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SPECIAL ISSUE

Healing Irritable Bowel Syndrome with Diaphragmatic Breathing

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Irritable bowel syndrome (IBS) affects 7 to 21% of the general population and is a chronic condition. The symptoms usually include abdominal cramping, discomfort or pain, bloating, loose or frequent stools and constipation, and can significantly reduce the quality of life. This case report describes how a 22-year-old woman, who was initially diagnosed with IBS when she was a high school junior, healed herself from IBS with slow abdominal breathing without any therapeutic coaching. She has continued to be symptom-free for the last three years. The article reviews how slower diaphragmatic breathing (abdominal breathing) may reduce symptoms of IBS, explores the possibility that breathing is more than increasing sympathetic/parasympathetic balance, and suggests additional self-care strategies to reduce the symptoms of IBS.

After having constant abdominal pain, severe cramps, and losing 15 pounds from IBS, I found myself in the hospital bed where all the doctors could offer me was morphine to reduce the pain. I searched on my smart phone for other options. I saw that abdominal breathing could help. I put my hands on my stomach and tried to expand it while I inhaled. All that happened was that my chest expanded and my stomach did not move. I practiced and practiced and finally I could breathe lower. Within a few hours, my pain was reduced. I continued breathing this way many times. Now, two years later, I no longer have IBS and have regained 20 pounds.

—21-year-old woman who previously had severe irritable bowel syndrome

Irritable bowel syndrome (IBS) affects between 7% and 21% of the general population and is a chronic condition. The symptoms usually include abdominal cramping, discomfort or pain, bloating, loose or frequent stools and constipation, and can significantly reduce the quality of life (Chey, Kurlander, & Eswaran, 2015). A precursor of IBS in children is called recurrent abdominal pain (RAP), which affects 0.3% to 19% of schoolchildren (Chitkara, Rawat, & Talley, 2005). Both IBS and RAP appear to be functional illnesses because no organic causes have been identified to explain the symptoms. In the United States, this results annually in more than 3.1 million physician visits and 5.9 million prescriptions. The total direct and indirect cost of these services exceeds $20 billion (Chey et al., 2015). Multiple factors may contribute to IBS, such as genetics, food allergies, previous treatment with antibiotics, severity of infection, psychological status, and stress. More recently, changes in the intestinal and colonic microbiome resulting in small intestine bacterial overgrowth are suggested as another risk factor (Dupont, 2014).

Generally, standard medical treatments (reassurance, dietary manipulation, and pharmacological therapy) are often ineffective in reducing abdominal IBS and other abdominal symptoms (Chey et al., 2015), whereas complementary and alternative approaches such as relaxation and cognitive therapy are more effective than traditional medical treatment (Vlieger, Blink, Tromp, & Benninga, 2008). More recently, heart rate variability training to enhance sympathetic/parasympathetic balance appears to be a successful strategy to treat functional abdominal pain (FAB) in children (Sowder, Gevirtz, Shapiro, & Ebert, 2010). Sympathetic/parasympathetic balance can be enhanced by increasing heart rate variability (HRV), which occurs when a person breathes at a resonant frequency that is usually 5–7 breaths per minute. For most people, it means breathing much slower because slow abdominal breathing appears to be a self-control strategy to reduce symptoms of IBS, RAP, and FAP.

This article describes how a young woman healed herself from IBS with slow abdominal breathing without any therapeutic coaching, reviews how slower diaphragmatic breathing (abdominal breathing) may reduce symptoms of IBS, explores the possibility that breathing is more than increasing sympathetic/parasympathetic balance, and suggests some self-care strategies to reduce the symptoms of IBS.

Healing IBS: A Case Report

After being diagnosed with IBS her junior year of high school, Cindy was told by doctors that her condition was incurable, that it could only be managed at best, and that she would have it throughout her entire life. With adverse symptoms including excessive weight loss and depression, Cindy underwent monthly hospital visits and countless tests, all of which resulted in doctors informing her that her physical and psychological symptoms were due to her untreatable condition known as IBS, of which no one had ever been cured. When doctors offered her what they believed to be the best option, morphine—something Cindy describes now as a "Band-Aid"—she was left feeling discouraged.

Hopeless and alone in her hospital bed, she decided to take matters into her own hands and began to pursue other options. From her cell phone, Cindy discovered something called "diaphragmatic breathing," a technique that involved breathing through the stomach. This strategy could help to bring warmth to the abdominal region by increasing blood flow throughout the abdomen, thereby relieving discomfort of the bowel. Although suspicious of the scientific support behind this method and because her previous attempts with traditional Western treatment had provided no benefit to recovery, she found no harm in trying. Lying back flat against the hospital bed, she relaxed her body completely and began to breathe. Cindy immediately became aware that she took her breath in her chest rather than her stomach. Pushing out all of her air, she tried again, this time gasping with inhalation. Delighted, she watched as air flooded into her stomach, causing it to rise beneath her hands, while her chest remained still. Over time, Cindy began to develop more awareness and control over her newfound strategy. While practicing, she could feel her stomach and abdomen becoming warmer. Cindy shares that for the first time in years, she felt relief from pain, causing her to cry from happiness. Later that day, she was released from the hospital, after refusing any more pain medication from doctors.

Cindy continues to practice her diaphragmatic breathing as much as she can, anywhere at all, at the first sign of pain or discomfort, as well as preventatively prior to what she anticipates will be a stressful situation. Since beginning her practice, Cindy says that her IBS is pretty much nonexistent now. She no longer feels depressed about her situation due to her developed ability to manage her condition. Overall, she is much happier. Moreover, since this time 2 years ago, Cindy has gained approximately 20 pounds, which she attributes to eating a lot more. In regard to her success, she believes it was her drive, motivation, and willingness to dedicate herself fully to the breathing practice that allowed her to develop skills and prosper. Although it was not natural for her to breathe in her stomach at first, Cindy explains it was necessity that caused her to shift her previously ingrained way of breathing. Sharing her story publicly for the first time in class, Cindy revealed that she had experienced shame for a long time because she felt that she had a weird condition, related to abnormal functions, which no one ever talks about. Cindy found that speaking out was very empowering, and she hopes to encourage others who are coping with a situation similar to hers that there is in fact hope for the future. Cindy continues to feel empowered, confident, and happy after taking control of her own body, and she acknowledges that her condition is a part of her, something of which she is proud.[1]

Background

Why should the body digest food or repair itself, when it will be someone else's lunch?

—paraphrased from Sapolsky (2004), *Why Zebras Do Not Get Ulcers*

From an evolutionary perspective, we were prey and needed to be on guard (vigilant) to the presence of predators. Today, the same physiological response pathways are still operating, except that the pathways are now more likely to be activated by time urgency, work and family conflict, negative mental rehearsal, and self-judgment. This is reflected in the common colloquial phrases: "It makes me sick to my stomach," "I have no stomach for it," "He is gutless," "It makes me queasy," "Butterflies in my stomach," "Don't get your bowels in uproar," "Gut feelings," or "Scared shitless."

Consciously or unconsciously, when threatened, our body reacts with a fight/flight/freeze response that diverts blood flow from the abdomen to deep muscles used for propulsion. This results in the reduction of peristalsis of the gastrointestinal tract. At the same time, the abdomen tends to brace to protect itself from injury. In almost all cases, the breathing patterns shift to thoracic breathing with limited abdominal movement. Because the breathing pattern is predominantly in the chest, the person increases the risk of hyperventilation because the body is ready to run or fight.

In our clinical observations, people with IBS, small intestine bacterial overgrowth (SIBO), abdominal discomfort, anxiety and panic, and abdominal pain tend to breathe more in their chest, and when asked to take a breath, they tend to inhale in their upper chest with little or no abdominal displacement. Almost anyone who experiences abdominal pain tends to hold the abdomen rigid as if the splinting could reduce the pain. A similar phenomenon is observed with

[1] See the in-depth interview with Cindy Huey in which she describes her experience of discovering diaphragmatic breathing and how she used this to heal herself of IBS: https://peperperspective.com/2017/06/23/healing-irritable-bowel-syndrome-with-diaphragmatic-breathing/

female students experiencing menstrual cramps. They tend to curl up to protect themselves and breathe shallowly in their chest instead of slowly in their abdomen—a body pattern that triggers a defense reaction and inhibits regeneration. If instead they breathe slowly and uncurl, they report a significant decrease in discomfort (Gibney & Peper, 2003).

Paradoxically, this protective stance of bracing the abdomen and breathing shallowly in the chest increases breathing rate and reduces HRV. It reduces and inhibits blood and lymph flow through the abdomen because the defensive posture evokes the physiology of fight/flight/freeze. The reduction in venous blood and lymph flow occurs because the ongoing compression and expansion in the abdomen is inhibited by the thoracic breathing. It also inhibits peristalsis and digestion. No wonder so many people with IBS report that they are reactive to some foods. If the GI tract has reduced blood flow and reduced peristalsis, it may be less able to digest foods that would affect the bacteria in the small intestine and colon. We wonder if a reduction in abdominal movement and an increase in bracing is a risk factor for SIBO.

Slow Diaphragmatic Abdominal Breathing to Establish Health

Digestion and regeneration occur when the person feels safe.

Effortless, slow diaphragmatic breathing occurs when the diaphragm descends and pushes the abdominal content downward during inhalation, which causes the abdomen to become bigger. As the abdomen expands, the pelvic floor relaxes and descends. During exhalation, the pelvic floor muscles tighten slightly, lifting the pelvic floor, and the transverse and oblique abdominal muscles contract and push the abdominal content upward against the diaphragm, allowing the diaphragm to relax and go upward, pushing the air out.[2]

This expansion and constriction of the abdomen occurs most easily if the person is extended, whether sitting or standing erect or lying down, and the waist is not constricted. If the body arches forward in a protected pattern and the spine is flexed in a C shape, it would compress the abdomen; instead, the body is long and the abdomen can move and expand during inhalation as the diaphragm descends (see Figure 1). If the person holds the abdomen tight or it is constricted by clothing or a belt, it again cannot expand during inhalation. Abdominal breathing occurs more easily when the person feels safe and expanded versus unsafe or fearful and collapsed or constricted.

[2] See the three-dimensional movement of the diaphragm: https://www.youtube.com/watch?v=hp-gCvW8PRY

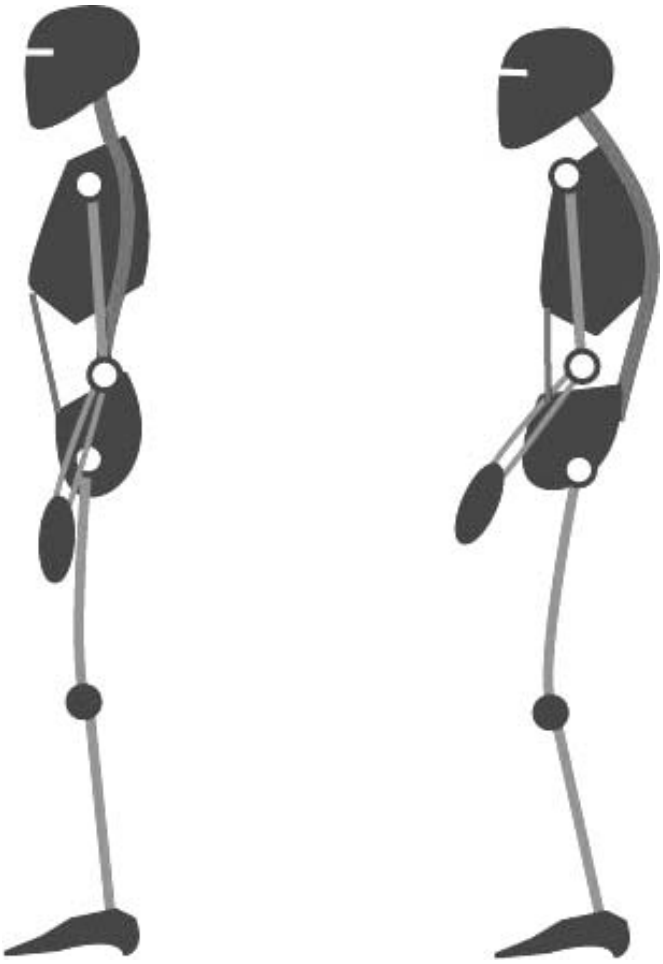

Figure 1. Erect versus collapsed posture. Note that there is less space for the abdomen to expand in the protective collapsed position. From Clinical Somatics: http://www.clinicalsomatics.ie/. Reprinted with permission.

When a person breathes slower and lower, it encourages blood and lymph flow through the abdomen and reduces the arousal and vigilance. This is the opposite state of the flight/fight/freeze response so that blood flow is increased in the abdomen, and peristalsis reoccurs. When the person practices slow exhalation and breathing, he or she slightly tightens the oblique and transverse abdominal muscles as well as the pelvic floor and allows these muscles to relax during inhalation. When the person breathes in this pattern effortlessly, he or she will often experience an increase in abdominal warmth and an initiation of abdominal sounds (stomach rumble or borborygmus), which indicate that peristalsis has begun to move food through the intestines (Peper, Booiman, Lin, Harvey, & Mitose, 2016).

What Can You Do to Reduce IBS?

There are many factors that cause and affect IBS, some of which are out of our control, such as genetics. The

suggestions here are focused on those things you can control, and on reducing risk factors that negatively affect the gastrointestinal tract.

Begin by integrating self-healing strategies that promote health and have no negative side effects before agreeing to do more aggressive pharmaceutical or even surgical interventions that could have negative side effects. Along the way, work collaboratively with your healthcare provider. Experiment with the following.

Consider Your Diet

Avoid food and drinks that may irritate the gastrointestinal tract: coffee, hot spices, dairy products, wheat, and many others. If you are not sure whether you are reacting to a food or drink, keep a detailed log of what you eat and drink and how you feel. Self-experiment by eating or drinking the specific food by itself as the first food in the morning. Then observe how you feel in the next 2 hours. If possible, eat only organic foods, which have not been contaminated by herbicides and pesticides.[3]

Reduce Stress

Identify and resolve stressors, conflicts, and problems that negatively affect you and drain your energy. Keep a log to identify situations that drain or increase your subjective energy. Then do problem solving to reduce those situations that drain your energy and increase those situations that increase your energy.[4]

Feel Safe

Often the most challenging situations that we *cannot stomach* are those where we feel defeated, helpless, hopeless, and powerless, or situations where we feel threatened—we do not feel safe. Reach out to friends and social services to explore how these situations can be resolved. In some cases, there is nothing that can be done except to accept what is and go on.

As long as we feel unsafe, we have to be vigilant and we are stressed, which affects the GI tract. Explore the following:

- What does safety mean for you?
- What causes you to feel unsafe from the past or the present?
- What do you need to feel safe?
- Who can offer support that will help you feel safe?

Reflect on these questions and then explore and implement ways you can feel safer.

Take Breaks to Regenerate

During the day, at work and at home, monitor yourself. Are you pushing yourself to complete tasks? In a 24/7 world with many ongoing responsibilities, we are unknowingly vigilant and do not allow ourselves to rest and relax to regenerate. Do not wait till you feel tired or exhausted. Stop earlier and take a short break. The break can be a short walk, a cup of tea or soup, or looking outside at a tree. During this break, think about positive events that have happened or people who love you and for whom you feel love. When you smile and think of someone who loves you, you may relax, and as you feel safe for that moment, regeneration can begin.

Observe How You Inhale

Take a deep breath. If you feel you are moving upward and becoming a little bit taller, your breathing is wrong. Put one hand on your lower abdomen and the other on your chest and take a deep breath. If you observe that your chest lifted upward and your stomach did not expand, your breathing is wrong. You are not breathing diaphragmatically.[5]

Learn Diaphragmatic Breathing

Take time to practice diaphragmatic breathing. Let the breathing rate slow down to about six breaths per minute. Exhale to the count of four and then let it trail off for two more counts, and inhale to the count of three and let it trail for another count. Practice sitting and lying down.

Sitting position. Exhale by feeling your abdomen coming inward slightly for the count of four and trailing off for the count of two. Then allow the lower ribs to widen and the abdomen to expand—the whole a trunk to expand—as you inhale while the shoulders stay relaxed, for a count of three. Allow it to trail off for one more count before you again begin to exhale. Be gentle; do not rush or force yourself. Practice this slower breathing for five minutes. Focus on the exhalation and allowing the air to just flow in. Give yourself time during the transition between inhalation and exhalation.

Prone position. While lying on your back, place a 2- to 5-pound weight such as a bag of rice on your stomach, as shown in Figure 2. As you inhale, push the weight upward and also feel your lower ribs widen. Then allow exhalation to occur by the weight pushing the abdominal content down, which pushes the diaphragm upward. This causes the breath to flow out. As you exhale, imagine the air flowing out

[3] See https://peperperspective.com/2015/01/11/are-herbicides-a-cause-for-allergies-immune-incompetence-and-adhd/

[4] For a detailed description of the practice, see https://peperperspective.com/2012/12/09/increase-energy-gains-decrease-energy-drains/

[5] See a video on the correct way to breathe in at https://www.youtube.com/watch?v=ldNnKVGxabA

Figure 2. Lying down and practicing breathing with a 2- to 5-pound weight on stomach From *Fighting Cancer—A Nontoxic Approach to Treatment* (p. 225), by R. Gorter and E. Peper, 2011, Berkeley, CA: North Atlantic. Copyright 2011 by Jana Asenbrennerova. Reprinted with permission.

through your legs as if there were straws inside your legs. When your attention wanders, smile and bring it back to imagining the air flowing down your legs during exhalation. Practice this for 20 minutes. Many people report that during the practice the gurgling in their abdomen occurs, which is a sign that peristalsis and healing are returning.

Observe and Change Your Breathing

Observe your breathing pattern during the day. Each time you hold your breath, gasp, or breathe in your chest, interrupt the pattern and substitute slow diaphragmatic breathing for the next five breaths. Do this the whole day. Many people observe that when they think of stressors or are worried, they hold their breath or breathe shallowly in the chest. If this occurs, acknowledge the worry and focus on changing your breathing. This does not mean that you dismiss the concern. Instead, for this moment, you focus on breathing and then explore ways to solve the problem.

If you observed that under specific circumstances you held your breath or breathed shallowly in your chest, then whenever you anticipate that the same event will occur again, begin to breathe diaphragmatically. To do this consistently is very challenging, and most people report that initially they only seem to breathe incorrectly. It takes practice, practice, and practice—mindful practice—to change. Yet those who continue to practice often report a decrease in symptoms and feel more energy and improved quality of life.

Summary

Changing habitual health behaviors such as diet and breathing can be remarkably challenging; however, it is possible. Give yourself enough time, and practice it many times until it becomes automatic. It is no different from learning to play a musical instrument or mastering a sport. Initially, it feels impossible, and with a lot of practice it becomes more and more automatic. We continue to be impressed that healing is possible. Among our students at San Francisco State University who practice their self-healing skills for five weeks, approximately 80% report a significant improvement in their health (Peper et al., 2014).

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