



857 COLLIER RD. NW STE 1 ATLANTA, GA 30318
PHONE: 404-419-7760 FAX: 404-351-3977

ORTHOPEDIC & SPORTS PHYSICAL THERAPY



Hydration: The key to safe activity

By Carlo Williams, DPT

The Basics

As the heat of summer continues we are challenged with the task to stay hydrated, but what does that really mean? First of all, it is important to know that water accounts for approximately 60% of the total body mass. When the body has “normal” levels of water content it is termed euhydration, and it is recommended that all exercise starts in a euhydrated state. One can obtain this number by averaging three first morning (after urinating) nude body weights. Dehydration refers to a greater than 2% body weight loss during activity. Mild dehydration symptoms include dry mouth, fatigue, chills, thirst, and dark colored urine. Moderate dehydration has the same symptoms but also includes increased heart rate, respiration, and body temperature along with headaches, tingling, nausea, cramps, and extreme fatigue. Seek immediate medical attention for anyone person with a racing pulse, difficulty breathing, spasm, dim vision, or loss of consciousness.

Demographical Differences

There are certain trends based on gender and age that one must know to help with appropriate hydration. In general, women have lower sweating rates than men but tend to turn water over quickly due to more frequent urination. Prepubescent children have lower sweating rates than adults. People > 65 have a decreased thirst response to water deprivation placing them at high risk to dehydration.

Hydration Recommendations

Adults should drink eight 8-ounce glasses of water each day. Prior to exercise, adults need at least 20 oz of fluid and children need 8 oz. An individual should begin the hydration process at least 4 hours before activity to allow absorption of fluids. Consuming beverages with sodium or eating small salted snacks can promote thirst and retention of fluids. Hydration during exercise is highly individualized so one must use weight as a guide to prevent dehydration (> 2% body weight loss).

In general, adults need to consume 10 oz every 15 minutes and children need 10 oz every 20 minutes, during physical activity. If there is less than 12 hours before the next exercise session then an individual must aggressively rehydrate by consuming about 1.5 L of fluid for each kg of body weight loss (1 kg = 2.2 lbs). If time permits rehydration can be achieved with normal beverages and meals.

References:

Sawka, et al. "Exercise and Fluid Replacement" Medicine & Science in Sports & Exercise. Position stand (2007).