



# The Gut- Brain Connection

WHAT IT IS & TOP TIPS TO  
IMPROVE YOUR GUT  
HEALTH

# WELCOME TO YOUR GUT HEALTH GUIDE!

Your gut does far more than just digest food—it plays a powerful role in how you think, feel, and function every day. The gut and brain are constantly in conversation, influencing everything from your energy and mood to your sleep, focus, and resilience to stress. When your gut health is thriving, it can feel like everything else falls into place more easily.

This guide is designed to help you understand that connection and give you practical tools to support it. You'll learn what to eat more of (and what to eat less of), simple lifestyle changes that make a big difference, and how prebiotics, probiotics, and postbiotics all work together to strengthen your gut-brain axis.

It's not about overhauling your life overnight—it's about small, sustainable changes that add up to better digestion, clearer thinking, and a calmer, more resilient mind.

Here's to building a healthier gut, and a healthier you.

*Briony*

The Holistic Health PT



# SIGNS OF POOR GUT HEALTH

*& what to do*

## Signs of Poor Gut Health

Your gut is always communicating with you—it just doesn't always use words. Instead, it sends signals through your digestion, energy, skin, and even your mood when something isn't quite right. Learning to notice these signs can help you catch imbalances early and take simple steps to bring your gut health back into balance.

### Common Symptoms

Your gut will often let you know when something isn't quite right. Some of the most common signs of poor gut health include:

- Digestive issues – bloating, constipation, diarrhoea, heartburn, or excessive gas
- Low energy – feeling fatigued, sluggish, or struggling to concentrate
- Skin problems – acne, eczema, or flare-ups that link back to inflammation in the gut
- Food intolerances – difficulty digesting certain foods, leading to discomfort after eating
- Frequent illness – a weakened immune system, as much of your immunity is rooted in the gut
- Mood changes – increased anxiety, low mood, or irritability, since the gut and brain are closely connected

Noticing these patterns doesn't always mean something serious is wrong, but they are strong signals that your gut might need extra care and attention.

## When to Seek Support

If symptoms are persistent, severe, or interfere with daily life, it's worth checking in with a GP or specialist. Professional advice can help rule out underlying conditions and guide you towards the right treatment.



# GUT-BRAIN CONNECTION

*The basics*

Ever felt “butterflies in your stomach” or “trusted your gut” about an important decision? You can thank your gut brain connection for that.

## What is the Gut Brain Connection?

Your brain and gut talk to each other. Anytime you get a “gut feeling” or feel a knot in your stomach, you experience this firsthand. This two-way communication is known as the ‘gut brain connection.’ The network of nerves that sends these signals is referred to as the ‘gut-brain axis.’



## The Gut Brain Connection & Your Health

This crosstalk between your gut and brain affects many aspects of your health, including:

- Mood
- Immune function
- Hunger and satiety
- Digestion
- Gut motility
- Metabolism
- Food sensitivities & intolerances
- Stress levels
- Behavior
- Sensitivity to pain
- Cognitive function

**The health of your gut affects your brain and vice versa.** For example, people with gut dysbiosis often suffer from depression and anxiety, while people with good gut health are more likely to have a healthy nervous system.

On top of that, people with digestive disorders like inflammatory bowel disease (IBD), irritable bowel syndrome (IBS) face an increased risk of depression and anxiety.



# GUT-BRAIN CONNECTION

*Key players*

## The Enteric Nervous System

Your enteric nervous system (ENS) is nicknamed “your second brain.” This **neural network of roughly 500 million nerve cells line your digestive tract.** It's part of your autonomic nervous system (ANS) that controls functions outside your conscious control (e.g. heart rate, digestion, blood pressure).

## The Vagus Nerve

**The vagus nerve connects your gut and brain** and is the second largest nerve in your body. It acts like an information superhighway, sending signals in both directions. The vagus nerve is part of your parasympathetic nervous system, or your 'rest and digest' response. It curbs the stress response and helps you relax.

## Gut Microbiome

Roughly 100 trillion microbes live in your gut. These microbes are known as your gut microbiome-- and they play a role in your gut brain connection too.

**Your gut bacteria make neurotransmitters and other chemicals that affect your brain.** In fact, 95% of the feel good neurotransmitter serotonin and 50% of dopamine is made by your gut bacteria!

They also make short chain fatty acids (SCFAs) like butyrate as a byproduct of digesting fiber. SCFAs have a slew of health benefits. They reduce inflammation, stabilize your blood sugar, and help maintain the integrity of the intestinal barrier to name a few.



# EATING FOR GUT HEALTH

## *What to avoid*

One simple way to harness the power of the gut brain connection is to watch what you put on your plate. By choosing foods that promote gut health and limiting ones that harm it, you can improve your mood, mental health, and overall well-being.

Below are some of the worst foods for gut health. To keep your gut happy, you'll want to limit or avoid them:



### The Worst Foods for Gut Health

- **Refined sugar:** Cake, soda, and other sugary foods fuel bad bacteria and disrupt the balance of your gut microbiome. Sugar also increases intestinal permeability, setting the stage for a “leaky gut.”
- **Alcohol:** Heavy drinking can damage the intestinal lining, create inflammation, and harm your gut microbiome.
- **Processed foods:** Packaged convenience foods like crackers, cookies, canned soups, microwave meals, lunch meats, and other processed foods contain artificial additives and preservatives that can hurt your gut.
- **Fried foods:** French fries, fried chicken, and other fried foods are high in saturated fat and difficult for the body to digest.
- **Factory farmed meat:** Livestock on factory farms live in crowded conditions. Because of this, they're usually fed antibiotics to reduce the risk of disease. This can increase the risk of antibiotic resistant strains in the animals' gut microbiome. So it's best to go with grass fed or organic meat.
- **Artificial sweeteners:** Aspartame, saccharin, sucralose, and other artificial sweeteners can damage cells in the gut lining and allow bad bacteria to take over.
- **Gluten:** Wheat, barley, and other gluten-containing foods can cause inflammation for people with Celiac disease or gluten sensitivity.



# EATING FOR GUT HEALTH

*What to enjoy*

Eating a healthy, balanced diet filled with wholesome, nutrient-dense foods will go a long way in keeping your gut happy.

Be sure to **include a diverse range of foods**. Research shows the more diverse your diet is, the more diverse your microbiome tends to be.

Here's why that matters. Microbiome diversity is the number of bacterial species that live in your gut. And generally, **a diverse microbiome = a healthy microbiome**.

With that in mind, here are some foods to add to the menu:



## The Best Foods for Gut Health

- **High-fiber foods** like fruits, veggies, beans, legumes, & whole grains support gut motility and keep your bowels moving.
- **Fermented foods** like yogurt, kimchi, sauerkraut, miso, kefir, and kombucha are rich beneficial bacteria to repopulate your gut.
- **Prebiotic foods** like onions, garlic, asparagus, bananas, chicory, and leeks have special fibers that feed your friendly gut flora - we'll go into detail later.
- **Polyphenol rich foods** like berries, cherries, plums, apples, dark chocolate, olives, hazelnuts, pecans, & flaxseed are shown to inhibit the growth of bacteria and support the growth of beneficial strains.
- **Omega-3 fatty acids** reduce inflammation and are linked with greater gut diversity. Omega-3 rich foods include fatty fish like salmon, sardines, and mackerel, as well as plant foods like chia seeds, walnuts, hemp seeds, and flaxseed.



# HOW TO IMPROVE GUT HEALTH

*Lifestyle tips*

Here are some lifestyle habits that support a healthy gut:



## **Chew your food**

The more you chew your food, the better your digestion will be. Chewing your food well increases the production of salivary enzymes that help digest your food. Ideally, chew each bite until your food is the consistency of applesauce.



## **Exercise regularly**

Exercise is one of the best things you can do for your gut. Research shows it enhances the number of friendly flora in the gut and increases microbiome diversity. Exercise also helps keep your bowels moving to prevent constipation. As if that wasn't enough, it also boosts your mood.



## **Reduce stress**

Stress is bad news for your gut. It increases intestinal permeability and disrupts the gut microbiome. Mindfulness, meditation, yoga, and breathing exercises like box breathing and diaphragmatic breathing are a few simple ways to help you relax and destress.



# HOW TO IMPROVE GUT HEALTH

*Lifestyle tips continued...*



## **Stay hydrated**

Drinking plenty of water helps keep your bowels moving to prevent constipation. But it also helps your body break down food so you can absorb nutrients better. Water needs vary, but shooting for at least 2 liters a day is a good rule of thumb.



## **Get plenty of sleep**

Research shows lack of sleep can negatively affect the gut microbiome in as little as two days. Not getting enough sleep also increases stress hormones like cortisol, which is linked with leaky gut. To keep your gut healthy, aim for 7-9 hours of sleep each night.



## **Vagus nerve exercises**

You can improve your gut-brain axis by doing activities that stimulate your vagus nerve. Singing, humming, gargling are a few simple ways to do this. Yoga, cold showers, laughter, and massage are also said to build vagal tone.



# HOW TO IMPROVE GUT HEALTH

## *Pre, Pro and Postbiotics*



### **Prebiotics**

Prebiotics are fibres that feed the good bacteria in your gut, helping them thrive and support digestion. When these fibres are fermented in the colon, they produce short-chain fatty acids that support digestion, reduce inflammation, and improve overall gut health. You'll find them in foods like garlic, onions, bananas, and oats—adding these regularly helps keep your gut balanced.



### **Probiotics**

Probiotics are live bacteria that add to the healthy community in your gut. They work by crowding out harmful microbes and boosting the good ones. They help balance digestion, support your immune system, and can improve how your body absorbs nutrients. You'll find them in foods like yoghurt, kefir, sauerkraut, and kimchi—regularly eating these keeps your gut thriving.



### **Postbiotics**

Postbiotics are the beneficial compounds created when probiotics feed on prebiotics. They include short-chain fatty acids, enzymes, and peptides that support digestion, reduce inflammation, and strengthen the gut barrier. You get them naturally through a diet rich in fibre and fermented foods, as they're produced in your gut during this process. They're the end products that deliver many of the real health benefits.

# DAILY GUT-FRIENDLY CHECKLIST

*What to do*

- Eat fibre-rich foods – Aim for a mix of vegetables, fruits, legumes, and whole grains.
- Include prebiotics – Garlic, onions, leeks, bananas, or oats are easy daily options.
- Add probiotics – A portion of yoghurt, kefir, sauerkraut, or kimchi.
- Stay hydrated – Around 2 litres of water, more if you're active.
- Prioritise movement – Even a short walk supports digestion.
- Manage stress – Try breathing exercises, journaling, or a few quiet minutes.
- Sleep well – Aim for 7–9 hours of quality rest.
- Limit ultra-processed foods – Keep sugar, alcohol, and additives in check.
- Chew slowly – Give your digestive system the best head start.

# PREBIOTIC LIST

*What are your choices*

## **Vegetables**

- Onions
- Garlic
- Leeks
- Asparagus
- Jerusalem artichokes

## **Fruits**

- Bananas (especially slightly underripe)
- Apples
- Berries (e.g., blueberries, raspberries)

## **Wholegrains & Legumes**

- Oats
- Barley
- Rye
- Chickpeas
- Lentils
- Kidney beans

## **Other Sources**

- Flaxseeds
- Chia seeds
- Dandelion greens

# PROBIOTIC LIST

*What are your choices*

## **Fermented Dairy**

- Yogurt with live cultures
- Kefir
- Certain aged cheeses (e.g., gouda, mozzarella)

## **Fermented Vegetables**

- Sauerkraut (unpasteurised)
- Kimchi
- Pickles (naturally fermented, not vinegar-based)

## **Fermented Drinks**

- Kombucha
- Kvass

## **Other Fermented Foods**

- Miso
- Tempeh
- Natto