



More than a gut feeling:

understanding stress and
the gut–brain connection



Why are we talking about stress?

Stress has become a defining feature of modern life. In the UK, around 74% of adults report feeling overwhelmed to the point where they struggle to cope.

While stress is often thought of as something that exists purely in the mind, research now shows that it involves the whole body. One of the most important systems involved in how we experience stress is the gut.

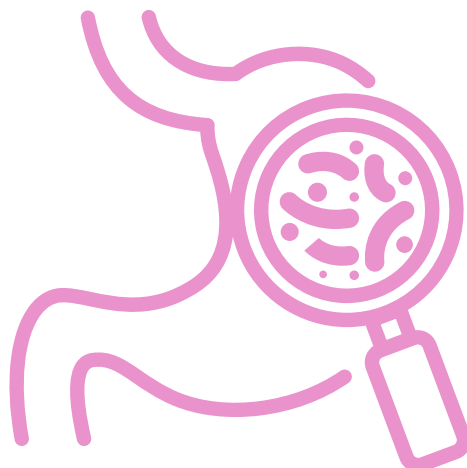
What is the gut microbiome?

Your body is home to trillions of microorganisms, with the largest community living in your gut.

This ecosystem, known as the gut microbiome, includes bacteria, fungi, and other microbes that:

- Help digest food
- Support the immune system
- Produce important compounds that affect the brain

In fact, the gut microbiome is so significant that it is sometimes referred to as a “forgotten organ”.



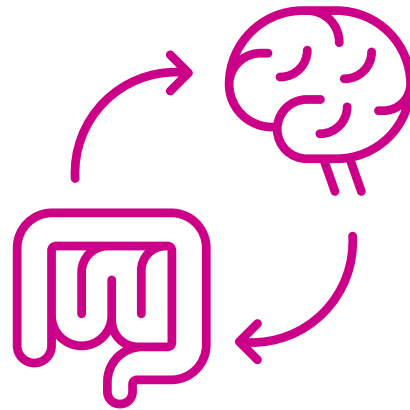
What is the gut–brain axis?

The gut and brain are in constant communication through a system called the gut–brain axis.

This communication happens via the vagus nerve, hormones, the immune system, and chemical messengers in the bloodstream.

This is why stress can cause physical symptoms like butterflies in the stomach, bloating or discomfort, and changes in appetite or digestion.

Importantly, this relationship works both ways. Stress can disrupt the gut, and the gut microbiome can influence how we respond to stress.



How does the gut influence stress?

Gut bacteria play a key role in producing and regulating compounds that affect the brain. These include short-chain fatty acids (SCFAs), which help regulate inflammation, as well as neurotransmitter-related compounds involved in mood and signals that influence the body’s stress response.

Research suggests that a healthier, more diverse gut microbiome is associated with:

- Lower perceived stress
- Better mood
- Improved sleep
- Greater emotional resilience

How does diet affect the gut–brain axis?

One of the most powerful ways to influence your gut microbiome is through diet. Unlike many parts of our biology, the gut microbiome can respond quickly to dietary changes.

Diets associated with better stress resilience tend to be:

- High in fibre
- Rich in plant-based foods
- Inclusive of fermented foods
- Lower in highly processed foods

When gut bacteria break down fibre, they produce beneficial compounds that help regulate inflammation and communicate with the brain.



6 simple ways to support your gut and stress resilience

1. Eat more prebiotic fibre

Prebiotic fibres feed beneficial gut bacteria. Include foods like onions, garlic, leeks, oats and wholegrains, beans and lentils, and slightly unripe bananas.

2. Aim for variety in plant foods

Different plants support different microbes. Try to include a range of colours across your week, such as greens like broccoli and spinach, reds and purples like berries and red cabbage, and orange and yellow foods like carrots and peppers.

3. Add fermented foods

These can introduce beneficial microbes. Start small with yogurt or kefir, sauerkraut or kimchi, miso, and aged cheeses.

4. Include omega-3 fats

These support brain health and inflammation regulation. Sources include oily fish such as salmon or sardines, as well as walnuts, chia seeds, and flaxseeds.

5. Eat regularly and consistently

Regular eating patterns help maintain a stable gut environment. Avoid long gaps between meals and focus on whole or minimally processed foods.

6. Support your lifestyle, not just your diet

Stress resilience is about more than food. Helpful habits include gentle daily movement, taking breaks away from your desk, and spending time outdoors.

Key takeaway

Stress is a part of life, but how we respond to it is not fixed.

The gut–brain axis shows us that daily habits, particularly those related to diet, can play a meaningful role in shaping our resilience to stress. Small, consistent changes can make a real difference over time.



Help us advance research into gut health and stress

Great science starts with bold questions. And myota are asking one of the most important yet:

[What role does our gut health play in how we cope with stress?](#)

Researchers at Myota are currently looking for adults aged 18-50 years old to participate in a clinical trial exploring the link between daily fibre intake and stress.

What's involved?

- Two visits to the study clinic located in central London
- Health assessments, including cholesterol, gut health & inflammation biomarkers
- Take a powered fibre supplement everyday 12 weeks
- Receive £150 at the end of the study

Why should I take part?

One person can spark a ripple effect. By taking part in this study, you're supporting groundbreaking research into stress and gut health, showing how meaningful change begins with a single step. [#BeTheChange](#)

How can I take part?

To learn more about the study, complete the enquiries form below or email the research team at calmstudy@myotahealth.com.

[COMPLETE THE ENQUIRIES FORM](#)



We provide a range of services across the UK and internationally. We are always happy to discuss how we can support you.

We look forward to supporting your wellbeing journey.

Find Us Here:

Suite S, Quay West
Salamander Quay
Harefield, Middlesex
UB6 9NZ

Call Us On:

Switchboard: +44
(0) 203 142 8659

Email Us On:

info@stress.org.uk

Visit Us On:

www.stress.org.uk
www.wellbeing.work

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