

Decode Your Labs

A plain-language guide to the markers that matter on a GLP-1

You get the results, and they may as well be in another language: a column of abbreviations, a reference range, a checkmark or a flag, and almost no explanation of what any of it means for you. Worse, the panel you are handed often leaves out the very markers that would explain how you feel on a GLP-1. This is a plain-language guide to the terms that matter most, so the next time you see your results, you can actually read them.

A normal result is not the same as an optimal one. Most lab ranges describe the middle of a general population, not what is ideal for someone losing weight quickly on a GLP-1. A value can sit inside the range and still be drifting in the wrong direction. The point of understanding these markers is to watch the trend and the context, not only the flag.

This is not the full GPS panel. It is the handful of terms patients ask about most.

The numbers that describe your body

Lean body mass (fat-free mass). Everything in your body that is not fat: muscle, bone, organs, and water. It is the metabolically active tissue that drives strength and metabolism. *On a GLP-1:* the number you most need to protect, and the right denominator for setting your protein target.

Body fat percentage. The share of your weight that is fat. It tells you what the scale cannot, namely whether the weight you are losing is fat or lean tissue. *On a GLP-1:* falling weight alongside steady or rising body fat percentage means you are losing muscle, the outcome to avoid.

The quiet depletions

Vitamin B12 (cobalamin). A vitamin essential for nerve function, red blood cells, and energy metabolism. *On a GLP-1:* lower food volume and altered digestion can reduce both intake and absorption, so it is worth watching.

Folate. A B vitamin that works alongside B12 in methylation and in building new cells. *On a GLP-1:* it depends on food intake and pairs with B12, so the two are read together.

Vitamin D (25-hydroxy vitamin D). The storage form of vitamin D measured to gauge your status; it supports bone, immune function, and muscle. *On a GLP-1:* commonly low at baseline and easy to overlook while everything else is changing.

Ferritin. The protein that stores iron, used as a measure of your iron reserves. It also rises with inflammation, so it is read in context, not alone. *On a GLP-1:* iron intake can fall with reduced food, so reserves are worth tracking.

RBC magnesium. Magnesium measured inside red blood cells, a more informative view of your true status than a standard serum test, which is tightly regulated and can look normal even when stores are low. *On a GLP-1:* magnesium drives energy, muscle function, and glucose handling, and it falls early when you eat less.

Zinc. A mineral central to immune function, wound healing, and taste. *On a GLP-1:* intake drops when food volume drops, and low zinc can dull taste further.

The functional markers standard panels often skip

Fasting insulin and HOMA-IR. Fasting insulin is the amount of insulin in your blood after an overnight fast. HOMA-IR is a simple calculation from fasting glucose and insulin that estimates insulin resistance. Together they reveal metabolic strain that glucose alone can miss. *On a GLP-1:* these often improve with treatment, and tracking them shows the metabolic change beneath the weight.

Free T3. The active form of thyroid hormone. Under a sustained calorie deficit the body lowers free T3 to conserve energy, and a standard TSH test can read normal while free T3 has already dropped. *On a GLP-1:* if your energy and metabolism feel flat, free T3 is the marker that explains what TSH alone will not.

hs-CRP (high-sensitivity C-reactive protein). A sensitive marker of low-grade inflammation in the body. *On a GLP-1:* it often falls as weight comes down, a useful sign of improving metabolic health.

Omega-3 index. The proportion of omega-3 fats in your red blood cells, a direct read on your fatty-acid status. *On a GLP-1:* a narrower diet can shift your fatty-acid balance, so a baseline is worth having.

Methylation and your genes

Homocysteine. An amino acid that rises when the methylation pathway is undersupplied with B12, folate, or B6. It is the functional readout that ties your B vitamins to how well that pathway is running. *On a GLP-1:* because B-vitamin intake is already under pressure, homocysteine is a sensitive early signal.

MTHFR. A gene that affects how efficiently you convert folate into its active form. A common variant can modestly reduce that conversion. It is one input into how you handle B vitamins, not a diagnosis and not a destiny. *On a GLP-1:* it can inform which forms of folate and B12 suit you, which matters more when intake is low.

You do not need to memorize any of this. You need to know these markers exist, and to make sure someone is tracking the ones that matter while you are on therapy. That is the entire job of a structured baseline.

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