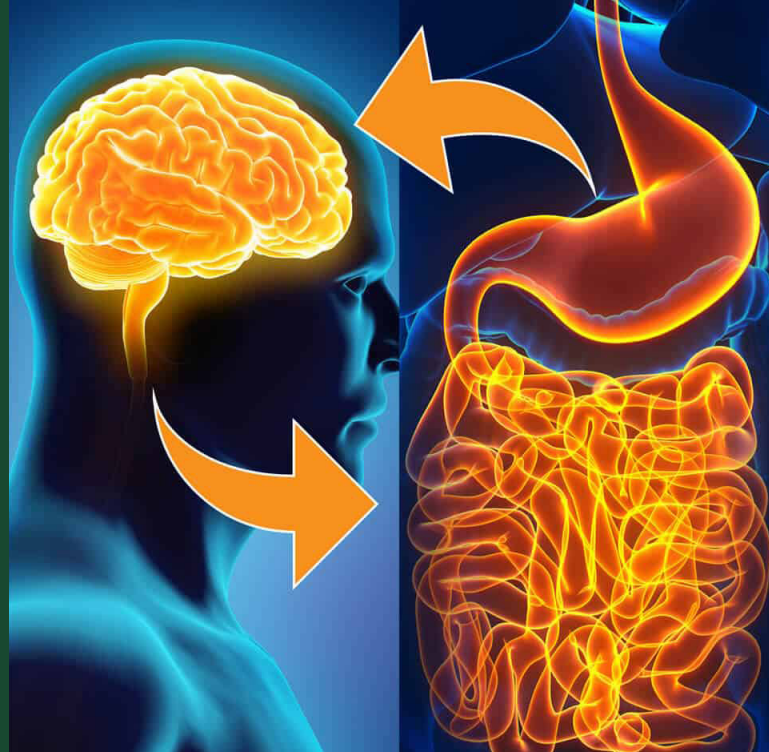


BIOHACK YOUR GUT BACTERIA

Boost Your Mood, Happiness and Promote Healthy Food Cravings

Courtesy of



Bacteria have been known to be detrimental to our health for roughly 350 years, but in recent decades we learned that there are friendly bacteria too, often called probiotics. Recent studies revealed that ingesting certain probiotics regularly affected the activity and connectivity in the emotion centers in brains, producing changes associated with healthier emotional processing.

With all this happening in your gut, there's another major connection going on: bacteria and food cravings. Since bacteria can trigger certain emotions, they can also trigger certain food cravings. The new science surrounding the microbiome provides many opportunities for developing products that can mediate GI function and thereby influence overall health.



THE GUT-BRAIN AXIS

More and more scientists are referring to the gut as “the second brain.” So much information is processed there that it's easy to begin to wonder who—or rather what—is in control of our bodies when you start falling down that rabbit hole. The twist is that there's a lot of truth to it and an incredible amount of new research is proving this. Researchers have found that the bacteria in your gut really do influence your emotions.

It sounds far-fetched, but it's true. Gut bacteria have been implicated in a range of conditions that affect mood, especially depression and anxiety. Yes, emotions are generated in your brain but the bacteria in your gut are able to influence in ways your five senses don't. What research has discovered so far is that there are bacteria that can make you feel good and bacteria that make you feel bad. Gastrointestinal complaints have long been associated with depression, anxiety, insomnia and many other diseases we previously thought of as solely “mental” illnesses.

The World Health Organization (WHO) rates depression and anxiety as the number one cause of disability, affecting 300 million people worldwide. The link between your gut and the brain shakes up the belief that mental illness is purely a chemical imbalance in the brain. This also changes how we can potentially treat it, too.

Bacteria have been known to be detrimental to our health for roughly 350 years, but in recent decades we learned that there are friendly bacteria too, often called probiotics. In 2004, Nobuyuki Sudo at Kyushu University, Japan discovered that mice lacking microbes had an abnormal response to stress. They were testing to see the effect physical disease had on these mice and were taken for a loop when differentiating behaviors cropped up.

The usual germ-covered group displayed calmer behavior while the sterilized mice reacted more severely to stressors. Adding healthy bacteria back to the mice corrected the stress response. And so the term “gut-brain axis” was born.

Various fields of research worked to duplicate Sudo’s results and target specific correlations. One such pattern that emerged was a dramatic drop in

serotonin, a neurotransmitter linked to depression. Reasserting balance in the gut microbiome corrected the emotional imbalance. In 2013, this led to the concept and term “psychobiotic.” Psychobiotics are a class of probiotics believed to have a positive impact on mood in humans. These findings suggest we can use our diet to positively influence our mood.



HOW ON EARTH DOES THE GUT COMMUNICATE WITH THE BRAIN?

Near the turn of the century, researchers discovered that microbes can produce almost every neurotransmitter found in the human brain, including serotonin and dopamine, your feel-good chemicals. The thing is that the brain has this thing called the “blood-brain barrier” to protect it from outside influence. This is supposed to prevent cells, particles and certain molecules—including neurotransmitters—from getting in, but here we had microbes seemingly breaking the rules.

It wasn’t until 2017 when researchers finally figured out how the two were connected: by special cells in the gut lining. Said cells can detect neurotransmitters produced by microbes, resulting in a pulse being triggered in the vagus nerves (located in your brain), thus directly connecting the gut to the brain. More evidence suggests that the gut microbes and the molecules they produce can directly modulate the integrity of the blood-brain barrier, too.

Researchers have also discovered a link between gut bacteria and the way healthy people process emotions. Kirsten Tillisch and Emeran Mayer,

both at the University of California, Los Angeles, examined the gut microbes of 40 women, dividing them into two groups: those with lots of bacteria from the genus *Prevotella*, and those with lots from the genus *Bacteroides*.

Using MRIs to observe specific parts of the brain while women viewed emotionally disturbing images, researchers discovered that each group had distinct brain activity. The group with plenty of *Prevotella* bacteria had less activity in the hippocampus, which is correlated with depression.

Tillisch and Mayer took their findings a step further by influencing the way people’s brains processed emotions by feeding them probiotics. Brain scans revealed that ingesting certain probiotics regularly affected the activity and connectivity in the emotion centers in the brain, producing changes associated with healthier emotional processing.



FLORA BLITZ:100 THE FAST WAY TO REPROGRAMMING YOUR CRAVINGS

The findings are pretty darn cool and promising but they come with a caveat: researchers are still figuring out which bacteria promote good moods. Thousands of gut microbes have been identified but one trend is certain: depressed people have reduced numbers of friendly bacteria.

What we do know is there's a connection between the mind and gut, that gut feeling and all. We also know that gut bacteria communicate with the brain in three ways:

- 1) send signals up the vagus nerve,
- 2) influence immune cells in the gut, and
- 3) produce chemicals that affect the brain and travel in the blood.

Nutritional studies provide a compass pointing towards which bacteria love healthy food, and which love junk food. OHS is tapping into this connection with Optimal Flora Blitz 100, a therapeutic dose of probiotics that will clear out your gut of bad bacteria and come ready to be programmed to crave healthier foods.

Your gut microbes cause a large portion of your cravings due to the gut-brain axis. 90% of your serotonin, the neurotransmitter thought to be responsible for your mood, is made in your gut and is impacted by the state of your gut microbiome.

Bacteroidetes thrive off of fats while Prevotellas thrive off of carbohydrate sources. When we eat sugar, we

literally feed the Candida yeast and other harmful microorganisms living in the gastrointestinal tract. This can lead to fatigue, low energy, and hormonal imbalance.

When our gut falls out of balance, the cells of the intestine become inflamed. We end up absorbing very little from the food that we eat. The cells of the intestine lose their ability to do work. This means that food might sit stagnant in the small intestine, where it ferments and putrefies. The large intestine may lose motility, or the ability to move. Most importantly, the wall of the intestines becomes irritated and leaky. A leaky gut allows large particles of food, toxins from bacteria, and Candida to pass into the bloodstream.



OPTIMAL FLORA BLITZ 100

A surge of over 100 billion flora to biohack your gut



This product is intended to be a swift intervention of sorts when you feel cravings for sugary or greasy food coming on. This is your red flag that your gut microbiome is out of whack.

Flora Blitz 100 delivers a surge of over 100 billion CFU of 11 different healthy bacteria to kill off the bad bacteria triggering the unhealthy cravings, along with creates a blank microbiome slate. This huge, therapeutic dose allows you to jump

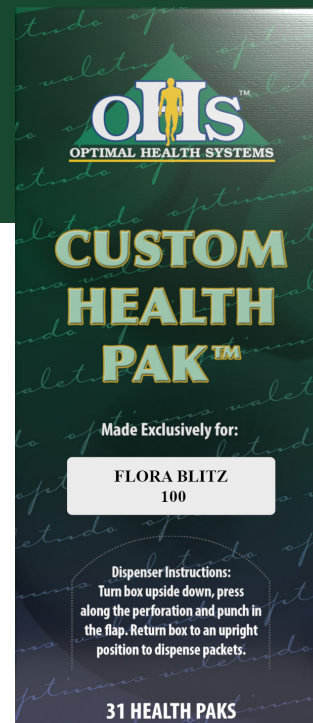


back on the healthy food wagon and give yourself a chance to develop permanent, healthy dietary habits.

To maximize the culture in your gut, you want to include a wide range of raw, plant-based foods in your diet. Pick whole grains over white bread, nuts, seeds, legumes, and fruit over candy and juices on a daily basis.

Dosing

Take 1 packet daily.



Supplement Facts

Serving Size: 1 Daily Supply
Servings Per Container: 30

Amount Per Packet		% Daily Value*
High CFU Probiotics	100 billion CFU	**
as Lactobacillus acidophilus, Bifidobacterium lactis, Lactobacillus plantarum, Lactobacillus paracasei, Marine polysaccharide, Fructooligosaccharide.		
Jerusalem Artichoke	50 mg	**
Opti Blend™ Delivery System	10 mg	**
(Amylase, Protease I & II, Lipase, Invertase, Maltase, Cellulase, Lactase, Phytase, Zinc, Copper, Manganese, Molasses)		
Patented Stabilized Heat Resistant Probiotics	1.25 billion CFU	**
(DDS-1™ Lactobacillus acidophilus, Bifidobacterium bifidum, Enterococcus faecium, Lactobacillus bulgaricus, Lactobacillus plantarum, Lactobacillus salivarius, Streptococcus thermophilus, bifidobacterium infantis, Bacillus coagulans).		

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These statements have not been evaluated by the Food and Drug Administration and are not intended to diagnose, treat, cure or prevent any disease.