

Bloating, *decoded.*

For anyone whose stomach is flat in the morning and tight as a drum by dinner. What the research says about why it happens, why it's so often not "too much gas", and when to see a GP.

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You are not imagining it, *and you are not alone.*

The waistband you undo under the table. The clothes chosen around your stomach. The reflection you barely recognise by evening. Bloating is one of the most common gut symptoms in the world, and one of the easiest to be told is "nothing".

~18%

of adults across 26 countries reported bloating **at least once a week**. That figure comes from more than 51,000 people in the Rome Foundation Global Epidemiology Study.

Ballou et al., Gastroenterology (2023)

Women report it about twice as often

23.4% of women vs 12.2% of men reported weekly bloating, and women made up 64.9% of everyone who bloated weekly.

Ballou et al., Gastroenterology (2023)

In the UK, most people noticed it recently

In a UK survey of 516 adults, 64% reported bloating in the previous month.

Thomson et al., European Journal of Nutrition (2025)

Why it is so hard to pin down

Bloating is a *sensation*: a feeling of pressure, fullness or trapped gas. **Distension** is something you can actually see, when the belly visibly expands. They often travel together, but not always, and they don't always share a cause. In studies of people with IBS, 66% to 90% report bloating or distension.

Cangemi & Lacy, Gastroenterology & Hepatology (2022)

What this briefing is, and isn't. It summarises published research and UK clinical guidance in plain English. It is not medical advice and cannot diagnose you. If your bloating is persistent, new or worrying, page 7 tells you when to see a GP.

It is often *not* "too much gas".

The common assumption is that a bloated belly is full of extra gas. Imaging studies tell a more interesting story.

In a study using CT scans during bloating episodes, people with functional bloating or IBS showed clear protrusion of the abdominal wall with **relatively small increases in gas** inside the gut. The visible swelling was being driven by something other than the amount of gas.

Accarino et al., Gastroenterology (2009), as summarised in Cangemi & Lacy (2022)



Villoria et al., American Journal of Gastroenterology (2011); described in Cangemi & Lacy (2022). Diagrams are simplified illustrations.

A sensitivity issue, not only a volume issue

A second mechanism is **visceral hypersensitivity**, where the gut's nerves register normal stretching and normal amounts of gas as uncomfortable. Studies have linked greater visceral sensitivity to more severe bloating in people with IBS.

Cangemi & Lacy, Gastroenterology & Hepatology (2022)

This is why "just cut out gassy foods" works for some people and does nothing for others. The cause is not always the gas.

The usual suspects, *according to the NHS.*

Bloating has many possible contributors, and more than one can be at play at the same time.

Gas from food and drink

Some vegetables, beans and lentils, and fizzy drinks. Swallowing air, for example eating quickly or chewing with your mouth open, adds to it.

Constipation

Slow-moving stool is a well-recognised cause. Problems with how the pelvic floor empties the bowel can also trap gas and stool.

Food intolerances

For example, difficulty digesting lactose or certain other carbohydrates. These can be checked by cutting the food out or with a breath test.

Coeliac disease

An autoimmune reaction to gluten. A simple blood test can check for it. You need to keep eating gluten until you are tested, or the result may be inaccurate.

Irritable bowel syndrome

Bloating is one of the most common IBS symptoms. IBS is a real disorder of how the gut and brain interact. It is not "all in your head".

Your menstrual cycle

The NHS lists bloating around your period as a common, usually harmless cause. Tracking symptoms against your cycle can help you spot it.

NHS, "Bloating" and "Coeliac disease – diagnosis" ([nhs.uk](https://www.nhs.uk)); Cangemi & Lacy (2022); Moshiree et al., AGA Clinical Practice Update, Gastroenterology (2023)

About coeliac testing. The NHS says to keep eating gluten while you are being tested, because avoiding it can lead to an inaccurate result. If you've already cut gluten out, tell your GP before the test.

What the NHS suggests trying first

- Eat smaller, more frequent meals rather than large ones, and avoid big meals late at night.
- Cut back on fizzy drinks, alcohol and caffeine.
- If you're constipated, eat foods high in soluble fibre, such as oats or linseed.
- Exercise regularly, drink plenty of water, and chew with your mouth closed.

NHS, "Bloating" ([nhs.uk](https://www.nhs.uk))

Why bloating and stress *so often show up together.*

Your gut and brain are in constant two-way communication, and bloating sits right on that line.

Linked

People who reported weekly bloating had significantly higher levels of depression and anxiety, and lower overall mental and physical health, than people without bloating.

Ballou et al., Gastroenterology (2023)

Correlation, not cause. This study shows the two travel together. It does not show that stress causes bloating, or that bloating causes low mood. The link probably runs in both directions.

How the connection may work

Gastroenterologists now group conditions like IBS under "disorders of gut–brain interaction". Part of the explanation is the **visceral hypersensitivity** on page 3: when the nervous system is on high alert, normal gut signals can be felt as discomfort. Anxiety and low mood can also turn up how strongly those sensations are noticed.

Cangemi & Lacy (2022)

What the guidelines include

Because of this connection, brain–gut therapies are now part of standard care. The American Gastroenterological Association says psychological therapies, such as gut-directed hypnotherapy and cognitive behavioural therapy (CBT), may be used for bloating and distension. It also says diaphragmatic breathing is used to treat the reversed reflex described on page 3. The British Society of Gastroenterology recommends IBS-specific CBT and gut-directed hypnotherapy for IBS symptoms overall.

Moshiree et al., AGA Clinical Practice Update, Gastroenterology (2023); Vasant et al., BSG guidelines on IBS, Gut (2021)

"Brain–gut" therapies don't mean your symptoms are imaginary. They mean your nervous system is part of the gut.

What the guidelines say *about the usual fixes.*

Bloating is a big market. Here is what clinical guidelines actually say about the most common things people buy or try.

- 1 Probiotics.** A 2023 American Gastroenterological Association expert review states: "Probiotics should not be used to treat abdominal bloating and distention." For IBS more broadly, UK guidance says probiotics *may* help some people. No specific strain can be recommended. If you try one, give it up to 12 weeks and stop if nothing improves.

Moshiree et al., Gastroenterology (2023); Vasant et al., Gut (2021)

- 2 Fibre: type matters.** In IBS, soluble fibre such as ispaghula (psyllium) is recommended. Insoluble fibre such as wheat bran "should be avoided as it may exacerbate symptoms". Soluble fibre should start low, at 3–4 g a day, and build up gradually *to avoid bloating*.

Vasant et al., BSG guidelines, Gut (2021)

- 3 Low-FODMAP diets.** Effective for many people with IBS, but UK guidance calls it a *second-line* approach. It should be supervised by a trained dietitian, with foods reintroduced according to tolerance. It is not meant as a permanent way of eating.

Vasant et al., Gut (2021); Moshiree et al., Gastroenterology (2023)

- 4 Cutting out whole food groups on your own.** Restrictive diets without testing can delay a correct diagnosis, for example of coeliac disease (page 4). Testing first gives you a clearer answer.

The pattern. Many of the products marketed most heavily for bloating have the weakest guideline support. The approaches with the strongest support are often unglamorous: the right *type* of fibre, addressing constipation, a supervised elimination diet, and brain–gut therapies.

This page reports what published guidelines say. It is not a treatment plan. Please talk to your GP, a pharmacist or a registered dietitian before changing your diet or starting anything new, especially if you take medication or are pregnant.

When bloating needs *a GP, not a guide.*

Most bloating is not dangerous. But some patterns should always be checked by a doctor.

See a GP if

- you feel bloated regularly
- you have changed your diet but still keep feeling bloated
- you have bloating and unintentional weight loss
- you have bloating and blood in your poo

NHS, "Bloating" (nhs.uk)

Bloating most days: women, please don't ignore it

The NHS lists a swollen tummy or feeling bloated among the main symptoms of ovarian cancer, particularly when it happens **about 12 or more times a month**. Other symptoms include feeling full quickly, pain in the tummy or pelvis, and needing to pee more often. These symptoms are very common and usually caused by something else. But if they are frequent, the NHS advises seeing a GP. Go back if they don't go away or get worse.

NHS, "Ovarian cancer – symptoms" (nhs.uk)

Get urgent help (call 111 or ask for an urgent GP appointment) if bloating comes with

- vomiting, diarrhoea or constipation, or stomach ache
- a high temperature or chills
- a swelling or lump in your tummy
- being unable to pee, poo or pass wind

NHS, "Bloating" (nhs.uk)

If you feel very unwell or think it is an emergency, call 999. This list is a summary. Always check [nhs.uk](https://www.nhs.uk) for the latest guidance.

Bloating rarely *travels alone*.

If you're bloated *and* foggy, tired, breaking out or swinging in mood, you've probably been told each one is a separate, minor problem. The research on the gut's links with the brain, immune system, skin and hormones suggests they may be connected. This briefing has only covered one of those links.

Gut Decoded is a five-chapter research synthesis that follows all of them: how stress loosens the gut wall, how inflammation travels, the gut–skin and gut–hormone connections, and how to read a study so you can judge the next "miracle" product yourself.

To be clear about what it is: it explains mechanisms. It is not a bloating protocol, a meal plan or a supplement list.

Gut Decoded: the full guide

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Sources

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