MICRONUTRIENTS *LAB GUIDE*

THE OPTIMAL RANGES I LOOK FOR

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MARKER	IDEAL RANGE	WHAT IT TELLS YOU
VITAMINS		
25-OH Vitamin D3	**50–75 ng/mL**	Acts more like a hormone than a vitamin — it runs immunity, mood, bones, and calcium. Most people are low.
Vitamin B12	**550–1100 pg/mL**	Needed for energy, nerves, and healthy red blood cells. But a "normal" B12 can be misleading — homocysteine tells you if it's actually working.
Serum folate	**> 15 ng/mL**	Works with B12 for energy, DNA repair, and red blood cells. Low folate is a common hidden cause of fatigue and low mood.
Homocysteine	**5–7 µmol/L**	The functional marker — it tells you whether your B12 and folate are actually doing their job, which the levels alone can't show.
MINERALS		
RBC magnesium	**6–6.8 mg/dL**	Shows your true cellular magnesium, not just what's in the blood. Low magnesium drives cramps, poor sleep, and anxiety — and most people are short.
Calcium	**8.6–10 mg/dL**	Read as a ratio, not single numbers — the balance between them matters more than either alone.
Phosphorus	**2.5–4 mg/dL**	
Parathyroid hormone (PTH)	**< 30 pg/mL**	Rises when your calcium or vitamin D runs low, pulling calcium out of your bones to compensate. A "normal" calcium with high PTH means your bones are quietly paying the price.
Plasma zinc	**100–120 µg/dL**	Supports immunity, hormones, and hundreds of enzymes. But it has to be balanced against copper — too much zinc drives copper down.
Serum copper	**100–140 µg/dL**	Needed to move iron, build connective tissue, and power antioxidant defenses. Often driven low by too much zinc — and low copper can look like an iron problem.
Ceruloplasmin	**19–30 mg/dL**	The protein that carries your copper and tells you whether it's actually usable.
Plasma selenium	**90–140 µg/L**	Needed for antioxidant protection and for converting thyroid hormone to its active form.
IRON		
Ferritin	**50–100 ng/mL**	Your stored iron. It rises with inflammation too, so it's read alongside the rest of the panel, not alone.
Serum iron	**80–130 µg/dL**	The iron currently circulating and available to use.
Transferrin saturation	**25–35%**	How much of your iron is actually usable. Low here with high ferritin means iron that's "stuck," often from low copper.
TIBC	**250–350 µg/dL**	Your blood's capacity to carry iron — it rises when iron is low.

FULL PANEL

See the Metabolic Health Lab List for every marker I run and how to prep for the draw.

Not sure what your labs are telling you?
That's what we figure out together.

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DISCLAIMER

The ranges in this guide are the optimal ranges I personally look for — they are not standard laboratory reference ranges, and they are not a diagnosis or a treatment recommendation.

"Optimal" reflects where I aim to see a marker for pursuing better metabolic health; it is not the same as a clinical "normal," and being outside these ranges does not by itself mean something is wrong.

This material is for educational and informational purposes only. It is not medical advice, and it is not a substitute for care from a qualified, licensed healthcare provider. Nothing here is intended to diagnose, treat, cure, or prevent any disease.

Always consult your physician or another licensed healthcare professional before making changes to your diet, supplements, medications, or exercise, before ordering or interpreting any lab tests, and before acting on anything in this guide. Do not disregard or delay seeking professional medical advice because of something you read here.

Lab results must be interpreted in the context of your full history, symptoms, and other markers by a qualified professional. Individual needs vary, and no guide can account for your specific situation.