

Runner's Trots

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Does this sound familiar? Five miles into a weekend run, you get a feeling of pressure and discomfort in your abdomen, and before long you're thinking, "Uh-oh, where's the closest restroom?"

The dreaded "runners trots" is a generic term that describes the abdominal cramps, lower gastrointestinal (GI) distress, and diarrhea that are common among runners. In a recent survey of distance runners, 60% had to stop for a bowel movement *during* training. Almost half experienced severe cramps during or immediately after a hard run or competition.

What's going on here?

Common culprits are foods and liquids that runners ingest the night before or morning of a run (caffeine, dairy, high-fiber foods). But that is too simple an answer, and does not consider the biomechanics that occur within the digestive system during exercise. Before delving into those concepts, it helps to understand the overall structure of the digestive system.

The pathway for all food and liquids is from the mouth, to the esophagus, to the stomach, to the small intestine, and to the colon (also called the "large intestine"). There are separate components within those segments, but the overall structure is what matters here.

Food travels from the mouth down the esophagus to the stomach in a matter of seconds. In the stomach, the rate of digestion depends on the amount of food consumed, fat levels, and the acidity of the stomach. Generally, the process takes 2 to 4 hours. Next, in the small intestine, digestion usually takes 5 to 6 hours before moving into the colon. Finally, the amount of time from food entering the colon to defecation is anywhere from 12 to 24 hours. Thus, the entire process from eating to elimination is generally somewhere between 20 to 30 hours.

Accordingly, the urge to stop at a port-a-potty during a morning run is not because of the small breakfast that you ate a few hours earlier. More likely, it's the dinner – or probably lunch – that you had the day before.

So, in theory, if you plan your meals correctly and develop a morning routine that includes "complete elimination," you can avoid the unwanted restroom stops, right? Not necessarily.

Even with a morning routine that includes a bowel movement right before heading out for a run, many runners still experience the need for another pit stop later. Even more common is the experience of loose bowels after a run.

Two issues to consider are **mechanical trauma** and **changes in blood flow** to the digestive system.

The first, mechanical trauma, is plain old gravity at work. Running produces jostling of the lower intestines, which some studies indicate produces more rapid movement of fecal material down the descending colon toward the rectum.

Think of the large intestine as a series of tubes that form an “M” shape in your abdomen. The “cecum” is at bottom right (where your appendix is or used to be), which attaches to the small intestine. Food moves from the small intestine into the cecum, and then upwards into the “ascending colon.” Next, across your middle is the “transverse colon,” where food travels before going into the “descending colon,” which is the left-hand side of the “M” shape. From there, material moves into the “sigmoid colon,” which is an S-shaped section that connects to the rectum.

Thus, you can see that running – with up and down motion, pounding downward – has an effect on the descending colon that is much like when you hit a bottle of ketchup. Jarring force and gravity move everything downward towards the exit.

Don’t mistake the sloshing of water (or food) in the stomach with what is described above. That sloshing around is happening in the stomach. Likewise, food that is in the small intestine generally stays there for 2 to 4 hours before moving into the colon. The unwanted pit stops are caused by movement in the lower bowels, not the stomach or small intestine.

The change in blood flow to the colon adds to the problem. Research indicates the exercise decreases blood flow to the large intestines by up to 80%. Blood that ordinarily flows to the intestines is diverted to the muscles and skin for evaporative cooling. Likewise, some studies indicate that exercise stimulates digestive hormones that effect the colon.

All of these factors together – decreased blood flow to the intestines, altered hormone and absorption levels, and “jostling” of the gut – added to pre-race anxiety and dehydration all contribute to the situation that has many runners headed for the nearest restroom. So what can you do to alleviate the problems?

Some runners take over-the-counter anti-diarrhea medications, like Imodium, shortly before a run. While that can lessen some problems, there can be side effects. You should talk to your doctor or pharmacist before you treat running-related lower GI problems with medications.

Because what we’re talking about is **food**, or more accurately the byproduct of food consumption and digestion, it is helpful to identify foods and drinks that worsen the problems, and avoid those items for 24 hours before a long run. A big lunch consisting of salad and high-fiber fruits and vegetables on Friday is certainly healthy, but can lead to lots of volume in the colon 20 hours later. If your Saturday long run starts at 7 a.m., that Friday lunch might hit you about five miles in the run, and you will be thinking, “Uh-oh, where’s the closest restroom?”