TrainRight.com

http://trainright.com/gut-check-techniques-to-keep-your-gut-from-ending-your-race-early/

By Jason Koop, CTS Premier Coach and Ultradistance racer

*‘This race will take all of the grit, guts and determination you have’*. I can remember these words being belting out over the loudspeakers by Leadville Trail 100 race director Ken Chlouber in front of a packed gymnasium of nervous athletes. While Ken was most likely referring to one’s character, the ‘guts’ part of his speech can now take on a more literal meaning thanks to Dr. Martin Hoffman, who published a study in the International Journal of Sports Physiology and Performance. And although the study specifically examines ultramarathoners, the findings – and the pieces of advice below – are relevant to any athlete participating in long-distance training sessions or events.

The study examined the factors related to the successful completion of the Western States and Vermont Trail 100 mile runs. Utilizing a post-race questionnaire, the researchers looked at host of factors – including training volume, maximum long run volume, the use of NASIDs, age, BMI, years of experience, number of 100 mile races completed and others – to determine what correlations can be made for those who finished vs. had to drop out (or ‘non-finishers’, as the researchers dubbed them). As a coach and ultramarathoner, their findings were somewhat surprising and interesting. One of the most interesting findings was the havoc nausea and/or vomiting causes for both finishers and non-finishers during the events. When the non-finishers were asked what caused them to withdraw, 23% reported ‘vomiting and/or nausea’ as the culprit, more than any other factor. As a comparison, the total number of people citing injury, blisters, muscle cramps, *and* exhaustion was only 21.6%. This means that more people dropped out of the two races due to GI distress than injury, blisters, cramps and exhaustion COMBINED! WOW!

As it turns out, even the finishers were not immune to GI distress. In fact, both the finisher and non-finisher groups reported nausea and/or vomiting as their top 2 responses when asked to choose ‘problems that impacted race performance’ (at 36.8% and 39.6% respectively). As the researchers point out, preventing and minimizing GI distress is a critical, if not the most essential, success factor in a 100 mile ultra marathon. As a coach, this is encouraging because most GI distress is preventable with proper training and nutrition.

Here are a few tips I use with my athletes – ranging from cyclists to triathletes and marathoners to ultramarathoners – to get the most from their guts.

PRACTICE MAKES PERFECT

At least twice per week, preferably during your longer workouts, you should practice your game-day nutrition plan. Make sure to go through the whole plan during the training at some point. If you plan on switching from gels to real food during the race, then practice that and see how you react.

FIND YOUR GUT’S LIMITATIONS

All competitors want to go fast and want to go long. They push their bodies in these areas. However, most of them do not push their guts to see what they can tolerate. I’ll revert to the research: only 0.7% of non-finishers reported ‘inadequately trained’ as the reason for the dreaded DNF (that’s not a typo: *point-seven percent, less than 1 percent)*. A whopping 23 % cited nausea as the offender, nearly **33 times** the amount of ‘inadequately trained’. So if you want to finish, you need to train your stomach as well (if not better) than your lungs and legs. I have my athletes do this by taking in more calories than they usually do in at least one training session per week. If you normally take in 200 calories per hour, try 300. Try to find the limit of what your gut can accommodate and perform well with, and then test those limits.

FIND THE EXCEPTIONS

We spend a lot of time planning nutrition strategies for athletes, but rarely does an event-day nutrition plan happen exactly as you’ve drawn it out on paper. That’s why part of the “planning” has to include what do when the plan goes awry. You better know what types of foods and fluids you can switch to. Do this by experimenting with different foodstuffs and drinks during training. What you are looking for are the things that definitely *won’t*work. That way, when you come up to the aid station buffet line at mile 80, you’ll know what one or two things to pick up out of the hundreds of options normally available. My favorite way to do this is to buy calories and fluid from grocery and convenience stores along my long workout route.

**What do when your gut goes sour**

As the research points out, GI distress is a big problem during ultradistance events. Some of these issues may be more pronounced for ultramarathon runners because of the physical jostling of running and the duration (24-30 hours), but athletes in shorter events still suffer from the same issues. Although you can prepare, train, eat and figure out the best nutrition plan possible beforehand, the inevitability is that you can still get a sour gut at some point during a long event. If you do, don’t panic, there are things you can do to cope. Remember, 36.8% of the *finishers*in the study reported GI distress during the events. This means that over a third of the race field finished despite their guts being in knots at some point. There are a ton of tips, concoctions, pills and other remedies out there on how to deal with a topsy-turvy stomach on race day. The ones that I have found to be most effective are:

SLOW DOWN:

Your stomach is always competing with your working muscles for blood flow. Part of GI distress is not having enough blood flow to the guts to properly digest food. If you can slow down, you can alleviate this by moving blood from your working muscles to your digestive system. Once your guts clear up, you can pick the pace back up! Better to slow down for 15-30 minutes than to come to a complete halt later on.

COOL OFF:

Similar theory as above… blood flow is getting pulled toward the skin’s surface for cooling, thus moving away from the digestive system. Use an ice-filled bandana and dunk your hat in the nearest stream to keep yourself cool.

GINGER:

Slowing down and cooling off are essentially universal advice for dealing with GI distress, in that they should work – to some extent – for anyone. When it comes to food/fluid/medication remedies, I can only tell you what has worked for me and the athletes I’ve worked with, and that’s ginger. It comes in a variety of forms; crystallized, candied, pickled, raw, etc. I suggest trying them all in training and having the variety of your favorite choices in either your drop bags or in your hydration system. Take small doses when you begin to get queasy.

For more information on the research cited above, please refer to- <http://ws100.com/research.htm>

Hoffman MD, Fogard K.  **Factors related to successful completion of a 161-km ultramarathon.**  Int J Sports Physiol Perform 6:25-37, 2011.

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Runner’s World

<https://www.runnersworld.com/newswire/how-to-avoid-stomach-problems-while-running>

**1. Avoid high-fiber foods** for several days before your event.

**2. Avoid aspirin and NSAIDS** like ibuprofen, especially if you have a history of stomach issues while running/racing.

**3. Avoid high-fructose foods**, particularly sports drinks that are sweetened only with fructose. Somewhat paradoxically, drinks that contain some fructose along with other sweeteners such as glucose appear to be less troublesome.

**4. Avoid dehydration.** Practice drinking in training to improve your comfort with fluids on board. Don’t overdrink in races simply because there are so many water tables and sports drinks available.

**5. Don’t use overly sweetened drinks** or mix sports drinks, gels, bars, etc. Yes, more sugar means more calories for energy, but it also means increased risk of stomach distress.

**6. If you’ve had problems in the past, practice new nutrition strategies**, both pre-event meals and drinking while running. An interesting though still speculative hypothesis indicates that nitrate supplements might ease stomach problems during exercise. This is an intriguing approach because nitrate might also improve performance, at least in non-elite runners.

iron Man

http://www.ironman.com/triathlon/news/articles/2014/06/train-your-gut.aspx#axzz4rpWdys1Z

## **Neglecting the GI system is one of the biggest mistakes triathletes make. Take charge of your discomfort with this guide.**

by Kim Mueller

You just blazed the bike leg of your second IRONMAN, and are determined to carry the momentum onto the run. Instead, you are greeted with bloating, gas, and severe stomach cramps that have you doubled over on the side of the road in no time—not where you want to be en route to the coveted finish line.

If this sounds familiar, you're not alone. Gastrointestinal, aka "gut" or "GI" disturbances, which target the upper and lower abdominal wall (see table below) have been shown to affect nearly every endurance athlete at some point during their racing career. These disturbances can range from pesky, to so severe that the athlete has to accept a DNF.

**Common GI disturbances**

Gut issues, despite what the name may imply or how it's used, are defined by discomfort or abnormalities in either the lower or upper abdominal area:

|  |  |
| --- | --- |
| **Lower Abdominal Disturbances** | **Upper Abdominal Disturbances** |
| Diarrhea  Gas  Side aches  Urgent need for toilet  Intestinal bleeding  Lower abdominal cramps | Nausea  Vomiting  Bloating  Burping  Stomach cramps  Reflux/heartburn |

**Causes of GI disturbances**

**Physiological**: While the cause of GI disturbance is often multi-faceted, experts belive the primary instigator is an overall reduction of blood and oxygen to the intestines, also known as ischemia. This is compounded by the fact that other cells—namely the muscles—are also in demand. Ischemia tends to be most pronounced in prolonged strenuous exercise. Sound familiar anyone?

**Nutritional**: There are a host of nutrition-related contributing causes to GI distress.

→ Consuming too many fibrous foods in the days leading up and including race day, can leave residue in the gut.

→ Meals high in fat and protein can also slow digestion, making them undesirable choices the night before the race and on race morning.

→ If adequate digestion hasn't occurred prior to the race start, unpleasant burping and vomiting can occur during the swim.

→ It's also common for athletes to swallow air during the swim as well as when drinking from water bottles throughout the race, increasing the risk for stomach distress.

→ Consuming too much of any ingredient (carbs, electrolytes, protein, fat) without the right volume of liquid (or just too many calories in general based on oxygen available for digestion) during racing is similar to throwing too much food down your kitchen sink—it results in a clogged gut, delayed gastric emptying, and a consequent cocktail of upper and lower GI disturbances.

→ Lastly, failure to stay hydrated also does not help.

**Biomechanical:**An aggressive aero cycling position can also worsen upper GI disturbances as it increases pressure on the abdomen. Gastric jostling on the run tends to exacerbate lower GI disturbances, especially gas and bathroom urgencies.

**Prevention**

For some athletes, avoiding GI disturbance completely may not be possible, due to the genetic component to such problems. The following strategies and nutritional practices, however, can certainly help lead the way to a happier gut on race day.

**1) Train the gut:**Triathlon should actually be called "quadrathlon," as performance in one is so heavily impacted by the execution of all four disciplines: Swim, bike, run, and nutrition. Too many athletes focus all their attention on swimming, biking, and running, however, and begin the race vastly underprepared on the nutrition front.

Research suggests that athletes who fail to practice their nutrition intake in training are twice as likely to experience GI disturbances on race day compared to those who have. As a side note, if it’s not the same nutrition you plan on using on race day, you are not prepping your gut properly. At least once a month, try doing a mini race simulation where you practice everything nutritionally from a timing, hydration, and fueling perspective at your target race pace. It doesn’t have to be the entire distance of your goal race, but it should encompass at least a portion of it. Document your results in a training log so you can review what works and what doesn't. Consume carbohydrates in training at a rate of 30-90 grams per hour, preferably from multiple sources (e.g., glucose and fructose). This has been shown to enhance intestinal absorption, which will improve fuel tolerance.

**2) Follow a low-residue pre-race diet:**For up to 72 hours pre-race, minimize residue in the diet.[*Click here for a list of low-residue foods.*](http://www.webmd.com/ibd-crohns-disease/low-residue-diet-foods)

**3) Give yourself adequate pre-race digestion time:**In general, allow approximately one hour for every 200 to 300 calories consumed, focusing on low-residue carbohydrates on race morning.

**4) Avoid non-steroidal anti-inflammatory drugs (NSAID) and Aspirin pre-race:**Chronic use of these drugs has been shown to damage the intestinal wall and increase incidence of GI disturbances.

**5) Be careful with supplements:**Several supplements and ergogenic aids, including caffeine at high doses, beetroot juice, and sodium bicarbonate, can increase risk for GI disturbances, so know how your body responds to a supplement prior to implementing it on race day.

**6) Stay hydrated:**Sip on fluids so that your urine runs pale yellow pre-race and water weight loss does not exceed two percent during racing.

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