

Stress and the sensitive gut

Psychotherapy may help ease persistent gastrointestinal distress.

Functional gastrointestinal disorders affect 35% to 70% of people at some point in life, women more often than men. These disorders have no apparent physical cause—such as infection or cancer—yet result in pain, bloating, and other discomfort.

Multiple factors—biological, psychological, and social—contribute to the development of a functional gastrointestinal disorder. Numerous studies have suggested that stress may be particularly important, however. The relationship between environmental or psychological stress and gastrointestinal distress is complex and bidirectional: stress can trigger and worsen gastrointestinal pain and other symptoms, and vice versa. This is why psychological therapies are often used in combination with other treatments—or even on their own—to treat functional gastrointestinal disorders.

A second brain

Life-sustaining functions, such as breathing, heartbeat, blood pressure, and body temperature, are regulated through the autonomic nervous system. This complex network of nerves extends from the brain to all the major organs of the body and has two major divisions. The sympathetic nervous system triggers the “fight or flight” response. The parasympathetic nervous system calms the body down after the danger has passed. Both the sympathetic and parasympathetic nervous systems interact with another, less well-known component of the autonomic nervous system—the enteric nervous system, which helps regulate digestion.

The enteric nervous system is sometimes referred to as a “second brain” because it relies on the same types of neurons and neurotransmitters that are found in the central nervous system (brain and spinal cord). After sensing that food has entered the gut,

neurons lining the digestive tract signal muscle cells to initiate a series of intestinal contractions that propel the food farther along, breaking it down into nutrients and waste. At the same time, the enteric nervous system uses neurotransmitters such as serotonin to communicate and interact with the central nervous system.

This “brain-gut axis” helps explain why researchers are interested in understanding how psychological or social stress might cause digestive problems. When a person becomes stressed enough to trigger the fight-or-flight response, for example, digestion slows or even stops so that the body can divert all its internal energy to facing a perceived threat. In response to less severe stress, such as public speaking, the digestive process may slow or be temporarily disrupted, causing abdominal pain and other symptoms of functional gastrointestinal disorders. Of course, it can work the other way as well: persistent gastrointestinal problems can heighten anxiety and stress.

Psychotherapy options

Reviews suggest that several types of psychotherapies may help ease persistent gastrointestinal distress—or at least help people learn to cope with such symptoms. Although this research has limitations—in particular, many studies have been criticized for using a waiting-list control, which does not allow investigators to account for the therapeutic effects of receiving medical attention—the evidence suggests that the following psychotherapies may provide some relief for many people with severe functional gastrointestinal disorders.

Cognitive behavioral therapy (CBT). This standby of psychotherapy helps patients to change counterproductive thoughts and behavior and learn coping skills to better manage stress and

anxiety. One three-month study involving 431 adults with functional gastrointestinal disorders found that CBT was significantly better than patient education at improving overall symptoms and well-being, but had little or no effect on pain. This and other research suggests that CBT may be most useful in helping patients to cope with persistent gastrointestinal distress, rather than reducing pain. Preliminary research suggests that CBT can be modified for children with such disorders.

Relaxation therapy. This encompasses a number of techniques designed to help people relax and reduce reactivity to stress. Techniques include progressive muscle relaxation, visualization, and restful music. Relaxation therapy has seldom been studied alone, but the research suggests that it is effective for gastrointestinal disorders when it is combined with CBT.

Hypnosis. Gut-directed hypnotherapy—which combines deep relaxation with positive suggestions focused on gastrointestinal function—may be helpful for people whose symptoms occur even without obvious stress. In one small randomized controlled study, patients with severe irritable bowel syndrome underwent three months of hypnotherapy that involved placing their hands on their abdomens while being asked to feel warmth and imagining they had control over gastrointestinal function. By the end of the study, symptoms had significantly improved in the hypnotherapy group when compared with a control group who underwent supportive psychotherapy. Another study suggests that benefits of gut-directed hypnosis may persist for years. ♥

Suarez K, et al. “Psychological Stress and Self-Reported Functional Gastrointestinal Disorders,” *The Journal of Nervous and Mental Disease* (March 2010): Vol. 198, No. 3, pp. 226–29.

For more references, please see www.health.harvard.edu/mentalextra.