THE GUT HEALTH SERIES

BLOATING AND GAS

What causes it, what to check with your doctor, and a six-step plan



DR MICHAEL KLEIN

Before You Begin

Gut problems can affect what you eat, how you feel and how you live. This book brings together scientific evidence and practical guidance on one of them: bloating and gas.

It is one of the problem chapters of *The Gut Health Manual*, published on its own. Chapter 2 is that chapter, word for word. Chapter 1 adds the short background it relies on, and Where to Go Next shows what the full manual adds for a reader with this problem. Where the text says "the constipation chapter" or similar, it means a chapter of the full manual.

IMPORTANT NOTICE

This book is for general information. It is not a diagnosis, and it does not replace advice from your own doctor, pharmacist or dietitian.

Read the **red flags** in Chapter 2 first. If any apply to you, see a doctor before trying the plan.

Never stop or change a prescribed medicine without speaking to the person who prescribed it.

Check with a pharmacist before taking herbal products if you are pregnant, breastfeeding, take regular medicines, or have a long-term condition.

How to Use This Book

Start with Chapter 2. You do not need to read Chapter 1 first, but it is short and explains the labels used throughout.

The evidence labels

Label	What it means
Strong	Several good randomised controlled trials, confirmed in meta-analyses.
Moderate	At least one good randomised trial, or several smaller trials pointing the same way.
Early	Small or laboratory studies, or traditional use with a plausible mechanism.
Expert advice	Recommended by specialist guidelines on the basis of experience rather than trials.
Not supported	Tested and found not to help, or advised against by specialists.

What the boxes mean

★ **KEY IDEA**

The single most important point of a section.

i **PRACTICAL TIP**

Advice that makes a step easier or more effective.

! **CAUTION**

Safety guidance, or a common mistake to avoid.

The workbook pages

Chapter 2 ends with **Key takeaways**, a **checklist**, a **14-day plan** and a **tracker** page. Patterns in your own diary are often more useful than any general advice. Each tracker is also in the free GutClarity™ app (see Free Downloads and the Companion Kit).

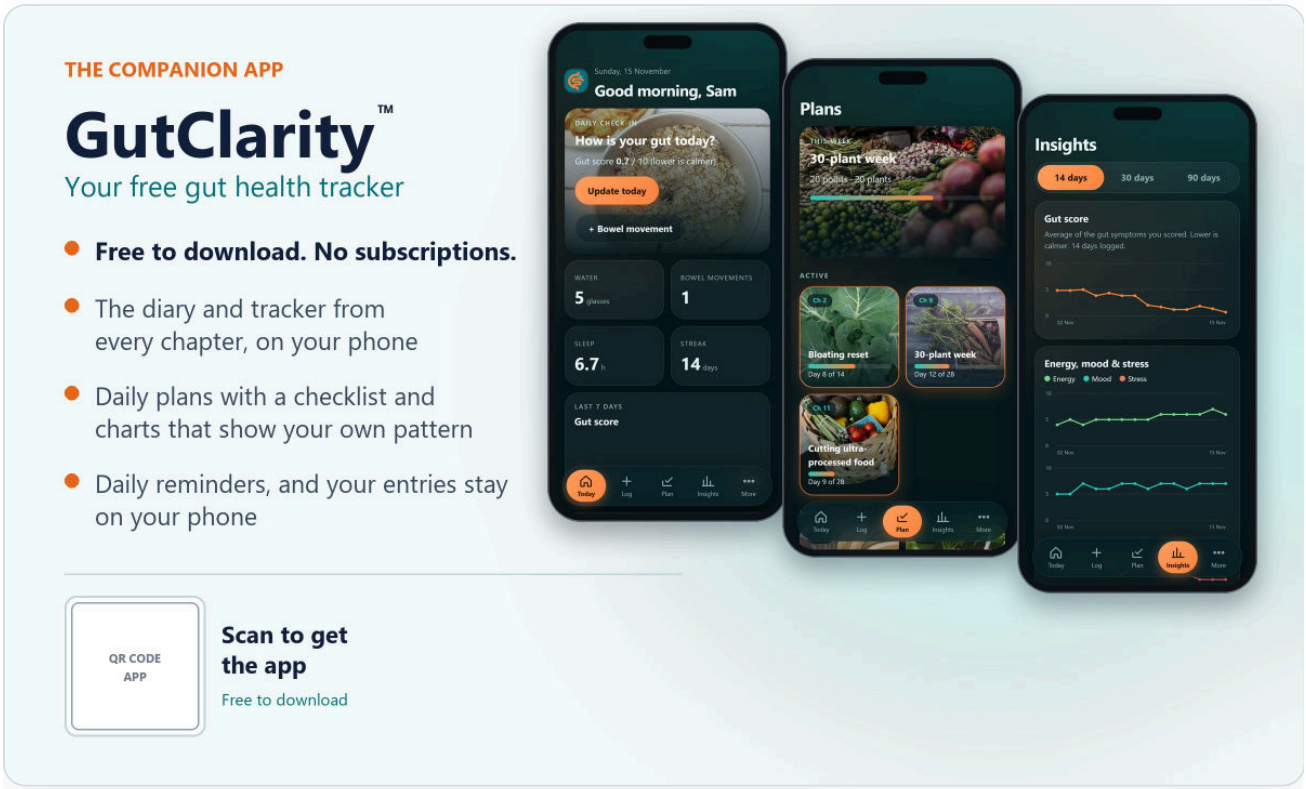
Free Downloads and the Companion Kit

To help you put the guidance into practice, a selection of free downloadable resources is available online, including printable checklists, symptom diaries and progress trackers. The complete Gut Health Companion Kit is free to download too, bringing together the chapter worksheets, practical plans, food-planning tools and reusable journal pages, alongside guided audio for breathing and gut-calming relaxation. These resources accompany the Natural Health Series and give you space to record your experiences, recognise patterns and prepare useful questions for your healthcare professional. You can print fresh copies whenever you need them and use the tools that suit you best.



Your free companion app

Every diary and tracker in this book is also available in **GutClarity™**, a companion app for your phone. It is free to download, and there are no subscriptions. You score your symptoms, log meals and bowel movements, tick off the steps of each 14-day plan, and see charts of your own pattern, with an optional reminder each day. Your entries stay on your phone. At the end of Chapter 2, a short panel shows the matching screens, for anyone who would rather not print and fill in the forms by hand.



Contents

Before You Begin 2

How to Use This Book 3

Free Downloads and the Companion Kit 4

CHAPTER 1

1 The Gut Basics You Need First 7

1.1 Two things worth knowing 8
1.2 How the evidence labels work 9
1.3 Where to begin 9

CHAPTER 2

2 Bloating and Gas 10

2.1 Bloating by the numbers 11
2.2 Three different problems 12
2.3 Where gas comes from 14
2.4 The four drivers of bloating 15
2.5 Rule out first 17
2.6 The bloating protocol 18
2.7 Herbal support 24
2.8 What about probiotics? 25
2.9 Myths versus evidence 26
2.10 Your 14-day bloating reset 26

Where to Go Next 31

About the Author 33

References 34

Glossary 35

List of Figures 36

CHAPTER 1

01

This short chapter gives the background that Chapter 2 relies on: two ideas about how the gut works, and how to read the evidence labels. It is adapted from the opening chapter of The Gut Health Manual.

IN THIS CHAPTER

01 The microbiome

02 The gut-brain axis

03 How the evidence labels work

04 Where to begin

1.1 Two things worth knowing

The full manual explains four systems that sit under almost every gut problem: the microbiome, the gut barrier, short-chain fatty acids and the gut-brain axis. Two of them matter most for bloating and gas, so they are summarised here.

The microbiome

Your large intestine is home to trillions of micro-organisms, mostly bacteria, and also viruses, fungi and other microbes. This community is called the gut microbiome. Its members help break down food that your own enzymes cannot digest. **Evidence level: Strong for these established biological functions.**

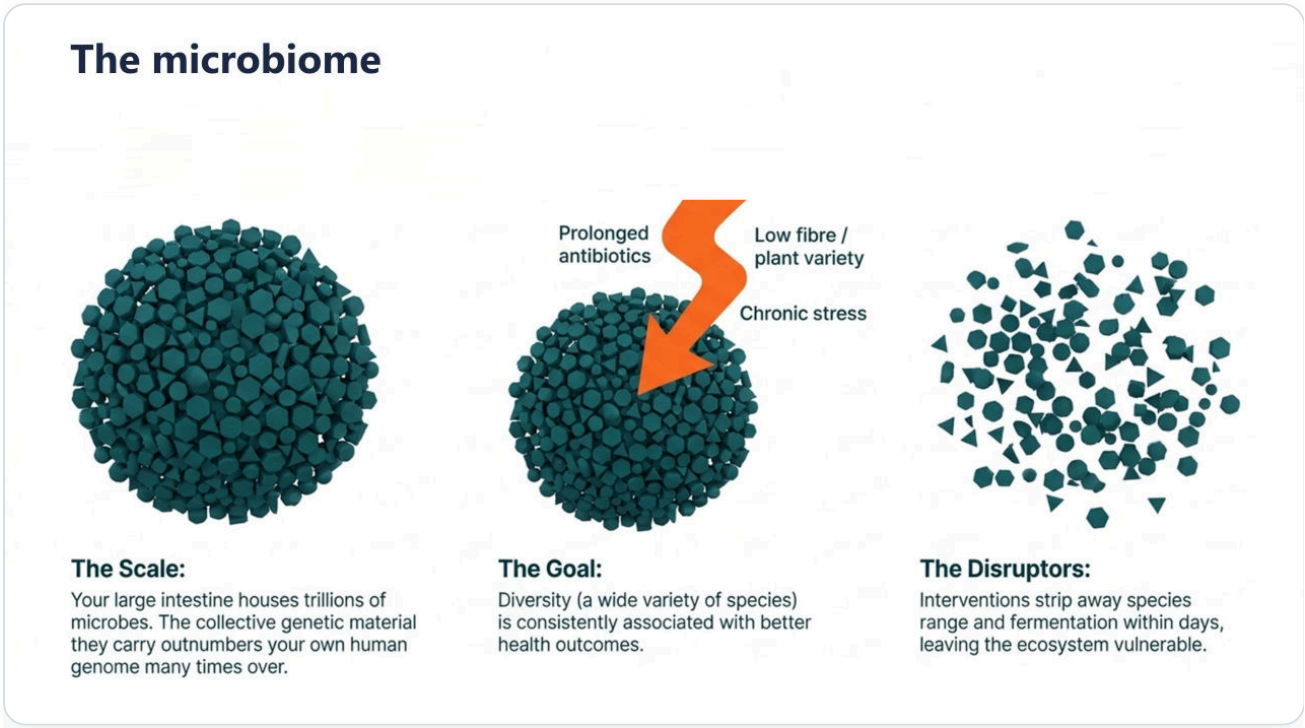


FIGURE 1.1 **The microbiome** A diverse community lives in the large intestine. Antibiotics can change it within days; diet and stress may also affect it. A link with health is not proof that raising diversity will relieve a particular symptom.

The gut-brain axis

Your gut and your brain are in constant two-way communication through a network called the gut-brain axis. The gut contains its own network of nerve cells, the enteric nervous system. The vagus nerve carries signals between the gut and the brainstem in both directions. Most of the body's serotonin is made in the gut, mainly by the gut's own cells, not by bacteria. Gut serotonin does not cross the blood-brain barrier; the brain makes its own. Bacteria can influence signalling, but that is not the same as sending serotonin to the brain. **Evidence level: Strong (basic neuroscience and anatomy); Early (microbial mechanisms as an explanation for changes in human mood).**

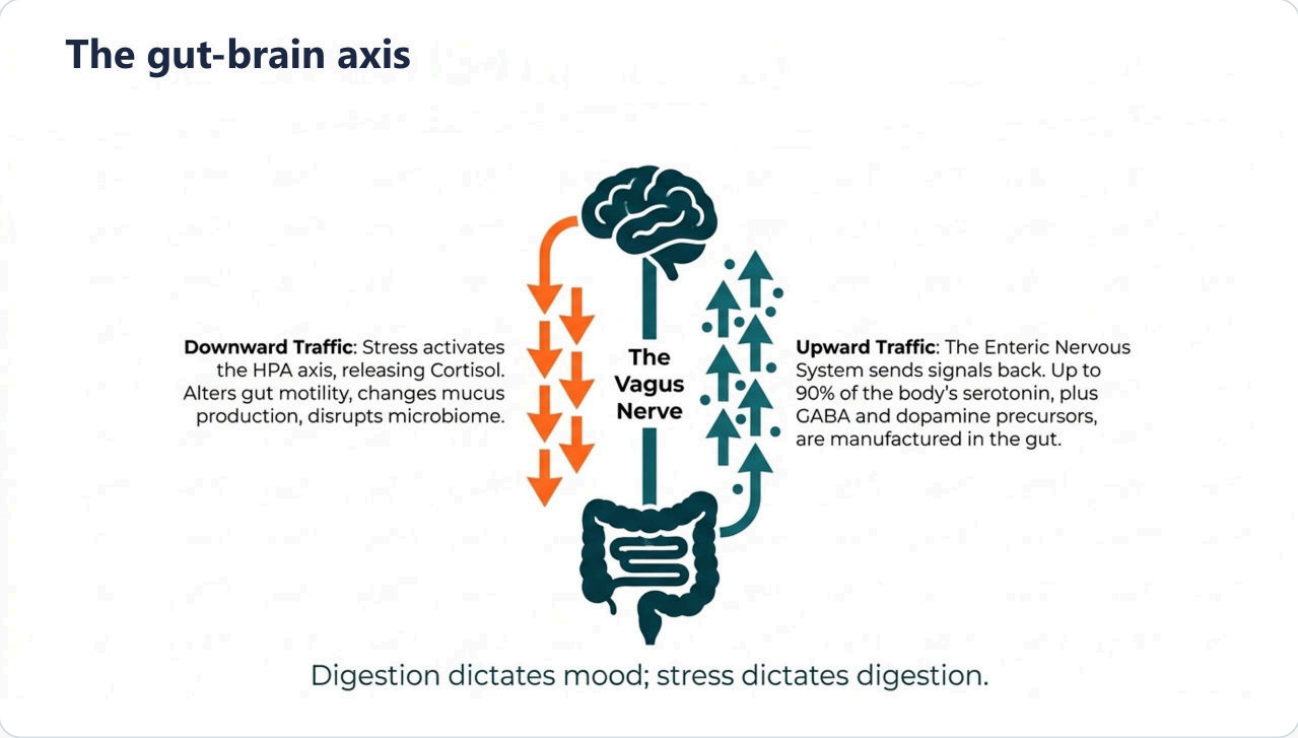


FIGURE 1.2 **The gut-brain axis** Signals travel both ways through nerves and other routes. Serotonin made in the gut is mainly produced by the gut's own cells and does not enter the brain. The arrows show possible routes, not that digestion dictates mood or stress dictates digestion.

1.2 How the evidence labels work

The labels in the table in How to Use This Book (Strong, Moderate, Early, Expert advice and Not supported) sit beside the key claims in Chapter 2. Read the words beside a label. Where the evidence concerns an observational link or basic physiology rather than a treatment trial, the text says so. Strong evidence that a biological process exists is not strong evidence that changing it will improve your symptoms.

1.3 Where to begin

Chapter 2 is the main part of this book. Read its **Rule out first** section before anything else: if any of the warning signs apply to you, see a doctor before trying the plan. Then work through the six steps in order, and use the 14-day plan and the diary at the end of the chapter to see what helps you.

This book is not a substitute for medical advice. If you have symptoms that are new, rapidly changing, or accompanied by blood, unexplained weight loss or pain that wakes you at night, see your doctor first.

CHAPTER TWO



Bloating *and* Gas

Why the belly swells, what to rule out first, and six steps that help.

1 in 5

Nearly one adult in five feels bloated at least once a week.

ROME FOUNDATION STUDY, 2023

> *You wake up with a flat stomach. By mid-afternoon your waistband is digging in, and by evening you look several months pregnant, feel tight and uncomfortable, and would rather not go out. Or the problem is gas: rumbling, belching, or wind that arrives at the worst possible moment. This chapter explains what is going on, what to check with your doctor, and a six-step plan that most people can start today.*

IN THIS CHAPTER

01 How common bloating is, and when it matters
02 Bloating, distension and gas: three different problems
03 The four drivers behind most bloating
04 Red flags and medical causes to rule out
05 The six-step bloating protocol
06 Herbs, probiotics and internet myths
07 Your 14-day bloating reset and diary

2.1 Bloating by the numbers

Bloating is one of the most common reasons people see a doctor about their gut, and one of the most searched-for symptoms online. One of the largest studies ever done, the Rome Foundation Global Epidemiology Study, surveyed more than 51,000 adults in 26 countries. Nearly **18%** reported bloating at least once a week. Women were about twice as likely to be affected as men, and bloating became less common with age.

Gas itself is part of normal life. In a 2025 survey of nearly 6,000 adults in the United States, the United Kingdom and Mexico, **89%** had at least one gas-related symptom in the previous 24 hours: 81% passed wind and 39% felt bloated. Gas becomes a problem when it is frequent, painful, or starts to shape your day.

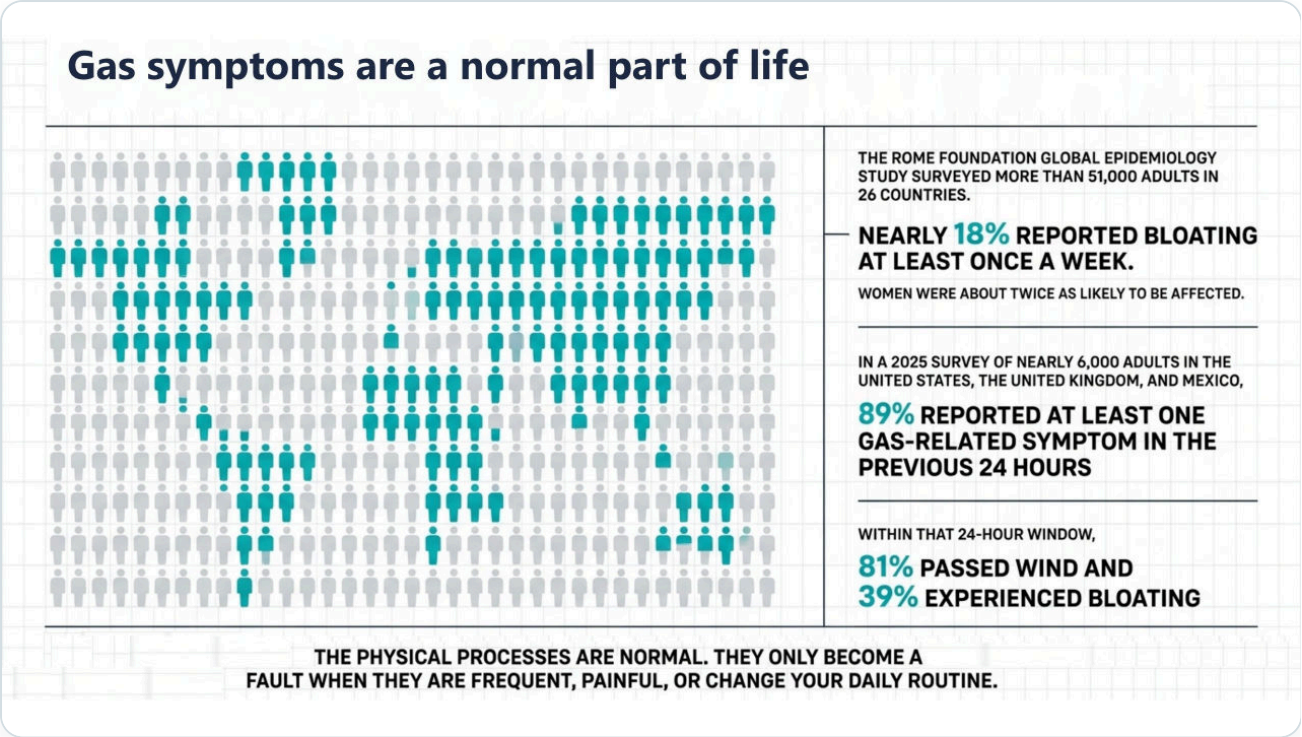


FIGURE 2.1 **Gas symptoms are a normal part of life** Nearly one adult in five is bloated every week; almost everyone has some gas every day.

2.2 Three different problems

People use the word *bloating* for three different things, and the difference matters because each has its own causes and its own fixes.

- **Bloating** is a *feeling*: pressure, fullness or tightness inside the abdomen. You can feel bloated with a completely flat stomach.
- **Distension** is a *visible change*: the abdomen measurably gets bigger, and clothes feel tight.
- **Gas** is the *physical* air and fermentation gases in the gut, released by belching or passing wind.

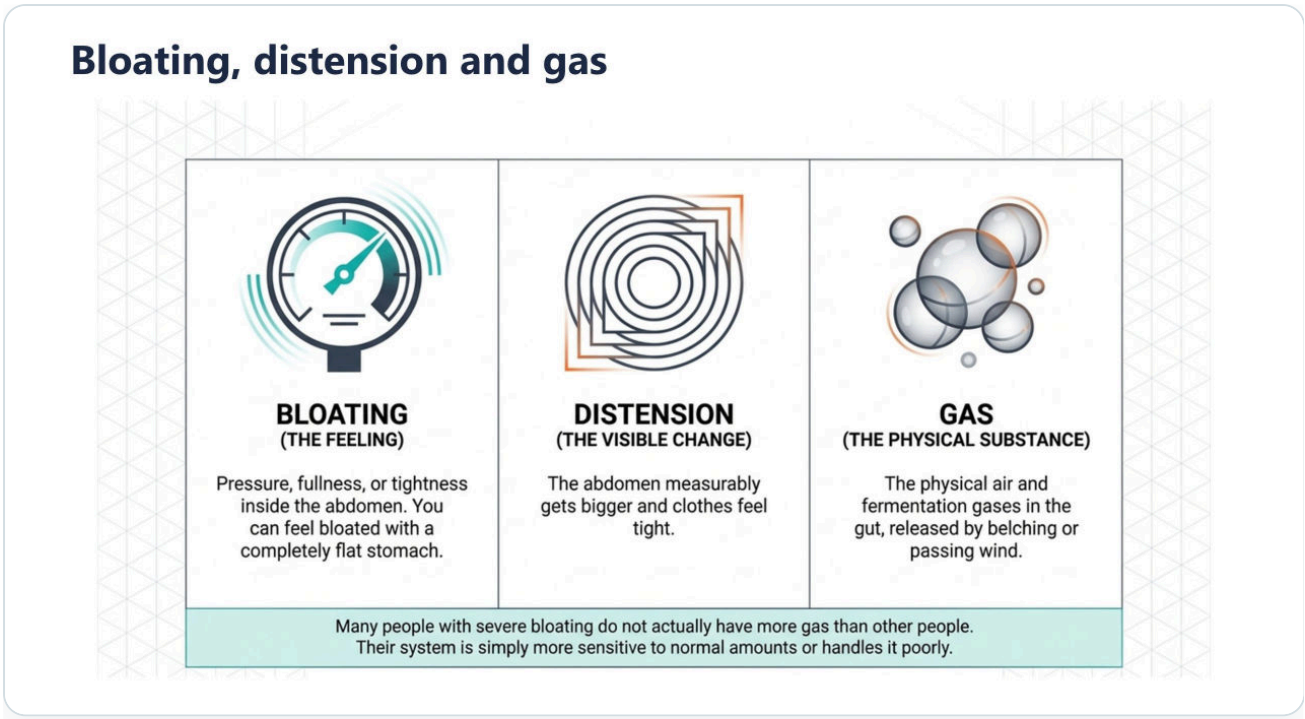


FIGURE 2.2 **Bloating, distension and gas** A feeling, a visible change and a physical substance. They often occur together but are not the same.

KEY IDEA

Many people with severe bloating do not have more gas than anyone else. Their gut is more sensitive to normal amounts of gas, or moves it along poorly. That is why cutting out food after food often fails.

The daily rhythm

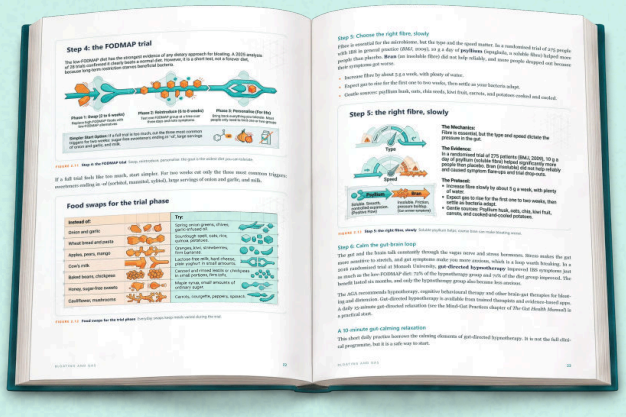
A flatter belly in the morning and a rounder one by evening is normal. Food and drink add volume, fermentation builds after meals, and posture and muscle tone relax through the day. The question is not whether your abdomen changes, but how much, and how uncomfortable it becomes.

Flat in the morning, swollen by evening?

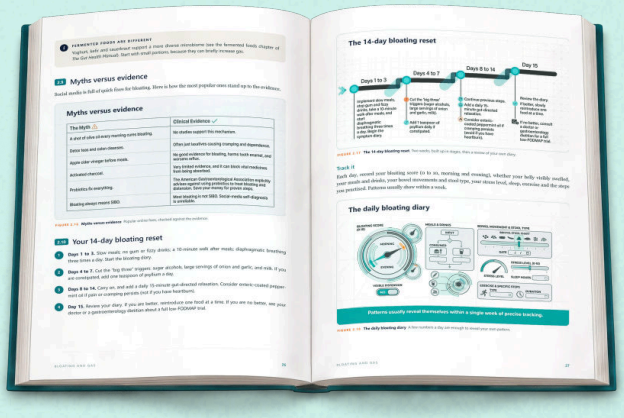
Bloating, belching and wind have many causes, and a few of them need a doctor. This book explains what is going on in your gut, what to rule out first, and six steps that follow, from slowing down at meals to a low-FODMAP trial.

Every step is graded by the strength of its evidence, so you know what is worth your time. Printable checklists, symptom diaries and progress trackers are free to download, and the GutClarity app is free too, with no subscription.

Read the warning signs first, then start the 14-day plan today.



Clear explanations. Practical steps.



Checklists, diaries and trackers.

Explore The Gut Health Series



The complete Gut Health Manual • Seven focused guides • Free GutClarity app