

# Inner *Workings*

Cognitive behavioral therapy for irritable bowel syndrome

STORY BY PATRICK KLINCK

TESTIMONIALS ADAPTED FROM WWW.IBSGROUP.ORG

The pain is real. The frustration is real. The embarrassment, disruption to everyday life and social isolation are all real. The only thing that's unreal about irritable bowel syndrome (IBS) is its near total absence from public awareness as a major health issue. Anywhere from 25 to 40 million Americans are affected, and perhaps as many as 10 to 15 percent of people worldwide. It is the second largest cause of employee absenteeism after the common cold. Estimates vary widely because the problem is underreported, but by all measures, it's a huge problem.

“THE GREAT MAJORITY of people who have IBS suffer with it and carry on silently,” says Jeffrey Lackner, PsyD, a behavioral scientist and associate professor of medicine in the School of Medicine and Biomedical Sciences. “It’s partly due to the unpleasantness of their symptoms and partly because they have so few treatment options available to them. People are reluctant to ask for help and that makes it even more difficult to get help to them.”

Lackner is director of UB’s Behavioral Medicine Clinic at Erie County Medical Center (see sidebar on page 15) and the principal investigator in an ongoing research project designed to bring relief to IBS sufferers.

His group was recently awarded \$8.5 million from the National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK), one of the National Institutes of Health (NIH), to conduct a seven-year clinical trial of a self-administered, at-home cognitive behavioral therapy program developed by Lackner and his associates. It is one of the few IBS treatments recommended by the *New England Journal of Medicine*. The study is the largest IBS trial ever awarded by NIDDK and one of the largest behavioral clinical trials without a drug treatment condition that NIH has ever awarded.

IBS is characterized by a constellation of symptoms that vary from

patient to patient, but pain is the common denominator. “Across all types of IBS, the cardinal symptom is some type of abdominal pain that is associated with some problem in bowel function,” says Lackner. A patient may have constipation, diarrhea, or alternating constipation and diarrhea, abdominal cramping, flatulence, and urgency (the sudden, uncontrollable urge to have a bowel movement), accompanied by feelings of helplessness and despair. Symptoms range from mild to debilitating across the population. The ratio of female to male sufferers is about 2-1. According to Lackner, two out of three people will experience symptoms of IBS at some point.



**T**HE PROBLEM with treating the syndrome is that there is no obvious physical cause underlying a patient's symptoms. "With something like inflammatory bowel disease [IBD], there is a physical pathology that corresponds with symptoms," explains Lackner. "The problem is not as straightforward for people with IBS. There's no structural pathology that you can see under a microscope or through diagnostic testing that explains the problem."

*I have suffered with IBS for most of my life. It wasn't until a few years ago that I found out its name. I've learned that IBS doesn't usually generate much sympathy from others, as only sufferers can truly appreciate the havoc it wreaks on both personal and professional life. Yes, I may look fine to you, but I suffer silently. Who wants to discuss diarrhea or constipation? Who wants to hear about your bowel problems? Who will believe that, yes, it's really that bad.*

For that reason, IBS is classified as a functional disease. The dysfunction associated with IBS occurs somewhere along the subtle, com-

plex feedback loop that is the brain-gut connection.

"There are neural connections that go from the brain to the gut and from the gut to the brain," says Lackner. "When you get full, messages are sent to the brain to say 'stop eating,' and when you're hungry those signals move the other way."

The brain-gut connection is also implicated in the body's fight-or-flight response to stress. The autonomic nervous system can either

shut down or speed up the digestive process and amplify gut sensations, in addition to quickening heartbeat and respiration, sweating and sensitivity to environmental stimuli. Probably everyone has experienced butterflies in the stomach at the prospect of a stressful situation, such as public speaking or taking a big exam. The problems begin when the stress response exceeds its biological value.

"The fight-or-flight response is designed for physical threats or life-threatening dangers," says Lackner. "If I'm mugged walking down Fifth Avenue or Broadway, that fight-or-flight response is a protective,

evolutionary mechanism that makes sure I stay alive. But if I have a stress response to a comparatively minor hassle—if I'm in an argument with somebody or if I'm stuck in a traffic jam or lost my keys—that stress response doesn't have biological value. It doesn't help me tackle the problem; in fact, it's exactly the opposite. It's a false alarm. Our culture evolves much faster than our bodies adapt, so we now don't have a lot of life threats and physical dangers, but we do have a lot of nonphysical stressors."

It's estimated that the fight-or-flight system switches on 30 to 50 times a day for the average modern human being, compared to just once or twice daily for our evolutionary ancestors, who were more likely to be confronted by genuine mortal threats.

Although stress is not believed to be the cause of IBS, it is the case that everyone reacts differently to it. People whose bowel symptoms flare up during periods of stress are called "gut responders." Continued exposure to stress can interfere with brain-gut communications, leading to a heightened sensitivity to ordinary gastrointestinal (GI) activity and the perception of pain, which experts call "visceral sensitivity." When visceral sensitivity leads to worrying about one's GI activity—and that worry itself becomes a stressor—the patient has entered a vicious cycle that can be extremely difficult to escape.

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—JEFFREY LACKNER, PSYD

*My stomach used to be a steel pit. I could eat anything. I never worried—until my diagnosis with IBS about 15 years ago. I would have constipation followed by diarrhea, and cramping that rivaled labor with my children. When the doctor told me I had IBS, I asked what I could do about it and he said, "Nothing." So, for a couple of years, I did nothing. I took ibuprofen for the pain and suffered.*

**T**HE GOAL of Lackner's cognitive behavioral therapy (CBT) treatment is to help patients break out of the vicious cycle that compounds their IBS symptoms. Patients referred to his clinic have long since been diagnosed with IBS and have undergone the battery of tests used to rule out IBD and other physical GI disorders. They have identified their "trigger" foods and have made changes to dietary habits, and may be taking medication to treat their symptoms, but still the symptoms persist.

"Over time patients learn to respond to stress in a specific way that can include physical, emotional, behavioral reactions," says Lackner. "They are conditioned, or learn, to respond in a specific way. Our view is that you can also teach patients to unlearn maladaptive behaviors through specific skills and strategies, and replace them with more constructive responses."

Patients learn to reduce physical tension through diaphragmatic breathing and progressive muscle relaxation skills. They learn to identify and recognize habitual, self-defeating patterns of thought, such as "pain catastrophizing," and supplant them with more flexible problem-solving strategies—"strategies that not only help to solve problems that are controllable," says Lackner, "but to respond more effectively to problems that are realistically beyond their control."

Another set of skills helps patients to handle intense worry, which is oftentimes characteristic of patients with more severe IBS symptoms. "We teach them to process information differently, so they don't think the worst, jump to conclusions or blow things out of proportion."

IBS is not an anxiety disorder, Lackner emphasizes, it's a gastrointestinal problem. "But it can be comorbid with other types of problems, and some of those are physical problems and some are nonphysical problems, like anxiety. Part of our work is to try to understand that relationship."

While CBT has been shown to alleviate symptoms of IBS, the traditional delivery model, which relies on multiple office visits to a highly trained therapist, is impracticable in light of the sheer number of patients. The system simply can't handle it.

### My life is ruled by my stomach!

*I am a 23-year-old college nursing student who has been suffering from IBS for the longest time. Recently, I have been unable to leave my house due to the fear of having an accident in my pants in the car. Every time I get into a car now to go somewhere, my stomach starts to act up and I have the feeling of "I need to get to a bathroom right now!" I am trying to finish up my nursing degree and with clinicals, I am not sure how I am going to be able to manage this. I just want my life back!*

**A**N EARLY CLINICAL TRIAL designed by Lackner's group looked at a group therapy-based version of CBT as a solution. "We found that the treatment did relieve IBS symptoms," he says, "but one of the things we also found was that it was difficult to coordinate groups." The search for a better way of delivering

CONTINUED ON PAGE 23

## Behavioral Medicine Clinic

OPENS NEW FACILITY ON ECMC CAMPUS

The UB Behavioral Medicine Clinic (BMC) recently moved from its former home in the main hospital on the Erie County Medical Center campus to a new, 4,500-square-foot office in the adjacent Nolan Center.

The new facility has some of the most advanced clinical and research facilities found on the medical campus, says Jeffrey M. Lackner, PsyD, director of the BMC.

"It's a big improvement for our doctors and their patients" he says. "We now have a state-of-the-art facility that is much more comfortable and accessible for our patients, and much more conducive to the high-end research for which the BMC is known."

The new space provides dedicated work stations for trainees and staff members; interview and exam rooms for patients, which enhance the clinic's ability to conduct both behavioral and drug trials; professional audiovisual recording capabilities; and a conference room for lectures, staff meetings and presentations.

The BMC treats medical disorders characterized by persistent or recurrent pain, including low-back pain, fibromyalgia, noncardiac chest pain, temporomandibular disorder, headache and irritable bowel syndrome (see related article, opposite).

To learn more about the clinic, visit [ubbmc.buffalo.edu](http://ubbmc.buffalo.edu).

—PATRICK KLINCK



behavioral treatments led to the current round of studies.

“We started developing a behavioral self-management program, a self-administered version of CBT that was more efficient but didn’t lose the efficacy of the office-based treatment,” he says. A pilot study involving 75 IBS patients found that patients in a “minimal-contact” CBT group, featuring four office visits for counseling and instruction plus home-based CBT, fared as well as or better than the standard 10-session, therapist-administered group. Patients in both groups reported clinically significant relief of symptoms: 72 percent for the minimal-contact group and 60.9 percent for the office-based group, compared to 7.4 percent for the control group. “The value of the study is that it shows that patients can learn relatively simple self-care skills to take control of symptoms that are resistant to existing medical treatments,” says Lackner.

The new study is designed to see if the results hold up for a larger, more diverse population over a longer period of time. The seven-year clinical trial will include 480 patients between the ages of 18 and 70 with moderate to severe IBS, at two clinical sites: UB and Northwestern University. Participants will be assessed at five points during the 12 months following intervention to

determine the long-term effectiveness of the home-based treatment.

Susan Krasner, PhD, clinical assistant professor of anesthesiology, is a co-investigator on the grant and senior psychologist. She has been treating and studying functional disorders for more than a decade, and sees great promise for this new approach to IBS.

“This particular research project is especially important because we hope to see and demonstrate that a more portable and easily accessible treatment option is as good as the gold standard of one-on-one therapy,” she says. “As a community, we could then provide this service to far more IBS sufferers.”

**IBS is a shadow now.** *It is in the back of my mind rather than dominating my life. I function very well day to day. Sometimes I am surprised to realize I haven't thought about IBS for a while, or find myself in a situation that used to put me in a panic. I think about the "what ifs" once in a while, which was a huge problem before, but now I am able to get rid of the thought as soon as I recognize it. I still get a flare-up on occasion, but I can usually figure out why ... consuming alcohol and allergies will always trigger an attack. I can shrug it off easily with "It's just my allergies. It's not the IBS returning." I guess mainly I have learned to underreact to IBS symptoms. I realize these are CBT techniques.*

**G**AUGING THE LARGER implications of the research, Lackner questions the tacit assumption that more therapist sessions automatically translate into better outcomes. “There may be something in brief treatments that is inherently therapeutic, and maybe more therapeutic, than longer treatments,” he says. “The responsibility for getting better is shifted to the patient, and they learn how to apply these skills in the environment where problems occur.”

Ideally, as the patient begins to take charge of her symptoms, the vicious cycle of negativity and despair is replaced by a virtuous cycle of constructive thinking reinforced by feelings of greater self-efficacy.

“Most people who have chronic illnesses don’t see a behavioral psychologist or health psychologist,” he says. “We have fairly sophisticated technology to teach people how to manage their diabetes or their asthma or their high blood pressure. So I think that’s the model we should pursue, as opposed to the traditional clinic-based mental-health model that provides a high level of care but has built-in limits on dissemination.” **BP**

*As this issue of Buffalo Physician was going to press, results of the study described in this article were published in Clinical Gastroenterology and Hepatology (Vol. 8, No. 5). To read a summary of the study, visit the UB NewsCenter web site at [www.buffalo.edu/news/](http://www.buffalo.edu/news/) and search “IBS.” To view the published article online, go to [www.cghjournal.org/current](http://www.cghjournal.org/current).*

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*Testimonials provided in it were adapted from the web site of the Irritable Bowel Syndrome Self-Help and Support Group ([www.ibsgroup.org](http://www.ibsgroup.org)), which has published a selection of posts from the group’s online bulletin board in the book IBS Chat: Real Life Stories and Solutions, co-authored by Jeffrey D. Roberts, founder/president of the online self-help group, and Barbara Bradley Bolen, clinical psychologist (iUniverse Inc., 2007).*