FREE GUIDE · FUNCTIONAL MEDICINE

Why your iron tests keep coming back “normal”, but you still feel exhausted

A guide to iron, ferritin and the gut connection that's often missed.

CHARMAINE SHEPHERD

Charmaine Shepherd
IFM Certified Functional Medicine Practitioner,
acupuncturist and biomedical scientist
4 Albyn Place, Edinburgh • and online

INTRODUCTION

"Your bloods are fine."

If you've been told this while still feeling tired, foggy, cold and nowhere near your best, this guide is for you.

You may have had your iron checked, perhaps more than once. Each time, you've been sent away with a clean bill of health.

But iron is one of the most nuanced areas of testing. A single number, judged against a population reference range, can completely miss what's going on in your body.

In this guide I'll show you what the tests really mean, where your numbers ideally need to be (not just where a lab flags them), and the link between your iron levels and the health of your gut.

Part 1: Iron isn't just about what you eat

When people hear they're low in iron, most assume the answer is to eat more red meat or take a supplement, and the job's done.

But diet is only one piece of a much larger puzzle. You can eat plenty of iron-rich food and still be iron-deficient. You can take supplements for months and barely shift your ferritin. When that happens, something else is driving the problem.

In my clinic, I look at three things:

- **Blood loss.** Heavy periods are the most common cause of low iron in women before menopause.[1]
- **Absorption.** Your upper small intestine is the gateway for iron. Stomach acid, the gut lining, digestive enzymes and your microbiome all decide how much iron reaches your cells. Coeliac disease is an important cause to rule out.[2]
- **Inflammation.** Inflammation raises hepcidin, the hormone that closes the gates on iron absorption and release.

That's why two people can eat the same diet and have completely different iron levels.

> **See your GP promptly** if you have new iron deficiency and you're a man or have been through menopause, or if you have unexplained weight loss, a change in bowel habit or any bleeding. These need investigating through the NHS.[1]

1. NHS: Iron deficiency anaemia: https://www.nhs.uk/conditions/iron-deficiency-anaemia/
2. Royal United Hospitals Bath, ferritin: a guide for GPs: https://www.ruh.nhs.uk/pathology/documents/clinical_guidelines/HAEM_Ferritin_a_guide_for_GPs.pdf

PART 2

The full iron panel: what you should be looking at

A standard check may give you one or two numbers. A full panel shows the whole picture.

Ferritin: your iron stores

TYPICAL LAB FLAG

Below 30 µg/L

Lab ranges often start at 13 to 15 µg/L; below 30 indicates deficiency[3]

FUNCTIONAL TARGET I USE

50 to 80 µg/L

Where many people's symptoms ease

Lab ranges are built around the point where anaemia develops. But your body starts to struggle, in energy, thinking and immunity, long before then. Ferritin below about 50 µg/L is often seen with:

- persistent fatigue, even with enough sleep
- brain fog and poor concentration
- low mood and poor stress resilience
- hair thinning and shedding
- restless legs, especially at night
- reduced thyroid hormone conversion
- poorer immune resilience
- feeling cold, and lower stamina

If your ferritin is 32, you may be told it's normal. In functional terms, your tank is running on fumes.

The rest of the panel

Test	What it shows	Patterns to know
Serum iron	Iron circulating right now	Varies with meals, stress, infection and time of day, so never read alone
Transferrin and TIBC	Capacity to carry iron	High TIBC with low ferritin is a classic sign of deficiency. Low TIBC with normal ferritin can point to inflammation
Transferrin saturation	How much carrying capacity is in use	My functional range is 20 to 35%. Below 20% suggests deficiency. Above 45% in women or 50% in men needs checking for iron overload[4]
Haemoglobin, MCV, MCH	Whether anaemia has developed	Small, pale red cells suggest iron deficiency anaemia. These can be normal while ferritin is low: the grey zone where many people are dismissed
CRP	Inflammation	Ferritin rises with inflammation, so it can look adequate on paper while usable iron is low

3. Newcastle upon Tyne Hospitals, adult haematology guidelines for GPs: https://www.newcastle-hospitals.nhs.uk/wp-content/uploads/2021/02/GP-Adult-haematology-guidelines-v11.pdf
4. Health Education England, hereditary haemochromatosis: https://www.genomicseducation.hee.nhs.uk/genotes/knowledge-hub/hereditary-haemochromatosis/

PART 3

The gut–iron axis: why your microbiome matters

Your gut microbiome doesn't sit passively while iron is absorbed around it. It takes part in iron metabolism, and the balance of species in your gut can help or hinder absorption.

Your gut lining is the gatekeeper

Iron is absorbed mainly in the duodenum and upper small intestine. Absorption depends on:

1. enough stomach acid to convert iron into its absorbable (ferrous) form
2. healthy cells lining the gut to carry iron across the gut wall
3. a well-regulated microbiome that isn't competing for your iron

When the gut lining is inflamed or more permeable than it should be, absorption drops. I see this often in people with low ferritin despite a good diet.

Bacteria compete for iron

Iron is essential for bacteria too. Many less helpful species depend on it. In an imbalanced gut, they can take iron for themselves before you absorb it.

Short-chain fatty acids support the lining

Beneficial bacteria ferment dietary fibre into short-chain fatty acids, particularly butyrate. These help keep the gut lining healthy, the same lining that absorbs iron. When those bacteria are depleted, the lining suffers, and iron absorption can follow.

PART 4

Probiotics and iron absorption

Not all probiotics are equal. For iron, the best-studied strain is ***Lactobacillus plantarum* 299v** (now named *Lactiplantibacillus plantarum*). A 2019 meta-analysis found it significantly improves absorption of non-haem iron from food.[5] Fewer studies show it raises ferritin over time, so I use it as a support alongside other measures.[6]

Other strains, such as *L. acidophilus*, *Bifidobacterium longum* and *B. lactis*, support the gut lining and the production of short-chain fatty acids. Their role in iron is indirect.

A note on timing. Many practitioners suggest spacing iron and probiotics: for example, iron in the morning and probiotics later in the day. It's a sensible precaution rather than a strict rule.

5. Vonderheid et al. 2019, probiotics and iron absorption (meta-analysis): https://pubmed.ncbi.nlm.nih.gov/31816981/
6. Axling et al. 2020, L. plantarum 299v in female athletes with low iron stores: https://pubmed.ncbi.nlm.nih.gov/32365981/

PART 5

What this means for you

If you've been told your bloods are normal and you're still struggling, this isn't in your head, and it isn't inevitable. The pattern I see most often in clinic is:

- ✓ ferritin in the 30 to 45 µg/L range: technically normal, functionally low
- ✓ symptoms that mirror iron deficiency: fatigue, brain fog, hair loss, low mood, feeling cold
- ✓ gut symptoms or history: bloating, irregular bowels, food reactions, antibiotic courses
- ✓ normal haemoglobin and MCV, so no anaemia is diagnosed and nothing is done
- ✓ iron supplements that haven't worked, or upset the stomach

If this sounds familiar, the gut is very often part of the answer, alongside periods and inflammation.

What a thorough approach looks like

1 Full panel testing

Ferritin, serum iron, TIBC, transferrin saturation, full blood count and CRP.

2 Find the cause

Periods, gut function, coeliac screening, stomach acid, bacterial imbalance and inflammation.

3 Targeted gut support

Specific strains and nutrients chosen for your picture, not a generic formula.

4 Help absorption at meals

Pair iron with vitamin C, make sure B12, folate and copper are adequate, and keep tea, coffee and calcium away from iron-rich meals by at least an hour.

5 The right form of iron, if needed

For example ferrous bisglycinate, which many people find gentler on the gut. Always test first: too much iron is harmful.

6 Retest after about three months

If ferritin hasn't moved, we look harder at absorption, blood loss and inflammation.

> *Ferritin moves when we fix the system, not by adding more iron to a system that can't use it.*

YOUR NOTES

My iron results tracker

Ask for copies of your results, including the reference ranges, and track them over time.

Date	Ferritin	Serum iron	TIBC	Transferrin sat. %	Hb	CRP	Notes / symptoms

Questions to take to your GP

- [ ] Could I have a full iron panel, including transferrin saturation and CRP?
- [ ] Has coeliac disease been ruled out?
- [ ] Could my periods be contributing, and what are my options?
- [ ] How long should I take iron before we retest, and which form suits me?

Ready to go deeper?

If you recognise yourself in this guide and want a clear, data-driven picture of what's driving your fatigue, brain fog or poor recovery, this is the kind of investigation I do every day.

Book a free 20-minute discovery call: charmaine-shepherd.com/book · 0131 235 1232

About Charmaine

Charmaine Shepherd is an IFM Certified Functional Medicine Practitioner, acupuncturist and biomedical scientist with over 20 years of clinical experience and more than 3,000 patients seen. She works at 4 Albyn Place, Edinburgh, and online by video.

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