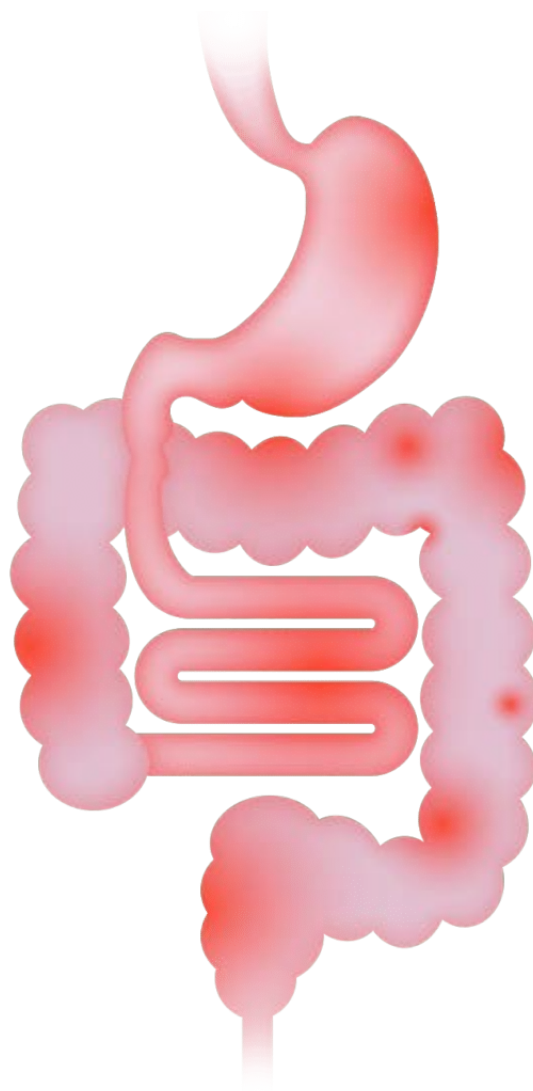


The
GUT / BRAIN
Solution

What
LEAKY
GUT
Does To
YOUR
BRAIN

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Introduction

For years, experts ridiculed the suggestion that gut health might influence the mind. However, modern research tells us a very different story. Increasing evidence points to a clear connection between our brain and our gut. Do you struggle with anxiety, depression, or brain fog? If so, you should not ignore your gut. Hippocrates, the father of medicine, claimed “**all disease begins in the gut**” and increasing scientific research is proving him right.

Read this report to find out how a leaky gut impacts your mind, and what you can do to restore a healthy gut.

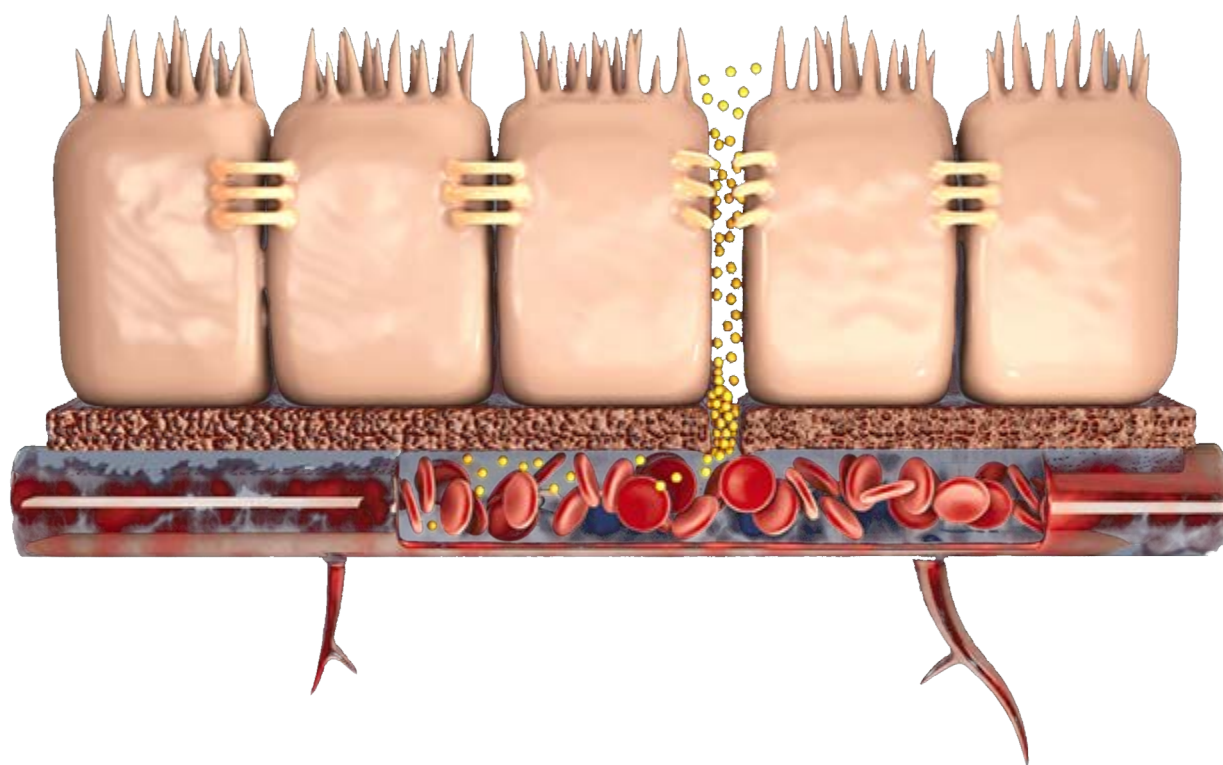
What is LEAKY GUT?

Leaky gut, also called increased intestinal permeability, is exactly what it sounds like — it’s an inflammatory condition in which the gut lining is compromised and becomes “leaky”, allowing inflammatory molecules out of the gut and into your bloodstream.

Let’s talk about our **digestive anatomy** — when we eat, food passes through our body, along with bacteria, viruses, and toxins. Inside our guts (i.e. our small and large intestines) there is a lining a single cell thick that forms a protective barrier (aka the gut lining) to separate the contents of the gut from the bloodstream. This layer of cells is held together by tight junctions. These little gaps allow nutrients into the bloodstream and keeps potentially harmful substances out. Think of tea leaves in a teabag. The gaps in the fabric of the teabag are so small that the tea leaves stay inside and only the flavor gets through. This same concept is happening within your gut.

Your **gut microbiome** is full of billions of good bacteria (aka “probiotics”), which play a central role in protecting the gut barrier and working to ensure that the junctions stay healthy and tight. Unfortunately, environmental influences like stress, medications, food additives and chemicals can change the healthy balance of good and bad bugs in our guts. As a result, the environment in our guts becomes imbalanced, eventually causing inflammation in the gut.

This inflammatory process breaks open the tight junctions. Now, the unhealthy gut is “leaky”, and the gaps are bigger, meaning some of the harmful intruders are going to come through. Back to our tea analogy - it's as if the teabag fabric was too loose, and now we have tea leaves all through our drink! When this leaking happens in our gut, the immune system detects the intruder somewhere in your blood and sounds an alarm throughout your body and up the vagus nerve into your brain. **This alarm leads to inflammation and triggers an autoimmune response, eventually affecting many systems throughout the body and causing a host of problems, such as stomach pain, fatigue, irregular bowel movements, bloating, gas, cramps, headaches, skin disorder, joint pain, and more. When a leaky gut isn't healed, it leads to continuous body-wide inflammation.**



What is LEAKY BRAIN?

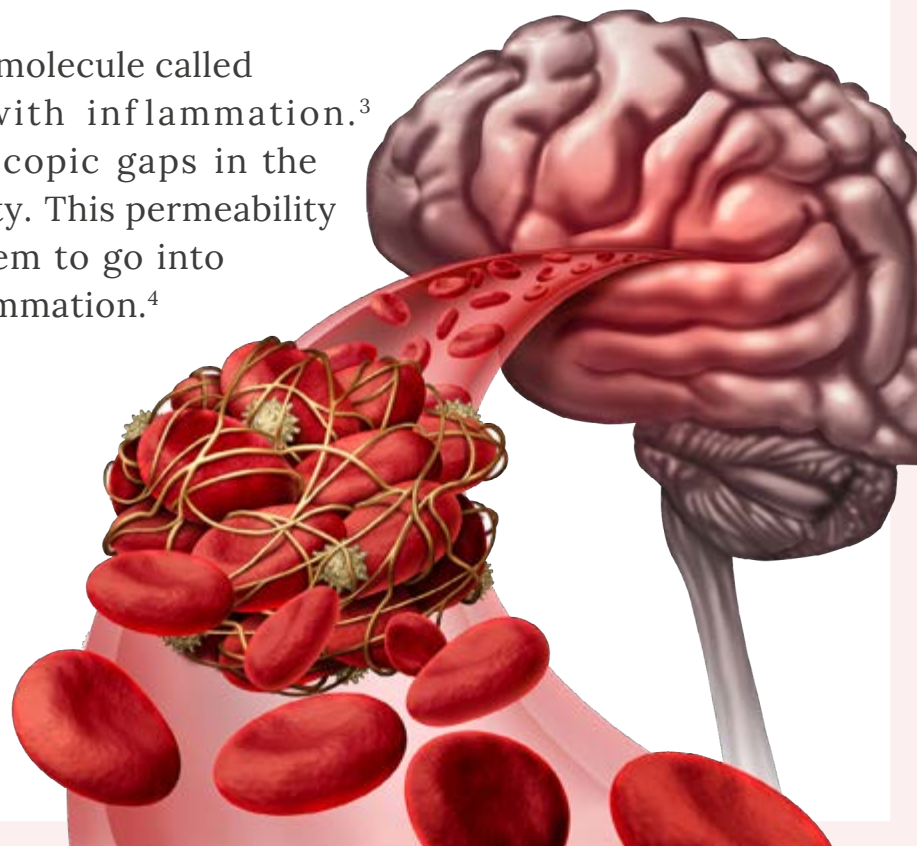
When your gut is leaky and there's body-wide inflammation, your brain will experience inflammation too. The inflammatory signals will journey from your brain back down into your gut, instructing your gut and your entire body to go crazy. This is the gut-brain connection — an expressway between your belly and your brain, and it's a big part of how leaky gut influences your state of mind.

Just like your gut, your brain has a protective blood-brain barrier (BBB). This is like another tea strainer, where the bloodstream flows into the brain. If inflammation breaks them apart, toxins can leak into the brain, which can lead to a slew of mental issues, including depression, anxiety, and brain fog.

There's been a lot of great research recently that confirms leaky gut's connection to "leaky brain".¹ Two of the main proteins that help detect both gut and brain permeability are occludin and zonulin. When occludin and zonulin levels go up, the tight junctions get large gaps between them, so elevated antibodies against occludin and zonulin can be used to determine leaky brain.²

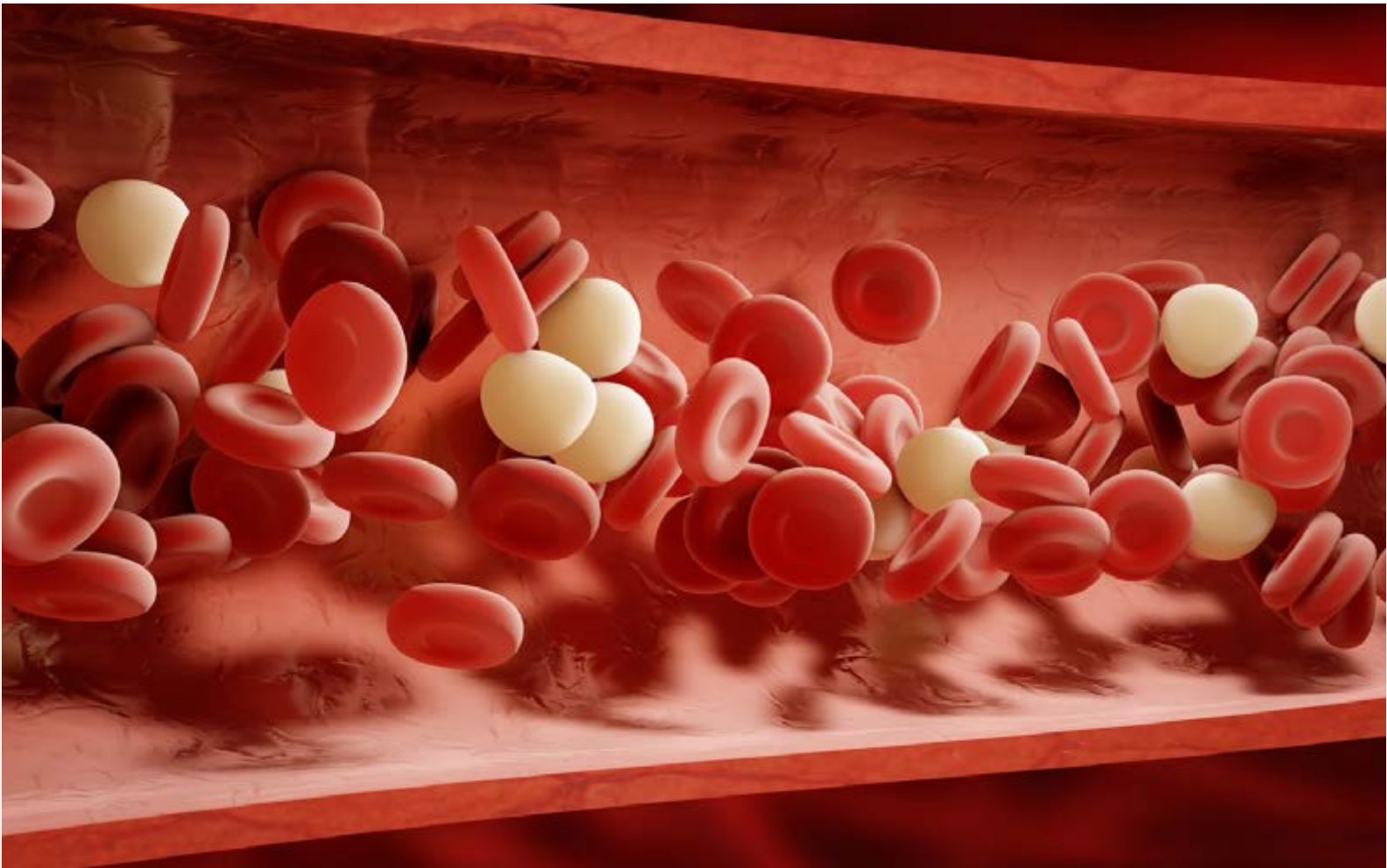
Researchers are also investigating a molecule called microRNA-155, which increases with inflammation.³ This molecule can create microscopic gaps in the BBB, which exacerbates permeability. This permeability can cause your brain's immune system to go into overdrive, causing more brain inflammation.⁴

One of the major proinflammatory substances that can cross a leaky brain barrier is bacterial coatings. Bacteria remove their outer coatings when they're finished with them, like when you take off your coat when you go into your house after being out in the cold.



Imagine taking off a different coat and dropping it in the hallway at the front door of your apartment every day — they would start to pile up after a while. The coats that certain bad gut bugs wear are called lipopolysaccharides, or LPS. These coats are awful inflammatory coats that can definitely pile up. This probably wouldn't be a problem until the front door opens and the coats fall out into the shared hallway of your apartment building. That's the bacterial coatings leaving the gut when you have leaky gut and making their way into your bloodstream. Consider how upset your neighbors would be if there were coats strewn all over your shared hallway.

Your brain and your body get extremely upset — in fact, they become inflamed in reaction to being inundated with these LPS coats. In this way LPS can directly damage the BBB, allowing pathogens, environmental toxins, and LPS itself, to enter the brain and induce brain inflammation.⁵ **Researchers are exploring how this brain inflammation is associated with cases of depression, anxiety, brain fog and autoimmune brain problems.⁶ While some symptoms might look like depression, the root cause may actually be something like leaky gut leading to leaky brain.**



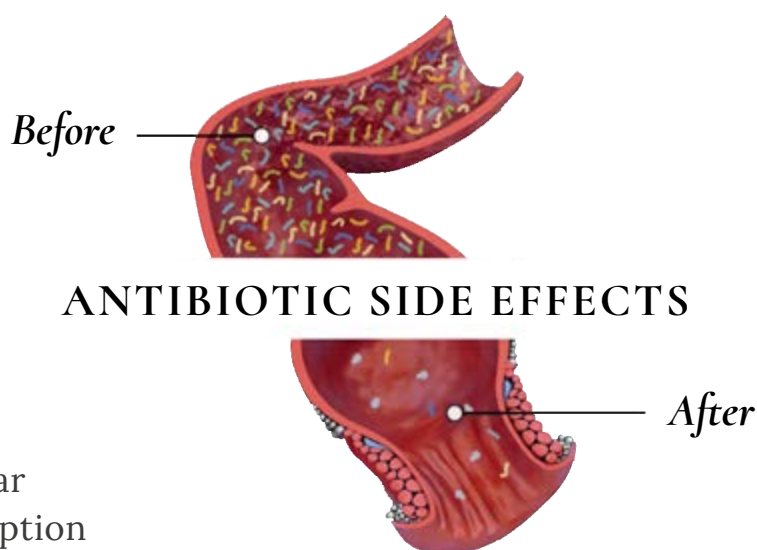
What CAUSES Leaky Gut?

There are a range of factors that can injure the gut lining and cause leaky gut.

One of the most common triggers is **an inflammatory diet**. Gluten, sugar, dairy, and processed foods can all add to inflammation of the gut lining.

Leaky gut can also be caused by certain **medications, such as antibiotics**.

Antibiotics are designed to kill bacteria. Although that includes the bad bacteria that make you sick, it also includes the good bacteria your body needs. Scientists have found that when significant damage has been done to the gut through repeated courses of antibiotics, some bacterial communities disappear and are unlikely to return.⁷ This disruption of intestinal harmony can affect many processes in the body, including healthy food digestion. If there's a lack of diversity among gut bacteria due to antibiotics and other medications, food is not properly digested and ends up rotting in your intestines. Once your intestinal bacteria are out of balance, this creates the perfect environment for harmful pathogens to overgrow and flourish. In response, your body activates its immune system, resulting in inflammation, which over time breaks open tight junctions, leading to a leaky gut.



Long-term use of **non-steroidal anti-inflammatory drugs (NSAIDs)** can also really irritate the intestinal lining and damage protective mucus layers.⁸ Common NSAIDs include aspirin, ibuprofen, and pills like that. It's so typical in our culture for people to just pop a painkiller, but doing this long-term results in inflammation that leads to intestinal permeability.

Stress can also mess with our gut lining. When we get agitated or distressed, our cortisol levels spike. Increased cortisol makes gut junctions larger, therefore increasing leaky gut. This response to stress damages the gut lining over time. One study even shows marital hostility could raise the risk of gut leaks.⁹ Married couples were led into discussions on sensitive topics while researchers assessed their arguing styles and collected blood samples before and after the interactions. The men and women engaged in more hostile interactions had higher levels of a marker of leaky gut syndrome.



Leaky gut has also been linked to **food sensitivities**, which occur when the body activates an immune response against certain food particles that enter our bloodstream. When leaky gut develops, bigger food particles like lactose and gluten can pass through the intestinal wall into the bloodstream. Once these bigger particles go into the bloodstream, the body triggers an immune response. Food sensitivities develop when this continues for longer periods of time.

How to RESTORE a HEALTHY GUT LINING

Find Time To Relax

Finding ways to create an anti-stress lifestyle is essential for both gut health as well as overall wellbeing. When we're stressed, our bodies release a cocktail of hormones that prepare us to fight, fly, or freeze, which then impacts our microbiome.¹⁰

Stress has a profound effect on gut flora leading to overgrowth, undergrowth, lack of

diversity, bad types of bacteria, many other troubling outcomes. One practical way to relieve stress is to find something to laugh about – researchers studied patients with atopic dermatitis, a disease typically accompanied by gut flora problems and found that after watching funny movies every day for a week, their gut flora had changed to look much healthier.¹¹

Move Your Body

Exercise can positively impact our gut bacteria.¹² One small study involving analysis of fitness levels and stool samples of 37 people suggests that exercise boosts production of “good” bacteria, which fuel processes that can fortify the intestinal lining and prevent leaky gut.¹³

Say Goodbye to Toxins

There are often hidden toxins that overwhelm our immune system. For example, are we storing our food in containers made from the gut toxin BPA?¹⁴ Or are we living in homes covered in gut-harming mold? Or are we sleeping on new beds sprayed in toxic flame-retardant chemicals? There are endless chemicals, pesticides, pollutants and more gut-harming toxins all around us. Even the electromagnetic waves from our smartphones can cause intestinal trouble. So finding and cleaning out these toxins is often instrumental in healing the gut.

Drink Water Instead...

Alcohol has a negative impact on the diversity and quantity of your gut bacteria and can kill off beneficial bacteria in the gut.¹⁵ It has been connected to increased inflammation in the gastrointestinal tract. Furthermore, excessive alcohol has also been linked to increased gut permeability.¹⁶ Why not grab a big bottle of water, or swig a refreshing glass of kombucha instead?



Get Dirty

Our hatred of bacteria in this day and age is ironically making us sick. It looks like having a pet and sharing their germs could actually be great for our microbiomes, reducing the risk of allergies and obesity.¹⁷ Studies also show that growing up in microbe-rich environments, such as on a farm, can protect children from chronic disease as they get older.¹⁸ We also know that exposure to dirt is great for the gut microbiome and research has shown that people living traditional rural lives have more diverse gut flora as a result.¹⁹

We are inundated with chemical-laden antibacterial cleaners for both our bodies and homes. Most cleaners are like antibiotics: they destroy everything, including beneficial bacteria. Less toxic cleaners such as vinegar, castile soap, and lemon juice are effective enough. Limiting our exposure to chemicals such as chlorine can help protect our health as well.

Eat Anti-Inflammatory Whole Foods

Although each of us have different problem foods, for many people, limiting gluten and dairy will have a positive effect on their gut microbiome. Sugar triggers inflammation, feeds unhealthy bacteria and organisms such as *Candida albicans*, a type of fungus that grows in the gut and when overproduced, breaks down the wall of the intestine. In one study, mice fed high-sugar diets lost gut microbial diversity, and developed leakier guts: the tight junctions in their walls actually opened wider due to inflammation caused by high sugar intake.²⁰ Artificial sweeteners are also bad news — research has

found that they cause glucose intolerance in some groups of people by altering the gut microbiome.²¹ Too much fat in the diet inhibits the growth of healthy bacteria. Partially-hydrogenated oils contain trans fats and occupy the immune system so it can't address other problems in the body. In general, it can be really helpful to keep overly processed foods or foods filled with chemicals and food additives to a minimum if we want a healthy gut.



Give Your Gut A Break: Try Fasting

If you eat frequently, then your tight junction proteins never get to close their gates, so your gut is constantly triggering an immune response and it reacts with inflammation to fight off perceived danger. Also, if you have an overgrowth of bad gut bugs, part of the goal is to starve them. You can try intermittent fasting or time-restricted eating to reduce bad gut bugs. Intermittent fasting involves daily fasting for an extended time and a shorter feeding window. A classic way of approaching this is the 16/8 split, which means a 16 hour fast and 8 hour feeding window. One study showed that mice fed a shorter window (8 or 12 hours) were slimmer and healthier than those fed the same amount of calories over a longer period.²² It's also important to eat dinner earlier, preferably 4-5 hours before going to sleep. That gives food time to be digested before your gut can shut down to repair.

Eat More Fiber

There is an entire ecosystem of symbiotic bacteria in your gut. Research shows changes to the gut microbiome can respond rapidly to changed diet.²³ A diet consisting of different food types can lead to a diverse microbiota. Our good gut bacteria relish high-fiber, unprocessed, whole plant foods. In fact, the soluble fiber in vegetables, legumes and whole grains provide food for our probiotic bacteria, making them stronger. Consequently, these good bacteria nourish the gut lining, helping to prevent leaky gut. One study found that a low-fiber diet can trigger a substantial dip in the diversity of our gut flora, increasing the risk of Crohn's disease, ulcerative colitis, and colorectal cancer.²⁴

The best foods for digestion are:

- Lots of fruit and vegetables, particularly cruciferous and green leafy vegetables
- Root vegetables like carrots, sweet potatoes and beets
- Legumes such as black beans, chickpeas, lentils, and even peas
- Whole, gluten-free grains like brown rice, quinoa, buckwheat, and amaranth
- Nuts and seeds
- Healthy fats from avocado and olives
- Organic as much as possible

Eat Antibacterial Foods

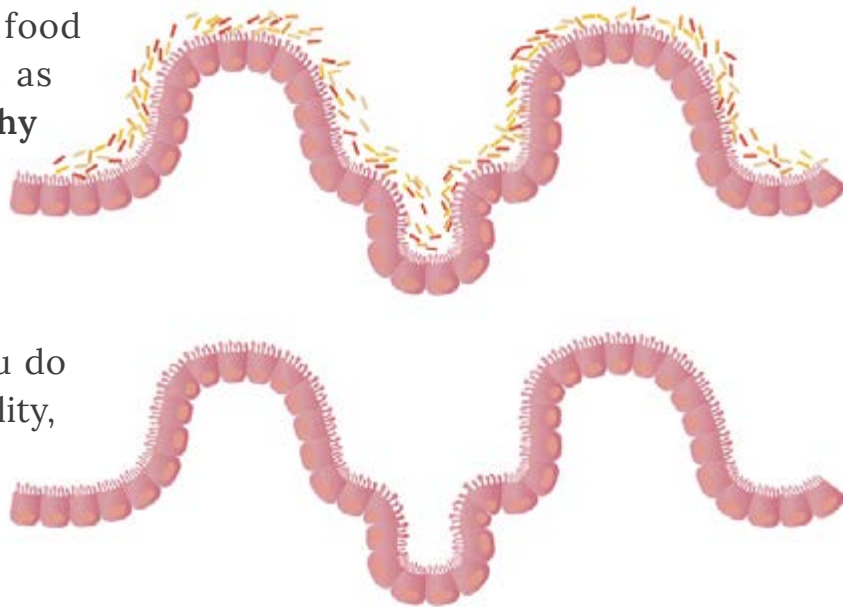
Probiotics help crowd out harmful bacteria; antibacterials help kill harmful bacteria. Antibacterial herbs can help to eliminate persistent bad gut bacteria. Did you know that garlic is a natural antibacterial food? Try incorporating some more into your cooking this week!

Consume Collagen-Building Foods

Collagen makes up the gut's connective tissue barrier and is a significant substance for repair and healing of the intestinal lining. In general, those with gut health issues tend to have low levels of collagen.²⁵ Eating foods rich in Vitamin C, like citrus fruit, dark leafy greens and red bell pepper/capsicum) can enhance your body's ability to make collagen and may help with leaky gut repair.

Eat Probiotics

Probiotics are probably the best food you can consume for gut health as **they restore and maintain a healthy gut microbiome and strong gut barrier function.** Although probiotic supplements can be helpful, they are usually too small to make much of an impact. If you do want to try pills, choose a high-quality, multispecies and multistrain probiotic supplement with 50 billion colony forming units (CFUs). You can also eat whole foods that are fermented and contain large amounts of bacteria, such as **sauerkraut, kimchi, miso, tempeh, coconut yoghurt, and coconut kefir.**



Get Good Sleep

Sleep allows the body to restore and detoxify. In humans, research has shown that sleep deprivation can alter the composition of the gut bacteria in as little as 48 hours.²⁶ We also need to develop good sleep routines – one study found that gut flora of people with jet lag showed higher numbers of bacteria associated with obesity and metabolic disease.²⁷

Try Some Gut Soothing Herbs & Supplements

- **L-Glutamine:** L-glutamine is the most common amino acid in the body. It rebuilds the mucosal lining of the gut and is the supplement of choice for repairing leaky gut. L-glutamine is also the preferred food of not only some of the beneficial bacteria in our colon, but also directly nourishes the brain cells. The brain uses L-glutamine to produce and balance GABA. L-glutamine boosts mental performance, enhances memory and can also be used to ease cravings.²⁸ However, for some people with certain genetic dispositions, L-glutamine can actually cause anxiety. If you begin taking L-glutamine and experience this, discontinue use.
- **Aloe Vera:** Aloe vera is anti-inflammatory and loaded with vitamins, minerals and amino acids. Consuming aloe vera improves digestion and supports detoxification. Aloe vera relieves symptoms of acid reflux while also healing the root of the problem. Aloe vera supports a healthy mental state, too. Researchers have found that aloe vera supplementation enhances learning, improves memory and alleviates depression.²⁹



- **Slippery Elm:** Slippery elm is a preferred herbal support for gut health because it soothes the throat, esophagus and intestines, calms reflux, supports peristalsis and encourages movement from the esophagus all the way through the digestive tract. Slippery elm contains mucilage, which turns into a slippery, thick gel when wet which helps to soothe and coat our digestive tracts. Slippery elm boosts our production of SCFAs, relieves stress and reduces anxiety.³⁰
- **Turmeric:** Turmeric is best known for its ability to reduce inflammation. Its active compound, curcumin, is also a potent antioxidant. Frequently used to soothe reflux, repair the lining of the intestines and heal stomach ulcers, turmeric is also being used to treat and prevent Alzheimer's. Thanks to its ability to increase our production of BDNF, it improves our ability to learn, remember and form new memories. Early research shows promise for the effectiveness of turmeric for treating depression and suggests that it may enhance production of serotonin and dopamine.³¹ The latest theory is that Parkinson's is caused by leaky gut, and turmeric may reduce symptoms of Parkinson's and slow progression of the disease.³²
- **Magnesium:** Even if we strive for a balanced diet, it can be difficult to meet our needs for this essential nutrient. Soil levels of magnesium have become especially depleted by modern farming practices and cooking decreases bioavailability of the magnesium in our food. Magnesium supports a healthy gut, and a healthy mind as well! We require magnesium for healthy peristalsis, which protects us from leaky gut, and for production of glutathione. When we are deficient in magnesium we are likely to suffer from constipation and indigestion and we become more vulnerable to anxiety and depression.³³ Autistic children are commonly deficient in magnesium. Early studies show promise for magnesium supplementation for decreasing hyperactivity and stabilising behaviour.³⁴

YOU'RE INVITED TO WATCH

The Gut-Brain Solution

Mental health issues are on the rise.

284 million people worldwide have an anxiety disorder, while more than 264 million people suffer from depression.

If you're part of these numbers, I want you to know two things:

First, you're not alone and this isn't your fault.

And secondly, the best form of self-care you can do today is to take the time to learn how to support a happy and healthy mind.

Several studies have shown the profound effects of regulating the gut microbiome for those suffering from anxiety and depression.

If you want to know the latest discoveries in this field, make sure you watch the brand-new masterclass called, *The Gut-Brain Solution*.

This series features world-leading experts, who will show you proven and practical remedies to overcome stubborn digestive problems like

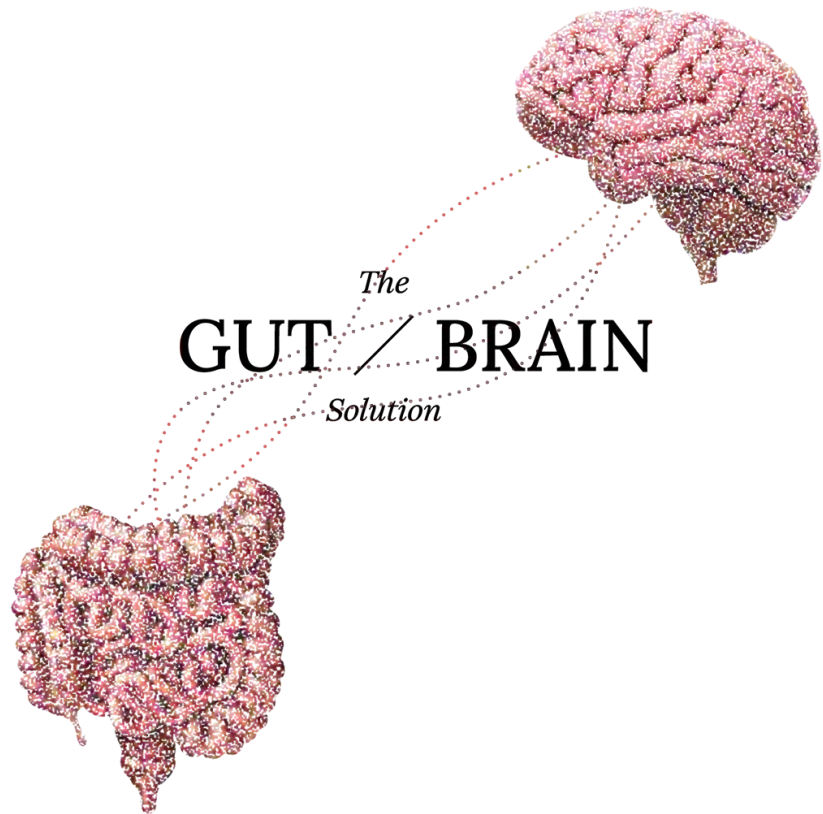
constipation, SIBO, IBS, reflux, bloating, and weight gain...

As well as mental health challenges like depression, anxiety, brain fog, and mood disorders.

You'll find out just how deep the relationship between our gut microbiome and mental health goes!

[Save your free seat here](#)

Limited Time Only



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