Special Olympics Seminole County

Workout Zone

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Staying Hydrated During the Summer Heat

Beating the Heat

Reprinted from an article by the Virginia Tech Sports Medicine Department.

Fluid balance is probably the most important nutritional concern for athletes. Without proper fluid intake before exercise, the athlete can quickly become dehydrated during exercise. As progressive dehydration occurs, anything can result from muscle cramping to hyperthermia, heat exhaustion or in extreme cases even death.

Fluids are lost through the body in a number of ways: direct (bodily waste) and indirect (sweating and breathing). During exercise an athlete will control his body temperature by sweating to release heat and cool the body through the evaporation of sweat. The human body is about 60% water and many organ systems rely on hydration for their function. These include the heart, lungs, muscles, and nerves. When a person loses bodily fluid through sweating and breathing, that fluid is moved from inside body tissues into the arteries and veins to maintain adequate circulation. When too much fluid is lost, the circulation becomes overwhelmed, unable to keep body temperature from rising too high. When this happens, heat exhaustion sets in and the body begins to shut down. Usually the first symptom is an elevated body temperature and a “heat headache”, but athletes can also have dizziness, fatigue, anxiety, chills, nausea, and “heat cramps.” With continued exercise, these symptoms can progress to include disordered thinking and even seizures. This is known as heat-stroke—a very serious and sometime life-threatening condition.

The key to avoiding dehydration lies in understanding the factors that contribute to overheating and how to overcome them

Wearing light colored clothing with fibers designed to “wick” away sweat helps. A wet cotton t-shirt can actually act as an insulator and hinder heat loss.

Probably the single most important action that athletes can take is to be proactive about hydration. Once you become thirsty you are already behind.

So what is the best way to stay well hydrated? Prevention is the key! The old adage of drinking six to eight glasses of water a day still holds true for most individuals. Athletes should drink 16 oz of water or sports drink 1-2 hours before exercise. This should be repeated 15 minutes before exercise.

During exercise, athletes lose large amounts of electrolytes and burn calories that water alone will not replenish. Sports beverages, such as Gatorade or Powerade, have electrolytes and simple sugars, taste good and can be easily taken during practice or competition. It is also important to drink them in the first 15 minutes after exercise, when muscles are replenishing energy stores most efficiently. A rough guide to fluid replacement is to drink two 8 oz glasses of fluid for every pound of body weight lost during exercise.

While some sport drinks are better than others, they are not inherently "good for you". An individual who does not exercise and drinks these beverages will accumulate extra calories and gain weight. There are some fluids that won't help you rehydrate. Caffeinated beverages actually promote dehydration by causing the body to lose more fluid in the form of urine.

Sugar - 14.4 grams
Potassium - 32.2 mg

Sugar - 39.8 grams
Potassium - 3.7 mg

****Potassium is an essential mineral in human nutrition and is important in maintaining fluid and electrolyte balance in the body. Potassium is also important in allowing muscle contraction****

Everyone, athlete or not, can benefit from good hydration. Coaches should educate and encourage their athletes to pay close attention to this aspect of sports in order to avoid tragedies.