GRAPHIC BY LISA MAY



## Fit For **Andrew Loscutoff**

**Columnist** 

## **HYDRATION:** Do you know if you're getting enough fluid?

Hydration is critical, yet it is often misunderstood and overlooked.

A body at just two percent dehydration levels drops in both physical and mental aptitude. Once someone reaches 3 percent dehydration, power (the amount of output they can produce via exercise) drops by 45 percent. A body that is dehydrated has higher blood pressure, poor digestive function, and kidney dysfunction. Headache, delirium, and clouded thinking will affect the dehydrated subject.

How do you know how much water to drink? For a period of time, experts pushed simply drinking more. While this will help dehydration, it actually can cause over-hydration and create imbalances the body must work to overcome. Sodium levels, carbohydrate utilization, and other processes will suffer.

Want a good rule of thumb? Consider urine color from dark clouded yellow (dehydrated) to clear (well hydrated). Don't rely on thirst. Studies have shown that just drinking when thirsty results in poorly hydrated athletes. An athlete who relies to drink by thirst has been shown to miss the mark by under-hydrating. Often thirst is a sensation that is slow to be recognized and reaction may be delayed too far to stay on top of the conditions.

The amount of water ingested per feeding is also important. The absorption rate of 20 oz. of water all at once was faster than when 13.5 oz. was consumed. which was also faster than 7 oz. This is likely an upper limit, so try for 16 to 24 oz. per interval when stopping to drink.

A glass of water before a meal is a good idea; it allows the stomach and small intestine to digest and absorb food more efficiently. The stomach needs hydrating water to have the proper osmolality of fluids. This is also important for digestion, as breaking down fibers and absorbing the carbohydrates requires water.

When exercising or simply playing, consider fluid losses; consider replenishing fluid and some minerals along the way. Intensity of activity, the weather (hot, or humid), and the individual do matter. A Tour de France cyclist may drink three 16 oz. bottles per hour. For the average person at an average ambient temp and relative humidity, one 16 oz. bottle per hour serves well for moderate activity. If it's a hot or humid day, up to 24 oz. will be required.

For longer sessions of moderate intensity (hiking, cycling, running, etc.) accompanying the water with a simple carbohydrate ensures that the exercise can be maintained. This is where a sport drink is important, but many off the shelf need to be slightly diluted. This is because the body will actually need to pull water out of the gut in order to match the osmolality of the body and absorb the drink. Usually adding a few ounces of water

per bottle of sports drink will do the trick.

Sodium helps the body regulate how much water a cell can hold. If sodium drops too low, then the body takes on too much water and begins swelling. This will also decrease performance. Understand this with intuition: If you are a salty sweater who tends to sweat a lot, a sodium replacement should be considered. Conversely, too much sodium doesn't allow the fluid to be utilized; a proper balance must be

achieved.

Proper hydration is essential for day-to-day function and for exercise performance. Healthy blood pressure, mental acuity, and proper digestion rely on proper hydration. Continued exercise — without fading - and recovery also are reliant on hydration. Remember the basics: 16-24 oz. per hour. For longer sessions, use a carbohydrate to supplement. Sodium is important, and should be balanced. Drink throughout the day, in moderation; around 8 oz. per hour, and take in an extra glass with every











