

# A Deeper Dive into IBS Relief



## IBS Relief Now!

### Session Two: Befriending and Cooperating with your Second Brain

#### Do We Really Have More Than One Brain

Long ago, well before people walked the earth, single-celled organisms flourished in the world's seas. These simple forms of life were basically floating stomachs. Across their cell membranes, they absorbed nutrients that were abundant in the water and released waste products back into the surrounding ocean.



Even though much has changed since then, we still retain many of the same basic structures found in those early creatures. But, clearly there have been a few system upgrades that have happened along the way. Our digestive system now runs 25 feet from mouth to anus. This tract is still basically an elongated tube that takes in food sources at one end

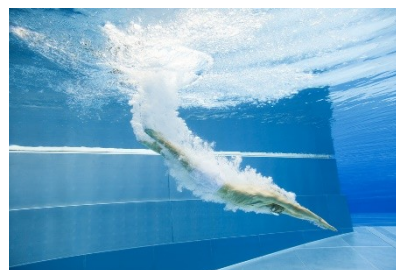
(mouth), extracts valuable nutrients by exposing food to acid baths that break it down into absorbable molecules in the middle regions (stomach and small intestine, with the assistance of our gall bladder, pancreas, and liver), and then prepares to release the unusable leftovers back into the world at the other end (colon). But, this release only happens after the gut has allowed countless trillions of bacteria that happily and helpfully live in our lower digestive tract a

chance to feed themselves while producing vitamins and vital hormonal building blocks that are absolutely essential to our survival.

This process takes an awful lot of coordination. So, as we went from simple, single-celled creatures to the modern human beings of today, Mother Nature gradually built a brain devoted to overseeing and coordinating all this activity. That master coordinator is called your Enteric Brain. It contains more nerve cells than any other system in your body outside of the central brain sitting inside your skull.

In a strange twist of fate, our modern and immensely complex human brain evolved to be able to physically move our gut (and us) around in space to give us broader access to food. All the while it is engaged in this effort, the brain works in glorious harmony with our enteric brain to assure we are well nourished, protected, and living successfully. However, as we know, sometimes that “harmony” is off-key, such as is the case with IBS.

#### Coordination and Cooperation with our Second Brain



Learning to function in coordination with our enteric brain is both simple and complex at the same time. Think for a moment about breathing. Whether

we pay attention to breathing or not, we still breath. Thank goodness for that! Breathing is an automatic

function that is managed by nerves in our brain stem that “talk” to our lungs, chest muscles, diaphragm, and blood, to assure that we are properly oxygenated and are expelling the right amount of excess carbon dioxide and nitrogen. Simple. This vital function happens without our having to pay any attention at all.

Except, sometimes we do pay attention! Breathing can also be controlled by voluntary muscles. When we are climbing a flight of stairs, or have just been scared by something, or are diving into a pool, lake, or sea, we can choose to take deeper breaths, slower breaths, or hold our breaths, depending upon what the situation calls for.

In a similar fashion, much about our digestive process happens automatically, outside our awareness and control and under the influence of our enteric brain. When it comes to managing IBS, we need to learn what functions we delegate to the automatic activity of the enteric brain and for what we will take responsibility using the control we have over our voluntary nervous system functions.

### **What does cooperating with our enteric brain look like**

Cooperation with our enteric (or gut) brain occurs at the intersection of four overlapping parts of us. Let’s look at each of them.

1. The activity of our autonomic nervous system
2. The activity of our emotional brain
3. Inner-directed awareness of our physical body – what is called interoception
4. Our ability to direct our attention using our conscious mind

**Point 1:** Our autonomic (or automatic) nervous system (ANS) regulates our internal organs, muscles, and general physical functioning. The ANS has two branches. Each branch regulates energy use. The PNS is active most of the time. It’s main role is to conserve energy. To accomplish that goal, the PNS down-regulates or calms our whole body and mind so that the energy we need to live can be most effectively extracted from the food we eat.

If it isn’t already obvious to you, I’ll spell it out: To manage IBS, you have to learn to keep your PNS active as often as possible. Digestion, nutrient absorption, and evacuation of waste from the body all work best when under the influence of our PNS.

**Point 2:** When we have trouble maintaining the calm, measured, relaxed attitude and arousal level that is the hallmark of PNS activity, we are likely shifting into a state of SNS dominance. The SNS is the second branch of the ANS and is what gets activated when we must exert ourselves physically or emotionally. The SNS is the home base of our “fight-flight-freeze” response. Our SNS can consume energy at a very rapid rate, as it should if we are truly facing a dangerous threat. Unfortunately, worry, fear, feeling chronically flustered or out of control ARE perceived by the ANS as clear and present dangers, which causes the SNS to become active.



You can imagine what happens in the gut when the SNS is chronically activated. We become captives of our own stress response system.

Big surprise: Having high SNS activity impacts digestion; sort of like routinely drinking from a fire hose. The digestive process is thrown off throughout the entire length of the digestive tract by chronically high SNS activity. This includes changes in the stomach’s acid balance, the ability of the small intestine to extract nutrients, the “leakiness” of the gut lining, the type and number of bacteria that flourish in our gut, which, in turn impacts everything from food cravings, to bloating, distention, gassiness, and pain, and the SNS also impacts bowel frequency and stool consistency (i.e., diarrhea, constipation, or both). Bottom line: learning to sooth your emotional brain by managing stressors more effectively is key to long-term digestive wellness.

**Point 3:** One of the key features of how our bodies adapt to our environment involves what’s called *habituation*. When something stays the same for a while we stop noticing it. Think, for example, of how

we hear the sound when an air conditioner turns on, and then stop noticing it until it turns off. We notice the change, not the habituated to sound of the AC. Our nervous system is oriented to noticing change.

Therefore, with IBS, we can get used to the increase in muscle tension, racy thoughts, worry patterns, changes in breathing and pulse rate, and certain patterns of altered activity in the digestive tract. We can adjust to a “new normal” and, as a result, stop noticing background tension levels early enough that we can redirect gut activity using our voluntary nervous system before the gut gains negative SNS-fueled momentum. In short, we habituate to states of chronically elevated distress and gradually settle into IBS habits.

A crucial step in regaining effective digestive control involves becoming aware of what is happening in the gut and in the rest of the body. **Interoception** means inner-directed perception. Becoming interoceptive involves broadening our sensitivity to a wider range of



bodily sensations. The world of skill-building has taught us that we can't learn without feedback about what we are currently doing.

Therefore, to learn to reregulate your digestive tract requires getting feedback from the digestive tract, as well as from other parts of the body.

Our bodies are “alive with sensation” and with IBS, people tend to be primarily aware of what is wrong and uncomfortable, which creates a feedback loop of discomfort -> anxiety -> body tension -> worsening of IBS symptoms -> anxiety, etc. That is why using attention with positive intention can be so crucial.

**Point 4:** Using conscious attention – intentionally – can powerfully impact whatever we pay attention to. Try to do this simple experiment: “Just breathe normally.” You can't! The moment you pay attention to your breath, it shifts from unconscious, autonomic control to conscious, voluntary control and changes your breathing from what it was before you paid attention.

Ellen Langer, PhD, the renowned Harvard psychologist said, **“Wherever you put the mind, the body will follow.”** Her words emphasize the importance of paying attention to where you put your attention. But, when it comes to managing IBS, there is something really important that her statement leaves unsaid. That is, it is important to watch **how** you put your mind into focus. In other words, what is the form or emotional packaging of your attention. Anxious, worried, or fear-filled interoception will result in intensification of anxiety, worry, and fear. Observing with a calmer, more gentle and compassionate eye, results in a far different impact on the body. Carefully noticing what your body or mind is doing allows you to observe the goings on of your body from the relative safety of a PNS-dominant perspective. As strange as that sounds, learning to adopt a mindful attitude to your body's sensations, including the really unpleasant ones, has a calming effect on your whole body and mind.

### Valuing Your Vagus

Emerging from the base of your brain are 12 cranial nerves. The 10<sup>th</sup> one is called the **vagus nerve**. The vagus nerve travels from the brain stem and branches out to every organ in our body. When the vagus is stimulated, you slide into the calm, energy conserving state characterized by the PNS. IBS Relief Now! builds upon what we have learned about how to stimulate the vagus nerve to quiet the out-of-control pyrotechnics of your digestive system.

Here is the link to an article that describes the relationship between the vagus nerve and IBS activity (<http://bit.ly/GutBrainVagus>). While we will have much more to say about the role of the vagus in IBS management, for now turn to the next page where I offer several ways to stimulate the vagus and continue the process of retraining your digestive tract to settle down, settle in, and take another step forward with restoring your digestive wellness.

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# Facts & Acts

## FACTS – Summary of important points

- Your body has at least two brains. When it comes to managing IBS, your enteric (gut) brain and your emotional brain play outsized roles
- The brain inside your skull developed to move your “gut brain” around – toward food sources and away from predators
- Because of how interconnected our emotional brain and our gut brain are, what happens in our gut affects our emotional states, and our emotional states exert a powerful influence on our digestive activity
- We have automatic systems that operate outside of conscious awareness. Most of our functions operate automatically. We also have voluntary, conscious systems. Managing IBS involves using conscious awareness to become tuned into what is happening internally (interoception) and through becoming tuned in, we learn to have a calming, quieting influence over the functions, like digestion, that normally function in the background outside of conscious control.
- Ellen Langer, PhD, renowned researcher, reminds us: “Wherever you put the mind, the body will follow.” Learning to put the mind’s focus on the body in a calming, soothing, non-reactive way, trains the body and the gut to operate in a smoother, more regulated way.
- Many of the skills that this program teaches are effective because of their impact on the vagus nerve system, the most central and

## ACTS – What you can begin doing NOW

- This session’s primary focus is on learning to direct the natural resources you have in your “main brain” and body by harnessing the power of your mind. When you tune into how your gut’s sensations, your various emotions, and ever-changing thoughts flow together, then you can begin to influence that flow in more positive ways that reduce IBS symptom patterns. Here is a simple practice to help your attention become a more useful tool in re-regulating your digestive system and restoring your health.
  - Begin by taking 5 minutes to notice what is already happening in your body and especially in your lower digestive tract. Don’t change anything. Before changing something, we must learn what is already there.
  - Then, begin introducing a shift in the tension level. Imagine that right in the center of your abdomen there is a ball of positive energy that is gradually radiating warmth outward through you. Imagine that feeling of warmth spreading out through the intestine and to all the other organs in your abdomen.
  - With every minute, your abdomen feels comfortably warmer, calmer, and more relaxed. Everything the warmth touches softens, becomes more comfortable, and more relaxed. Do this for 5 more minutes.
  - Congratulate yourself on building your interoceptive skill!

**Stay Tuned:** In the *Deeper Dive* connected to **Session**

**Three,** I will be introducing you to your microbiome – the

*dynamic world inside your digestive tract and the role it plays in generating IBS symptoms. More importantly, we will be covering what you can do to regulate your digestive and your health based on your food and nutritional choices.*