
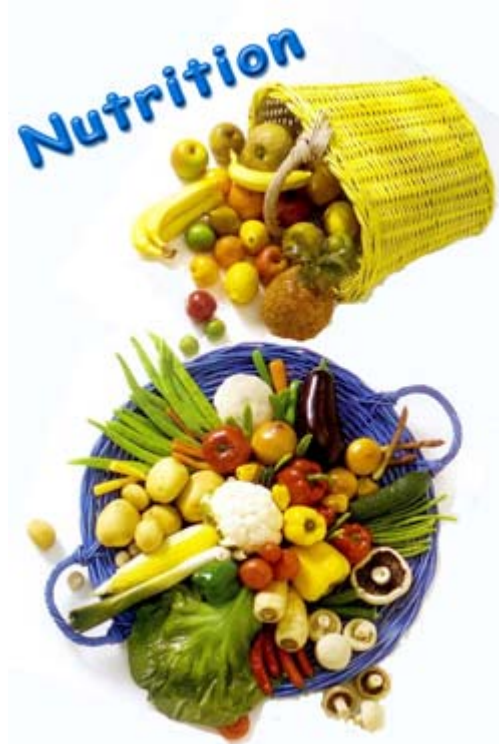


SOS for GI Distress

Have you ever felt like you need to send out an SOS signal during your race because of GI distress?

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This month I thought I'd share some details of why GI distress can occur and provide tips to keep the gut "happy" and delivering the fluid and nutrients you need for a strong finish.

The GI system (aka the gut) refers to all 30 feet of the gastrointestinal system from point of entry to point of exit. This includes the mouth, esophagus, stomach and all 22 feet plus of intestines.

The purpose of the GI system is to allow food and fluids to be digested (in the stomach) and absorbed (in the intestines) so the nutrients can be used or stored. Waste products of digestion are collected in the lower part of the GI system and eliminated at what is hopefully an opportune time.

The system works pretty well for those of us who have a healthy diet but, come race day, GI problems can arise.

The most common digestive or GI issues expressed by endurance athletes are GI reflux, nausea, stomach bloating, abdominal/stomach cramping, gas/flatulence, the urge to "go" and diarrhea/loose stools. Upper GI issues tend to present themselves during or after the swim and on the bike. Lower GI distress tends to be more common during the run.

Reasons why the GI system can get wacky during a race include:

Race Anxiety

Race anxiety, according to sports medicine professionals, can affect the nervous system and impair how well your stomach and intestinal function. This may, in part, explain why what seems to work well in training does not always work so well in racing.

Diverted blood flow

During a race, blood flow to the GI tract is reduced by 60 per cent and diverted to the working muscles to deliver oxygen, energy and remove metabolic waste products. The greater the intensity of the muscular effort, the more blood that is diverted away from the gut. When this happens, the body's ability to process fluid and nutrients becomes compromised, causing delayed stomach emptying (this is what I call a clogged sink) with subsequent sloshing, reflux, stomach bloating and nausea.

Dehydration

Adequate blood flow to the muscles and gut for efficient digestion and absorption all depend on sufficient water in the system. Inadequate fluid intake during a race will impair these processes, making it even more difficult to hydrate the body. Dehydration can cause nausea and delay stomach emptying, resulting in bloating, sloshing and irritation of the intestinal tract contributing to diarrhea. Athletes who stay sufficiently hydrated will be less likely to be sidelined by GI problems

Fuel source and concentration

Your fuel choice, whether it be sports drink, gel or solid food plus water, can impact your GI system. Sports nutrition products consist of various blends of carbohydrates (simple and complex) and electrolytes which all need a certain amount of water to help aid the body with digestion and absorption. The fuel sources that are best tolerated are the ones that have an osmotic load (this is a fancy name for how much "stuff" or particles is contained in a set volume of water) that is closest to the osmolality of the blood (280 to 300 milliosmols/kg) also known as isotonic. Most sports drinks and gels (when taken with 8 oz + water) meet these guidelines. Problems arise when athletes put too much "stuff" in their gut without enough water to dilute the particles. Examples include washing down a gel with sports drink, eating a whole PowerBar with only a sip of liquid, or eating a couple of cookies followed by a Cola on the run. These create a hypotonic gut, which can further delay stomach emptying causing bloating, nausea and bring

even the fastest athlete to a stop.

Too much fiber

Fiber is an essential part of maintaining GI health, but it can be a dirty F word on race day. Fiber is not digested and remains in the intestinal tract helping speed the passing of waste products. Speedy elimination during a race is not a good thing for most athletes and can be frustrating if you end taking excessive P2 time (Port a Potty time). In more extreme cases, excessive fiber in the GI, combined with dehydration, can be an intestinal irritant and contribute to GI cramping and diarrhea, which is no fun.

Nutritional Tips and Tricks to Minimize Race Day GI Distress:

Taper your fiber intake for 24 to 48 hours before the race. It takes about 24 to 36+ hours for foods to move thru and exit the body. Cutting back on fiber the day or so before the race should help minimize GI issues on the run because there will be less “roughage” sitting in the intestines to be jostled around.

Establish a bathroom routine. Get to “know” your body. Many athletes know which foods and fluid will keep them regular so elimination race morning will not be a problem. Pre race jitters can alter this pattern for some - the key is to relax and consume foods and beverages you know will help things along. Tip: Warm liquids with breakfast is known to help move things along!

Plan your breakfast two to three hours before the race start. Low fiber, low fat and high carbohydrate based solid foods and fluids should be mostly emptied from your stomach by the time the race starts.

Go easy on the caffeine. Caffeine can be a stomach irritant and causes the valve from your esophagus to your stomach to relax causing reflux. Its OK to have a cup of eye opening coffee race morning (if this has served you well in the past) or a caffeinated gel during the race but, if you do have a sensitive GI you may want to avoid caffeine all together.

Stay hydrated. Remember that your stomach will empty more quickly when it is partially filled at all times. After the swim you should jump start your fueling with some liquids as you exit the water. Continue with small frequent sips until you settle in on the bike then progress to regular consumption of the appropriate amount of fluid you've determined you need thru sweat rate

evaluation during your race specific phase of training.

Carefully monitor the type of carbohydrates you use. Many athletes tolerate some carbohydrates better than others. Fructose may irritate the gut for some, causing GI cramping and gas. Maltodextrin (or glucose polymers) maybe helpful as it is a carbohydrate source that can be tolerated in a slightly higher carbohydrate solution without risk of GI issues.

Keep your solid foods to reasonable doses. No need to chow down on a whole PowerBar or any other solid food at once. Portion your low fat, high carbohydrate foods into smaller 50 to 100 calorie pieces (comparable to ½ to 1 gel) at a similar interval as you would a gel. Wash this down with 4 to 8 oz of water and your stomach will thank you. Solids will be better tolerated on the bike but consider sticking with sports drink, gels and water only the hour or so before you start your run.

Use caution with concentrates. Athletes that choose to mix their special drink in a concentrated format and plan to “sip” off of it during the race need to be keenly aware of how much they are consuming and ensure they balance the intake with sufficient water. Just like solid foods, you should aim for diluting the concentrate in your gut (50 to 100 cal/12 to 25 gms carbohydrate) with 8 oz water.

Have a tried and true fueling plan that is easy to follow. I recommend using 15 to 30 minute time increments ogee mile or km markers. Know approximately how many bottles, aerobottles or gels you should be getting in each hour, then break it down into these increments.

Finally, if you do find yourself with a “clogged sink”, slow your pace, take small sips of water and allow the body to get itself back to a point where you can absorb the nutrients and fluid you are putting in.

GI distress does not have to be a necessary part of your Ironman experience. Planning and practicing your race day nutrition and hydration strategies 3/22/07 will allow you to complete the race with no SOS needed.

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