Gut Feeling

Your emotional state controls your digestion more than you think.

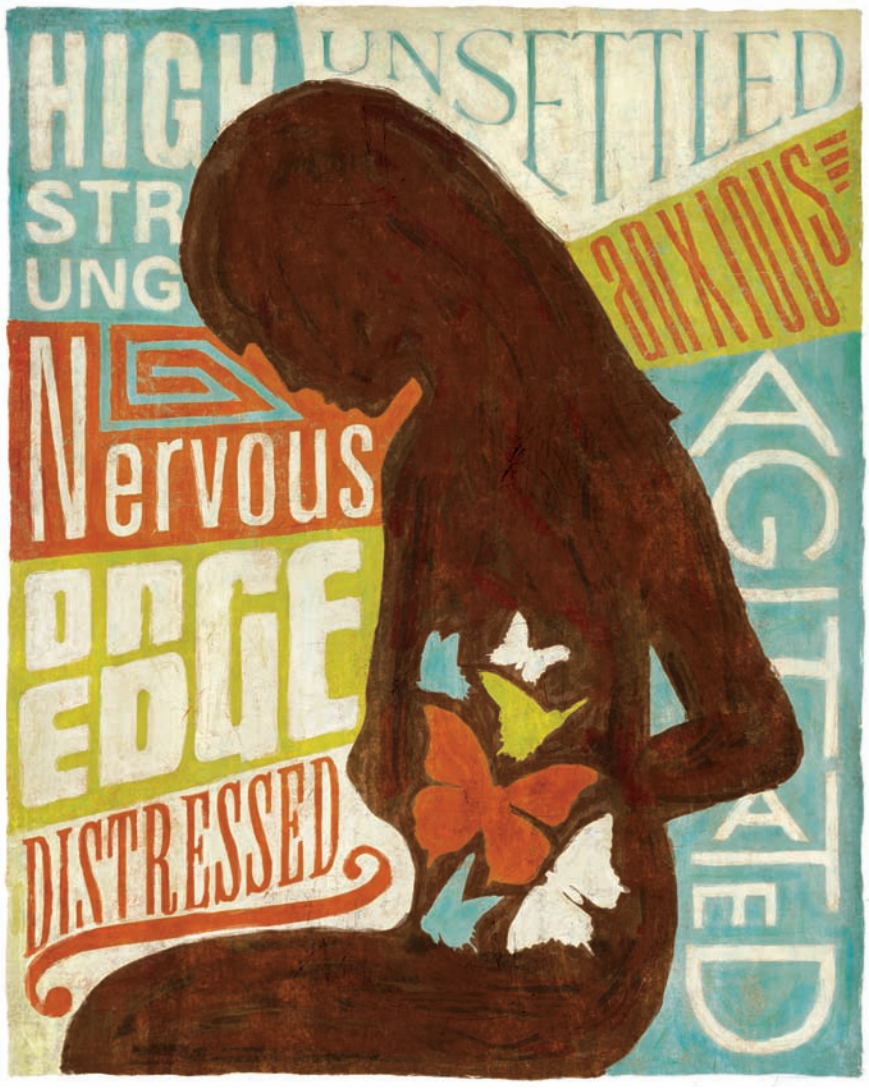
BY LISA MARSHALL

We get "butterflies in our stomach" when we're nervous, "choke up" when we're about to cry, and have a "gut feeling" when something just doesn't seem right. We turn to "comfort food" when we're depressed and forget to eat when we are stressed.

But even though these phrases underscore our intuitive grasp of the link between our emotions and our digestive system, Western medicine has only recently begun to understand how connected the two truly are—and how calming one can have a profound impact on the other.

"The gut literally has a mind of its own, and it is intimately, almost instantaneously, connected with the one in our brain," says gastroenterologist Anil Minocha, MD, author of *Natural Stomach Care* (Avery, 2003).

Roughly one in five Americans suffer from "functional" digestive disorders, meaning their plumbing is structurally fine, but its function is painfully flawed. The most common is irritable bowel syndrome (IBS), which can include chronic diarrhea, constipation, pain, and bloating. Then there are those who may not have a diagnosable disorder but suffer heartburn or a queasy stomach every time they have to give a speech or get on a plane. Thus far, conventional treatments (such as fiber and over-the-counter medications) have a poor track record, often causing another aggravating symptom as they fix the first (fiber can lead to bloating; diarrhea medication can cause nausea). Last year, the FDA pulled the IBS prescription drug Zelnorm off the market after studies linked it to heart attack and stroke risk. With few options, more patients are turning to psychosocial approaches, such as cognitive behavioral therapy (CBT), relaxation techniques, and hypnotherapy—and seeing powerful results.



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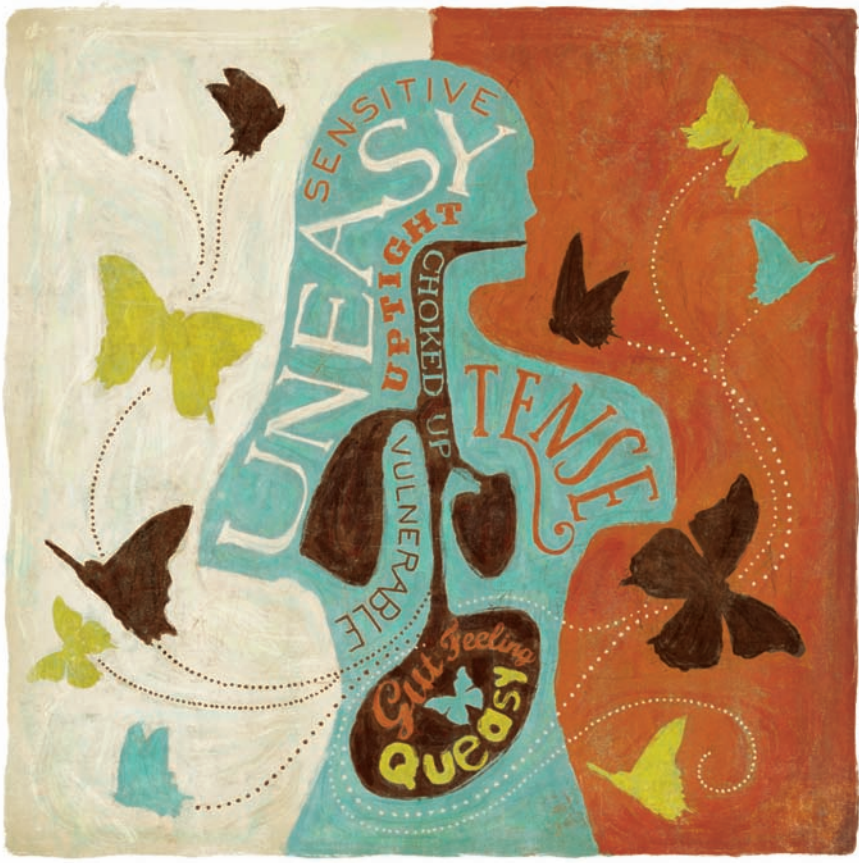
"The magnitude of improvement that has been reported with psychological treatments [for IBS] seems to be similar to or greater than that reported with medications," stated an article in the April issue of the *New England Journal of Medicine*. That's not to say IBS is "all in your head." Rather, it seems, your gut is smarter than you think.

A mind of its own

A decade ago, Columbia University neurobiologist Michael D. Gershon, MD, coined the phrase "the second brain," to describe the intricate web of nerve cells and fibers lurking



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Mind Over (Gut) Matter

Cognitive behavioral therapy (CBT) aims to help people change the way they think about stressful situations and give them tools to solve problems more efficiently. Some elements of CBT for irritable bowel syndrome (IBS) include:

✻ **KEEP A JOURNAL OF SYMPTOMS** for at least two weeks, jotting down foods you eat or stressful events that occur prior to onset. This will give you clues about your triggers and give you something to look back on later to see if your therapy has helped you improve. ✻ **TRACK STRESSFUL EVENTS** in your week, what you were thinking at the time, how you handled them, and whether you had stomach problems. Again, valuable information for understanding triggers. ✻ **IF YOU HAVE A PROBLEM** and you are worried about it, ask yourself these questions: *What is bothering me? How much control do I have over the situation? What can I do? What is the worst that could happen?* ✻ **IF YOU CAN DO SOMETHING,** make a decision to do it and follow through. If the situation is out of your control, recognize it and try to let it go. ✻ **DE-CATASTROPHIZE.** If you are worried about an event, ask yourself these questions: *Is this situation time-limited? Can I handle it for that long? Is it worth having stomach problems over?*

within the wall of the gut. With 100 million-plus nerve cells (more than in any other organ, including the spinal cord) and a prolific chemical factory churning out all the same neurotransmitters found in the brain (including more than 90 percent of the body's serotonin), the lowly gut is remarkably sensitive and "rich and brain-like in its complexity," Gershon says. Animal research has shown that when the gut is disconnected entirely from the brain, it will still writhe in a downward motion, tightening at the oral side and loosening on the anal side (called the peristaltic reflex) when exposed to pressure from the inside (which makes it think it has food in it). Unlike other organs, which respond like puppets to a string-pulling brain, the gut has its own "enteric nervous system," which kicks in at the first smell of a juicy hamburger

or—unfortunately for some—the first inkling of a perceived threat.

In the case of that fragrant burger, digestive enzymes and stomach acid will flow, unbeknownst to us, before our first bite. In the case of a nervous speaker waiting to take the microphone, the second brain's response may be less benign.

Smart as it may be, the gut is still modeled after that of our caveman ancestors and cannot differentiate between, say, a lion about to lunge or a room full of people waiting to hear a speech. As the nervous speaker waits, the brain may send the signal "I am anxious," but the gut kicks into fight-or-flight mode. For some, it may opt to get the business of digestion done quickly, so the body may tend to other things (like running from that lion). The nerves in the throat may tighten, leaving you with that choked-up feeling. The bowels may loosen, causing diarrhea. For others, the second brain may halt operations, leading to constipation.

Storehouse of emotion

Psychoneuroimmunologist Candace Pert, PhD, author of *Molecules of Emotion* (Simon and Schuster, 1999), adds that the same neurotransmitters that put us at ease when someone smiles at us or make us flinch at a gory movie are also abundant in the circular trapdoors, known as sphincter muscles, throughout our tube-like digestive tract. From the one in our esophagus, which stays closed to keep caustic stomach acid out of our throat but opens up to usher food through, to the two in our anus, which play gatekeepers at the end of the line, their function is critical—and highly subject to our mood.

"People thought that the emotions were housed in the brain, but it turns out that the hundred or so chemicals that modulate our emotions are also found throughout the body, particularly in the gut," says Pert. "Whether someone is smiling at you or grimacing at you while you are eating can literally open or close one of these sphincter valves," aiding in, or sabotaging, digestion.

If an emotion like stress is prolonged, research suggests, it can dry up stomach acid and slow digestion, leading to an overgrowth of bad bacteria that can exacerbate gut problems. Chronic stress may also delay the gut's normal cell turnover (which happens every three to five days). When the cell's maintenance is delayed, microscopic gaps between cells allow partially digested food molecules to escape into the bloodstream, leading to a different, dangerous condition known as leaky gut syndrome, says nutritionist Elizabeth Lipski, PhD, author of *Digestive Wellness* (McGraw Hill, 2005). "On the other hand, when we give our bodies messages that we live in a safe environment, it calms the whole body down," says Lipski, "including the gut."

Sending the right message

The first step to better digestion is simple: Don't stress about things you can't control.

"A significant number of IBS patients tend to worry a lot, think the worst, and blow things out of proportion," says

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Easy Remedies for Better Digestion

While behavioral therapy can do wonders for tummy troubles, it doesn't always do the trick. Here are some other options.

EAT YOGURT. Some research has shown that irritable bowel syndrome (IBS) sufferers who regularly take probiotics can reduce symptoms by half. "They affect gut motility, gut secretion, and immune antibody responses," says Anil Minocha, MD. He suggests two helpings a day of high-quality yogurt containing multiple live active cultures.

TAKE PEPPERMINT. New York researchers recently found that taking a capsule of peppermint oil three times a day helped reduce abdominal pain for 80 percent of IBS sufferers. It relaxes the muscles responsible for stomach spasms and cramps.

COME PREPARED. If you suffer from GI distress before a speech or before getting on a plane, make sure to get there early, take time to prepare, breathe deeply, and relax.

TRY HOMEOPATHY. Nutritionist Elizabeth Lipski suggests the homeopathic remedy Hyland's Calms Forte (calmsforte.com) for stomach problems caused by nervous tension.

Jeffrey Lackner, PsyD, at the University at Buffalo School of Medicine. "That works if they can tackle a problem and do something about it, but if they can't, it can lead to physical problems, many of them GI-related."

Lackner divided 75 IBS patients into three groups, with the control group sticking with their usual therapy (including medications), one group undergoing 10 sessions of therapist-administered cognitive behavioral therapy, and another doing self-directed CBT. (The home CBT group kept a log of emotional triggers, worked to "de-catastrophize" their thinking, and did relaxation exercises). After 12 weeks, 72 percent of the self-directed group reported significant improvement, while 62 percent of the therapist group and 7 percent of the control group improved.

Another promising remedy for IBS is "gut-directed" hypnotherapy: The patient is hypnotized and asked to visualize that she has power over her ailing belly (perhaps she'll be told that when she places her hand on her stomach, it feels calm and warm). A recent study found that of 53 children with IBS, those who underwent six sessions over three months had far less pain than the control group. Other research has shown that meditation and relaxation therapies reduce IBS symptoms.

Such therapies aside, Minocha says patients can accomplish a lot by giving the gut the credit it's due. "Ancient cultures have always believed all health and sickness begin in the stomach. That's why there has been so much emphasis not just on what you eat, but how."

So before you sit down to dine in front of that violent TV show or grab fast food to eat on the run, take a moment to ask yourself—*What would your second brain think?* ■