FLUID MAINTENANCE

Rigorous exercise over an extended period of time unarguably will result in thirst. The majority of people, however, do not realize the body’s thirst “response” (the feeling of being thirsty) is inadequate to prompt needed fluid replacement, especially during exercise. Furthermore, a physically active individual will lose more fluids through perspiration than a sedentary individual, making proper hydration even more important. What type of fluid is “best?” Should the fluid be cold or warm? How much should be consumed? What benefits do sport beverages provide?

The type of liquid replacement as well as its temperature can affect the rate of fluid absorption into the body. The body absorbs most of its fluids from the small intestine. Therefore, the faster one can get the fluid into the intestine, the faster it may be absorbed. Cold water is one of the best fluid replacements for the average exercising person, as it not only speeds gastric (stomach) emptying into the intestine, but also aids in core temperature reduction. Contrary to what many believe, cold water does not cause stomach cramping. The volume of water, however, can be a factor in gastric distress. Since most people find consuming large volumes of fluid at once can impair performance, smaller amounts (3-1/2 to 8 ounces) taken at frequent intervals during the workout or competition are recommended.

Sport beverages are heavily marketed to the public. They are promoted to supply electrolytes (potassium, sodium, chloride, magnesium) and calories lost through physical activity. The typical North American diet supplies enough electrolytes to make up for the amount lost during exercise. An athlete who participates in prolonged aerobic activity (over an hour in length) on a regular basis and/or who exercises in a high-temperature or high-humidity environment may need to consider electrolyte replenishment. Since many use physical activity as a means for weight management, consuming sport beverages negates caloric loss. Endurance athletes, however, may be concerned about carbohydrate replacement.

While most exercising individuals do not need sport beverages, those participating in regular, prolonged endurance exercise may need them. The presence of glucose (a simple form of carbohydrate), found in many current commercial products, can improve fluid absorption. Although such beverages
may not empty from the stomach as quickly as cold water, they may be absorbed out of the intestine and into the body as rapidly as water. Beverages containing 6-8% glucose or sucrose can provide energy to working muscles, which water cannot do. Thus the popularity of such beverages in long distance runners, triathletes and other endurance performers, who require added energy in order to continue their prolonged activities.

Fructose, another form of carbohydrate, is not absorbed as quickly as glucose, and is often associated with gastric distress. Subsequently, beverages with carbohydrate in the form of glucose, glucose polymers and/or some sucrose are recommended as exercise fluid replacements, while juices and other high-fructose beverages are not. Beverages, such as soda, exceeding 10% carbohydrate do not appear to provide added benefits. In fact, higher-carbohydrate beverages are often associated with cramps, nausea and diarrhea. Beverages containing less than 5% carbohydrate will not provide enough energy for those who need it.

Whatever form of fluid replacement you choose, remember to drink plenty of water throughout the day. Approximately 6-10 glasses of water is recommended.