



THE GUT BRAIN CONNECTION

How it effects The body and mood

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THE GUT BRAIN CONNECTION

Learn tools to help correct your gut,
improve your body composition and mood

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TRANSFORMATION SOLUTION**

Doctor Emi is board certified in Internal Medicine with specialized training in holistic and functional medicine. She graduated Magna Cum Laude with a Degree in Molecular Biology from the University of Texas at Austin. She received her Medical Degree from the University of Texas Southwestern Medical Center. Doctor Emi has received functional medicine training through the Institute of Functional Medicine and through the American Academy of Anti-Aging Medicine.

Doctor Emi sees medicine as a field of service and a dynamic opportunity to help change lives.

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CHAPTER

INTRODUCTION

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INTRODUCTION

Have you ever had a "gut wrenching experience" or felt "butterflies in your tummy"?

There is a reason terms like this exist. The gut and brain connection is real.

The brain has a direct effect on the stomach. The connection goes both ways.

These two organs are connected both physically and biochemically in a number of different ways.

Our "second brain" communicates with the brain in our head. Together, "our two brains" play a key role in certain diseases in our bodies and our overall health.

In this E-book we will go over the physical gut-brain connection, gut health and anxiety, neurotransmitters in the gut and how the gut communicates to the brain.

We will also discuss leaky gut and natural herbs to reset the gut-brain connection.





2

CHAPTER

THE PHYSICAL GUT BRAIN CONNECTION

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THE PHYSICAL GUT BRAIN CONNECTION

The gut first described as the second brain in 1907, hosts the largest concentration of immune cells in your body. Both our gut and our brain originate early in embryogenesis from the same clump of tissue which divides during fetal development.

Later the two nervous systems connect via a cable called the vagus nerve — the longest of all the cranial nerves whose name is derived from Latin, meaning “wandering.” The vagus nerve meanders from the brain stem through the neck and finally ends up in the abdomen. There’s the brain-gut connection.

The communication system between your gut and brain is called the gut-brain axis. The gut-brain axis includes both endocrine hormones as well as the nervous system.

Your gut contains 500 million neurons, which are connected to your brain through nerves in your nervous system.

Neurotransmitters made in the Brain affect the Gut

The ENS, is a widely distributed network of neurons spread throughout two layers of gut tissue.

The ENS can work both independently of and in conjunction with your brain, although you are not conscious of your gut “thinking”, the ENS helps you sense environmental threats, and influences your response.

They Key Functions of the Gut:

- Digestion and Absorption
- Forming an Intestinal Barrier
- Immune Regulation
- Gut Microflora
- Nervous System



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CHAPTER

GUT HEALTH AND ANXIETY

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GUT HEALTH AND ANXIETY

Do you experience stomach pains when you have anxiety or stress? You're not alone, stomach pains are one of the most common symptoms of stress and anxiety.

When your nervous or anxious your body releases hormones and chemicals into the digestive system. This can affect microorganisms that live along your gut, decreasing antibody production. The chemical imbalance can contribute to several gastrointestinal conditions.

The ENS communicates with your brain through the nervous system and your hormones.

An exchange of information also takes place between your gut and the immune system, affecting your overall mental health. Its also connected to diseases like parkinson's and Alzheimer's, autism, amyotrophic lateral sclerosis, multiple sclerosis, pain and anxiety.





THE FIGHT OR FLIGHT RESPONSE AFFECTS THE GUT

When your body is under stress, it releases inflammatory cytokines. These little chemical messengers bring a part of our immune system into high alert. Our body reacts to all stress as if it were an infection, and to chronic stress as if it were a chronic infection. The immune system works wonders.

Inflammation saves your life every day from all the pathogens, like the flu and strep. But chronic levels of inflammatory response lead to all sorts of chronic disease. For example; depressive disorders, high blood pressure, atherosclerosis, and autoimmune diseases.



CHAPTER 4

LEAKY GUT

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LEAKY GUT

Bacterial imbalance is the leading cause of leaky gut syndrome. "The human gut contains enough endotoxin, inflammatory mediators, and bacteria to kill the host many times over.

A healthy functioning intestinal mucosa is the body's primary line of defense against these potentially lethal agents.

When someone has a leaky gut it means that the gut lining is damaged and cannot function as a barrier anymore. The holes become larger and allow bad bacteria and substances to enter your system and cause considerable damage to health.

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CHAPTER

HERBS AND SUPPLEMENTS FOR HORMONE BALANCING

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HORMONE BALANCE

ASHWAGANDHA

“Indian Ginseng” - has anti-inflammatory and antioxidant properties
Can help the adrenal glands make small amounts of DHEA-S on Demand to Shut off Cortisol Production



GABA

GABA is an amino acid manufactured in brain cells from glutamate. This primary neurotransmitter, abundant in the cerebral cortex, increases the production of alpha waves (related to a relaxed, yet mentally focused state) while decreasing beta waves (associated with hyperactivity, nervousness, and fleeting thoughts)

CHROMIUM

Chromium has been shown in multiple studies to improve insulin resistance by its effect on the insulin receptor- absorption of chromium can be tricky in pill form



GUT HEALING

1 GLUTAMINE

Research shows that L-glutamine benefits leaky gut, muscle growth, running speed, and diabetes while reducing sugar and carb cravings.



2 PROBIOTICS

Probiotics may restore the composition of the gut microbial communities. The extra good good bacteria helps repopulate your gut and fight off any remaining bad bacteria.

3 CURCUMIN

Studies have shown that that the effects of curcumin on gut microbiota, there was an overall increase of bacterial species up to 69%



A close-up photograph of an aloe vera plant with its characteristic thick, green, serrated leaves. The plant is positioned in the foreground, with some leaves extending towards the center of the frame. The background is a soft, out-of-focus light grey or off-white wall. The overall lighting is bright and even, highlighting the texture of the aloe vera leaves.

“

“Many of the gut signals reaching the brain will not only generate gut sensations, such as the fullness after a nice meal, nausea and discomfort, and feelings of well-being, but will also trigger responses of the brain that it sends back to the gut, generating distinct gut reactions. And the brain doesn’t forget about these feelings, either. Gut feelings are stored in vast databases in the brain, which can later be accessed when making decisions.”

-
Emeran Mayer, The Mind Gut Connection

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IMPROVING YOUR GUT HEALTH TO ACHIEVE HORMONE BALANCE

Maintaining the integrity of the gut helps protect against the toxins and xenoestrogens that can cross into blood and increase the risk of cancers. Subscribe to our Newsletter to learn more on how to reset your gut health.

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