

Performance Nutrition--“Getting the Edge”

(Ron Jones, ACSM Health/Fitness Instructor)



*The basis for performance nutrition is still the perfect circle and balance of **Wellness**. Performance nutrition is merely taking the balanced diet component of Wellness one step further to compensate for the extra physiological demands of athletic training and competition.*

Hydration: The simplest and most effective way to check your hydration level is to examine the color of your urine. If your urine is stained dark yellow, you are dehydrated. Proper levels of hydration will yield clear or extremely light-colored urine. No fancy equipment is needed for this one--just common sense and paying attention to your body.

Pre-Event Hydrating: You should start carefully maintaining your hydration *the day before your event*. Don't try to overload with fluids 30 minutes before you start--it's too late! Dehydration rates of **even 1%** will decrease physiological efficiency in athletes.

- Start each day with a glass of water--especially the day or so before your compete.
- On event day after your morning water you can start sipping on fructose- based drinks such as *Snapple* or other types of fruit juices. The labels indicate if the drink is fructose or glucose based. A drink primarily composed of fructose will list fructose before glucose and other subsequent ingredients. The ingredients on food labels are always listed in order of their concentration related to the other ingredients.
- Within 2 hours of your event you should switch from fructose based drinks to glucose-based drinks such as: *Gatorade*, *Powerade*, or any other sport drink with similar composition (many of them are glucose based).
- Don't approach your event bloated from *over-hydrating*. Remember, “smart hydration” starts the day before the event. I would suggest tapering off around an hour before competition. If you need more just take conservative sips and *not* gulps. Your body can clear most excess fluids consumed 45 minutes before your competition without a problem. If you ingest large volumes within the 45-minute safe zone, you might get caught in the bathroom when your event starts--not good.

Electrolytes: The advantage of sport drinks over sugary drinks like soda or *Kool-Aid* is that most of them contain valuable electrolytes. Electrolytes (potassium, magnesium, phosphate, sodium, chloride, and calcium) are extremely important as they carry the messages from your nerves to your muscles telling them to contract. If your electrolyte balance is off, your muscles will contract involuntarily--i.e. cramping or spasms. This is what happens in events like the Iron Man Triathlon when people stagger across the finish line defecating all over--not a pretty sight! Most events are much shorter, so it shouldn't be as big a problem; however, if you're doing multiple events that take all day you CAN run into problems. Drinking *plain water* in this scenario can be *dangerous* because what electrolytes you do have left will get “thinned out” which throws the balance off. One very serious condition that occurs in distance endurance events is called *Hyponatremia* that results from not having enough sodium. Many times this will develop AFTER the event has finished because the athlete thinks that plain water is OK as they're done for the day--wrong! Remember, the first 30 minutes post-event is critical, for not only carbo re-loading (glycogen resynthesis), but also **to restore electrolyte balance!**

Post-Event Hydration: “You mean I have to drink after the event?”--YES! Drinking immediately following your event is critical for 2 major reasons:

1. If you're doing multiple events throughout a hot afternoon, you need to constantly work at staying hydrated. What you drank before your event will only go so far. Don't enter your next event dehydrated when you have the knowledge to eliminate the problem. It's also good to drink right after an event so your body can rehydrate--this is very important when doing multiple events. *(Note the 45 min. safe zone for clearing excess fluids)
2. Additional to hydrating, your body needs the carbohydrate calories from liquid glucose to quickly maintain proper blood sugar levels and to begin replenishing your energy reserves (glycogen resynthesis). The most efficient time to replenish the energy used in racing is within 3 hours (8 hours maximum) and ideally within 30 minutes of finishing your event. This

is the time when your body is really starving for glycogen (the stored form of glucose) and will quickly metabolize it for storage. The first 2 post-event feedings should be simple sugars such as the glucose sport drinks, or if nothing else is available, a soda which contains simple sugars. After the first feedings, you can eat complex carbohydrates such as bagels, bread, or pasta, etc. This is called **RECOVERY** and is critical for ongoing competition as well as *successive days of hard training*. *These hydration tips should also be used for any hard training that is similar to your actual competition or events.

Pre-Event Meals: The night before your event, the diet should be primarily complex carbohydrates or starches such as pasta, potatoes, and bread. Eliminate the excess fats from sauces and butter. Make sure to eat enough to carbo load *before* your upcoming event. When you don't eat enough carbohydrates, your body doesn't have the maximum amount of glycogen stored. When the body runs out of glycogen, it goes to stored fat and protein that are *not desirable fuels* for high-intensity efforts. The breakdown of fat and protein yields a waste product called ketone. The buildup of ketones causes an acidosis condition in your body which makes your pH drop below the normal of 7--*Bottom Line:* Your muscles work best in a very narrow range of pH; if there is too much acid in your blood, your muscles can't metabolize the oxygen which further compromises your blood pH towards acidity.

Gastric Upset: ☺ There are many causes of gastric distention in athletes--here are some good tips for controlling many of them:

- **Fiber:** Try to eat foods that are *low in fiber* the day of the event. While fiber is very healthy in terms of a balanced diet, fiber is not good for hard athletic events as it can cause some bloating. This is one of the disadvantages of energy food like *Powerbars* as they have a high-fiber content. Breads that are not whole grain would be a wise choice for event days and low fiber bagels. Fiber is great, and I encourage all of you to look for whole grain products during the week--but be careful on event day. *(High-fiber diets also require more water)
- **Junk Food:** Sporting events are famous for offering nachos and hot dogs; this is a sad statement about the ignorance of American athletics. If you are competing, bring your own food supply with the fluid of your choice. A greasy hot dog and bowl of nachos is going to sit in your stomach like a lead balloon. ***Junk food is not performance food--it is junk!*** This type of food also has high amounts of food additives and preservatives besides the saturated fats you already know about.
- **Salad:** Again, this should be part of your everyday nutrition and Wellness plan, but it is not a performance food for the day of competition. Salads can cause gastric upset and bloating, so be careful.
- **Fruits:** These are OK the morning before the race, but be careful within a couple of hours of your event as the acidity in some fruits may cause stomach upset. A banana would be a great food to bring when you have a couple of hours between events as they are easily digested and rich in potassium (an electrolyte).

Meal Schedules: The healthiest way to eat throughout the day is "grazing." Instead of 2 or 3 huge "gut bustin' meals" you should eat 5 or 6 times a day but in smaller portions. Grazing helps blood sugar levels to be more stable and puts less demand on your digestive tract and eliminates gastric upset and distention from "eating too much." Most of us are too busy to graze every single day, but grazing really is a more efficient way to eat. **DO NOT skip meals.** Your body needs the energy derived from food to handle the stress, recovery, and healing from your intensive training program. ***If you don't eat properly, you won't be able to compete or exercise at an optimal level!***

Nutrition/Supplement-Related Weblinks

www.5aday.com (National Cancer Institute)

www.nal.usda.gov/fnic (US Government's Food & Nutrition Info Council)

www.nutrition.gov (US Government's Primary Nutrition Site)

www.ronjones.org/weblinks.htm (Ron Jones' Health & Fitness Weblinks)

www.usda.gov/cnpp/pyrabklt.pdf (USDA Food Guide Pyramid On-Line Booklet)

Give yourselves a chance and do everything in your power to be your best.

*Balance as an athlete starts with **Wellness**--and this is truly "the edge."*