



# Functional Diarrhea- Some Answers to Often Asked Questions

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## What is Diarrhea?

For clinical purposes, diarrhea is defined as an abnormal looseness of stools and/or increase in frequency of bowel movements. Based on surveys of normal populations, more than three bowel movements per day exceeds normal frequency but is not sufficient. A better definition is the frequent passage of unformed stool that takes the form of the container that it is collected in. If diarrhea lasts longer than three weeks, it is classified as chronic. If no specific cause is found after a thorough investigation and certain criteria are met, a diagnosis of functional diarrhea may be considered.

## What are Functional Bowel Disorders?

Patients with functional bowel disorders do not demonstrate physical or laboratory abnormalities to explain their GI symptoms. One example of a functional bowel disorder is Irritable Bowel Syndrome (IBS), which is estimated to affect approximately 15-20% of all adults.

## Is Functional Diarrhea the Same as Irritable Bowel Syndrome?

Patients with functional diarrhea may represent a subgroup of patients with IBS. Patients with IBS often complain of altered bowel habits, including diarrhea and/or constipation, associated with abdominal pain, bloating, rectal urgency, straining, or a sense of incomplete evacuation. Many of these symptoms occur in patients with functional diarrhea but the absence of abdominal pain distinguishes these patients from those with IBS.

## What is the Evaluation for Patients with Functional Diarrhea?

The most important aspect of the workup is a thorough medical history, including use of medicines and dietary habits, and a careful physical examination. Additional studies such as blood tests and stool analysis may be ordered. Diagnostic procedures such as colonoscopy or endoscopy may be indicated, allowing the physician to examine the inner surface of the colon and small intestine to exclude other causes of chronic diarrhea, such as infections or inflammation of the colon or small intestinal diseases.

## Why is the Medical and Dietary History so Important?

A diagnosis of functional diarrhea is made only after other possible causes, such as medications and diet induced diarrhea, are excluded. The list of medications which cause diarrhea is extensive and includes certain antibiotics, magnesium containing antacids, blood pressure lowering agents (including beta-blockers, ACE inhibitors), and drugs to control irregular heartbeat (quinidine). All medications, whether prescription or "over the counter," should be brought to the attention of the physician.

Although some patients are sensitive to wheat and other related grains (Celiac disease, gluten enteropathy), true food allergies are rare. However, inability to completely absorb certain food groups can, if they are eaten in sufficient quantities, leads to diarrhea in susceptible subjects. Milk (lactose) intolerance is one of the more common examples of this. Patients with lactose intolerance have low levels of intestinal lactase, the enzyme required to digest the milk sugar, lactose. The unabsorbed sugar then passes to the colon where it is broken down by bacteria to produce abdominal gas (bloating) and diarrhea. Whether a person develops symptoms depends on many factors including the amount of lactose ingested and the levels of lactase enzyme in the small intestine.

Treatment involves reducing or eliminating lactose in the diet or using commercial products that contain the lactase enzyme. Other persons are intolerant of fructose (found in fruit and fruit juices), sorbitol (plums, pears and sugarless gum), and caffeine (coffee, tea, many sodas). Dietary elimination of possible offending agents may resolve symptoms in sensitive persons.

### **What Other Factors May Worsen Functional Diarrhea?**

Some patients develop diarrhea after undergoing stomach or gallbladder surgery. The exact mechanisms are unclear, but are thought to involve increased transport of food through the GI tract or an increase in bile salts delivered to the colon.

A condition called “runner’s diarrhea” has been described as the name suggests, these individuals experience diarrhea during long distance marathons. The cause is uncertain but may involve alterations of GI motor activity.

### **What is the Cause of Functional Diarrhea?**

Although there is no consensus, one proposed mechanism relates to alterations in gastrointestinal motility. Contractions of the smooth muscle of the gastrointestinal tract regulate movement of food through the small intestine and colon. Patients with functional diarrhea may have different motility patterns than do patients without diarrhea. However, the causes of the motility dysfunction and changes in intestinal fluid absorption leading to firmer stools or to diarrhea are incompletely understood.

### **What Treatments are Available for Functional Diarrhea?**

As the cause(s) of functional diarrhea is (are) unknown, treatment is symptomatic. Dietary modifications include elimination of various substances known to cause diarrhea. In addition to lactose, fructose, sorbitol, and caffeine some patients develop symptoms because they do not completely digest complex carbohydrates (pasta, beans). These too may be reduced in the diet to see if there is any improvement.

Some patients with IBS and diarrhea may benefit from an increase in dietary fiber. In contrast, other patients benefit from carbohydrate restriction, as was shown in a recent study by investigators at the University of North Carolina, Chapel Hill.

For patients who do not improve with dietary modifications, antidiarrheal agents such as loperamide (Imodium), diphenoxylate (Lomotil), and codeine are often effective. All work by similar mechanisms. In general, these drugs are used under the supervision of a physician; all but loperamide require a doctor’s prescription.

As future research uncovers the mechanisms which underlie functional diarrhea, more specific therapies will be developed. As with many functional disorders, a trusting physician-patient relationship should enhance the treatment of this complex problem and promote a better understanding of the dynamics of GI symptoms.

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