normal physiological functions. During physical activity in the heat, the body sweats. Sweat then evaporates and cools the body. We must drink water to continuously replace what is lost in sweat. If the body is unable to adequately evaporate sweat from the surface of the skin, the core temperature will begin to rise rapidly. Dehydration occurs when the body's fluid in sweat loss exceeds fluid intake. Dehydration of 1-2% of the athlete's body weight begins to have a negative effect on physiologic function and athletic performance. If dehydration level exceeds 3% of the athlete's body weight, the athlete is at risk for an increased disturbance of physiologic function and thus increases the risk of heat illness. Dehydration is preventable if proper hydration guidelines are followed.

### Signs and Symptoms of Dehydration

Some common signs and symptoms of dehydration include:

- Chills and dizziness
- Dark colored urine
- Headaches
- Dry mouth or thirst
- Overall weakness



If dehydration progresses or is prolonged, the risk of a heat illness rises. These symptoms include increased heart rate, increased body temperature, difficulty breathing, muscle cramps, nausea, and tingling in your limbs. Severe incidences can become fatal.

### Preventing Dehydration and Heat Illness

- Properly acclimatizing your body to the heat
  - Make sure you are preparing for the demands of your sport at least several weeks in advance so your system is prepared and ready!
  - Remember it's better to "train your body for practice rather than use practice to train your body"
- Fluid replacement before, during, and after exercise
- Appropriate clothing to keep your body cool- light colored, loose fitting, one layer, breathable
- Early recognition of dehydration and heat illness
- Monitor the intensity of physical activity appropriate for the athlete's fitness level and acclimatization status.

## **Suggested Guidelines for Fluid Replacement and Energy**

- Pre-competition meals should be eaten 1 to 4 hours prior to the athletic event and include foods with high carbohydrates and water content
- The only “fuel” that should be consumed right before competition is cool fluids
- Include high-water content foods in your child’s daily diet (i.e. oranges, lettuce, tomato, cucumbers, watermelon)
- Before the event: Drink approx. 20 oz. of cool water 2-3 hours before the start
- Immediately prior: Drink another 10 oz. of fluid water 10-20 minutes before that start
- During: Drink 4-6 oz. of cool water, diluted sports drink/fruit juice every 10-15 minutes during the event
- After the event: weigh your child and replace every pound of weight lost with 16 oz. of plain water or diluted sports drink. Chocolate milk is also a good fluid and energy replacement drink at this time!
- Avoid caffeinated beverages as this can increase fluid loss.

Children's Hospital & Medical Center's Sports Medicine Program has partnered with the American Orthopaedic Society for Sports Medicine's STOP Sports Injuries to help educate parents, coaches, and athletes about how to prevent injuries. For more information go to [www.childrensomaha.org/sportsmedicine](http://www.childrensomaha.org/sportsmedicine) or [www.STOPSportsInjuries.org](http://www.STOPSportsInjuries.org).

### **Resources and for more information visit:**

National Athletic Trainers Association (NATA) [www.NATA.org](http://www.NATA.org)

American College of Sports Medicine (ACSM) [www.ACSM.org](http://www.ACSM.org)

Korey Stringer Institute (KSI) [www.ksi.uconn.edu](http://www.ksi.uconn.edu)

