



## ASK THE EXPERT

Question: What is a Functional GI disorder?

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Functional gastrointestinal disorders (FGIDs) are common disorders that are characterized by persistent and recurring GI symptoms. These occur as a result of *abnormal functioning* of the GI tract. They are not caused by structural (tumors or masses) or biochemical abnormalities. As a result, many routine medical tests attempting to diagnose an FGID -- such as x-rays, CT scans, blood tests and endoscopic exams -- can have essentially normal/negative (non-disease) results.

More than 20 functional GI disorders have been identified. They can affect any part of the GI tract, including the esophagus, stomach, bile duct and/or intestines. The most common and best researched FGID is Irritable Bowel Syndrome (IBS) – abdominal pain associated with altered bowel habits of diarrhea, constipation or alternating between both. Other common FGIDs include functional dyspepsia (pain or discomfort in the upper abdominal area, feeling of fullness, bloating or nausea), functional vomiting, functional abdominal pain, and functional constipation or diarrhea.

It is important to understand that these are *not* psychiatric disorders, although stress and psychological difficulties can make FGID worse. Approximately 25 million Americans have functional GI disorders. 50 - 80% of people with FGID symptoms do not consult a physician, although they may take over-the-counter medications and report significantly more job absenteeism and disability than people without these symptoms. It has been reported that IBS is the second leading cause, after the common cold, for missing work or school.

**There are three primary features of FGIDs -- motility, sensation, and brain-gut dysfunction.** *Motility* is the muscular activity of the GI tract, which is essentially a hollow, muscular tube. Normal motility (e.g., peristalsis) is an orderly sequence of muscular contractions from top to bottom. In FGIDs, the motility is abnormal. There can be muscular spasms that cause pain and the contractions can be very rapid, very slow or disorganized. *Sensation* is how the nerves of the GI tract respond to stimuli (e.g., digesting a meal). In functional GI disorders, the nerves are sometimes so sensitive that even normal contractions can bring on pain or discomfort. *Brain-gut dysfunction* is the disharmony in the way that the brain and GI system communicate. With FGIDs, the regulatory conduit between brain and gut function may be impaired.

### **How are FGIDs diagnosed?**

Fortunately, attention to and understanding of FGIDs is increasing, as reflected in the growing base of research in this area over the last two decades. Because routine tests like x-rays, CT scans and others used for diagnosing organic disorders are generally negative for people with FGIDs, diagnosing these disorders cannot be based on test results. Expert clinicians and researchers from all over the world have met and studied the symptoms and other characteristics of FGIDs for many years and their collaboration has resulted in the development of the so-called 'Rome Criteria' -- symptom-based criteria for diagnosing

FGIDs. As a result, the diagnosis of a functional GI disorder can be made when a patient's combination of symptoms and other factors meet the Rome criteria for a specific functional disorder. This is similar to other disorders, like migraine headaches, which also are not seen on x-rays, etc. but can be diagnosed based on the symptoms experienced by the patient.

### **What are the psychosocial aspects of FGIDs?**

Research on the psychosocial aspects of these disorders has yielded three general observations: *First*, psychological stress can exacerbate GI symptoms. *There is a bi-directional pathway between the brain and the GI tract*, often referred to as the 'brain gut axis'. External stressors and emotions or thoughts can affect GI sensation, motility and secretion. In other words, the brain affects the gut. But, just as significantly, activity in the gut can affect pain perception, mood and behavior in the brain. *Second*, *psychosocial disturbances can amplify illness experience* and adversely affect health status. Patients with FGIDs who were studied at medical centers have been found to have greater psychological difficulties than healthy subjects or other medical patients. However, patients at medical centers are generally sicker and their symptoms more severe as compared to patients seen in primary care clinics, so these results may overestimate the true difference. Also, persons with IBS who do not consult a physician for their symptoms are considered psychologically similar to people without IBS. This shows that IBS is not a psychiatric disorder. Instead, psychosocial factors modulate the illness experience and health outcomes, including physician visits. *Finally*, *having a functional GI disorder impairs the quality of one's life*. Any chronic illness, including IBS, will affect a person's health-related quality of life (i.e., general well-being, ability to carry out everyday activities, concerns about the illness, and satisfaction with health care).

### **What are some of the treatments for FGIDs?**

The specific treatment depends on the particular symptoms a person is experiencing. Different medications will affect different symptoms, such as abnormal motility or hypersensitivity. *Anti-spasmodics*, such as Bentyl or Levsin, can be helpful in decreasing spasms in the GI tract. They are especially effective when taken prior to an event that might be expected to trigger spasms. For example, taken before a meal, they will blunt the exaggerated response often seen in FGIDs, which leads to cramping and pain. *Pro-motility* agents, such as Zelnorm, help accelerate the motility of the GI tract, which is especially useful for treating chronic constipation. Unfortunately, there are very few other motility-promoting medications on the market at this time. *Anti-diarrheals or laxatives* can be found over the counter at drug stores and many can be helpful for milder symptoms. *Prescription medications*, such as Lomotil for diarrhea or Miralax for constipation, can be used when symptoms are more severe.

*Antidepressants* are often prescribed, not for depression, but to decrease chronic GI pain. These medications can modify the messages between the brain and the gut in a way that 'turns down' the intensity of the pain. Some are also effective in decreasing pain by working on the GI tract directly, while others are effective in normalizing motility. Other miscellaneous medications that are helpful for FGIDs include Buspar, which can help relax the walls of the GI tract, and phenergan, which is used for nausea and vomiting. And, there are *psychological treatments*, such as relaxation therapy, hypnosis or cognitive behavioral therapy, that can help patients learn to better manage their symptoms and how they respond or react to their symptoms.

**What is the future of FGIDs?** As researchers in the US and around the world continue to study FGIDs, new and helpful information is becoming available. A better understanding of what might have caused IBS in certain people has resulted from the discovery of a connection between GI infections and subsequent chronic GI problems (post-

infectious IBS). Investigations have also discovered a chronic, low-level inflammation in the GI tract in some people with IBS. There are also new diagnostic techniques and new medications being tested that appear promising. Basic research on the nature and causes of various functional GI disorders needs to continue along with clinical trials of new treatments.