DEEPER THAN SYMPTOMS

LAB INTERPRETATION

The Optimal Lab Ranges Reference Guide

Conventional vs. functional ranges, side by side — so you can tell "normal" from "optimal."

Inside this guide

A side-by-side reference table for 7 key markers — thyroid, ferritin, vitamin D, blood sugar, B12, and homocysteine — plus a 5-step plan for reading your own results against both frameworks.

A free resource from

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How to Use This Guide

Standard lab ranges are built to flag **disease** — they mark the middle 95% of a tested population as "normal." Functional ranges are narrower and ask a different question: is your result in the band tied to actually feeling well? This guide maps the two side by side so you can walk into your next appointment ready to ask for your *actual numbers* — not just a "normal / abnormal" printout.

> **The one idea to remember**
>
> A "normal" value means your result is statistically average. An "optimal" value means it sits in the range tied to real energy, hormonal balance, and feeling like yourself. They are not the same bar.

Conventional vs. Functional Ranges, Side by Side

Conventional numbers below are typical US reference ranges (they vary by lab). Functional targets reflect ranges many integrative practitioners aim for; they are not standardized and should be interpreted with a clinician. Nothing here is a diagnosis.

Marker	Typical conventional range	Functional target (practitioner-dependent)	Why the gap matters
TSH (thyroid)	~0.5–4.5 mIU/L	Often ~1.0–2.0 mIU/L	A "normal-but-high" TSH can mean your brain is already pushing a struggling thyroid.
Full thyroid panel	Often TSH only	Add Free T3, Free T4, Reverse T3, TPO & TgAb antibodies	Shows how much active hormone reaches your cells — and whether antibodies are present.
Ferritin (iron stores)	Low flagged only below ~12–15 ng/mL	Many aim ~40–70 ng/mL to resolve fatigue & shedding	Ferritin can "pass" while sitting far below what hair and energy need.
Vitamin D (25-OH)	Often not flagged until <20–30 ng/mL	Higher optimal target for mood, immune & bone health	The low end of "normal" overlaps with real deficiency symptoms.
Fasting glucose & HbA1c	Flagged near prediabetes cutoffs	Watch early upward *drift* before cutoffs	Insulin resistance builds long before glucose crosses the line.

Marker	Typical conventional range	Functional target (practitioner-dependent)	Why the gap matters
Vitamin B12	Low end of standard range	Higher target within range	The bottom of “normal” overlaps with fatigue, brain fog, early nerve changes.
Homocysteine	~11–12 µmol/L can read “in range”	Many aim ~7–9 µmol/L	A useful readout of how well methylation is actually running.

How to Put This to Work

1. **Start with standard labs through your primary care doctor.** A comprehensive metabolic panel, full thyroid panel, iron studies, vitamin D, and B12 are all reasonable requests.
2. **Pull your own results.** Most patient portals let you download the actual numbers — don’t settle for “everything looks fine.”
3. **Read each value against both frameworks.** Note where you sit *within* a range, not just whether you passed.
4. **Track trends over time.** A single snapshot hides drift; two or three data points reveal direction.
5. **Bring both lenses to the conversation.** Use conventional ranges to rule out disease, then ask whether “not sick” is the same as “thriving” for anything drifting toward the edge.

A balanced note

This isn’t “conventional bad, functional good.” Conventional ranges are essential for ruling out serious disease. Functional ranges are a *second lens* — many rest on clinical experience rather than large trials, and they vary between practitioners. Use them together, in sequence.

Your next step

Bring this guide to your next appointment and ask for your actual numbers. For the full breakdown of why “normal” doesn’t always mean well, read the complete article at deeperthansymptoms.com.