

Reading *your bloodwork*

A private guide to what your labs are actually telling you, marker by marker, without the panic or the false reassurance.



What This Guide Is

A biomarker is a signal, not a grade. It tells you something about what's happening inside you at the moment the sample was drawn. It doesn't hand you a verdict.

Most lab reports flatten this. They print a number next to a green or red flag, and the flag does the thinking for you. That's convenient and it's also how a lot of context gets lost, the context of what you ate that morning, how you slept the night before, whether you'd just finished a hard training block, and what your baseline actually looks like over time rather than as a single snapshot.

So this guide is written differently, deliberately. For each marker, you'll get what it actually measures, what a reading generally suggests in either direction, and anything specific to this protocol that changes how to interpret it. What you won't get is "this is good" or "this is bad." That judgment depends on your full picture, your history, your symptoms, and your physician, not a single number in isolation.

This guide is educational context, not a diagnosis and not a substitute for a conversation with your doctor. Reference ranges vary between labs and populations, so treat the ranges printed here as general orientation rather than the exact cutoffs your specific lab uses. Always discuss your actual results with a physician, particularly anything markedly outside range or paired with symptoms.

Getting A Clean Read

A few practical habits make your results genuinely comparable, this time to next time. Skip these and you're partly reading noise.

01 **TEST AT A CONSISTENT TIME OF DAY**

Cortisol, glucose, and iron markers shift across the day. Fasting morning draws, roughly the same time each round, make results genuinely comparable.

02 **FOLLOW THE FASTING WINDOW YOUR PANEL REQUIRES**

Most metabolic and lipid panels ask for 8 to 12 hours fasted. Water is fine. Black coffee is a judgment call, ask your lab if it matters for your panel.

03 **SKIP HARD TRAINING THE DAY BEFORE**

Intense exercise 24 to 48 hours before a draw can temporarily elevate AST, creatinine, and inflammatory markers in ways that have nothing to do with your baseline health.

04 **DON'T TEST MID-ILLNESS OR RIGHT AFTER ONE**

Inflammation from a cold, an infection, or even a bad night's sleep can distort CRP, ferritin, and glucose for days afterward.

05 **TRACK TRENDS, NOT SINGLE DRAWS**

One reading is a data point. Three readings over time are a trend, and a trend is what actually tells you whether something is working.

Glucose & Insulin

These markers describe how your body is currently managing blood sugar, and how hard it's working to do so.

Fasting Glucose

70–99 mg/dL typical

A single snapshot of circulating sugar after an overnight fast. It reflects the morning of the draw, not your average.

ON THIS PROTOCOL

Can sit at the higher end of the typical range, occasionally just above it, due to a normal adaptive shift often called "physiological insulin resistance," where muscle preferentially spares glucose for the brain. This is generally distinct from the insulin resistance seen with excess carbohydrate intake, and is usually paired with a low fasting insulin rather than a high one.

HbA1c

4–5.6% typical

An average of blood sugar exposure over roughly the last three months, based on how much glucose has attached to red blood cells.

ON THIS PROTOCOL

Usually falls on a lower-carbohydrate pattern. It can read unreliably in people with anemia or other blood cell conditions, since it depends on red blood cell lifespan, not glucose alone.

Fasting Insulin

2–25 µU/mL typical

How much insulin your pancreas is releasing to manage fasting glucose. It's a more sensitive early signal of metabolic strain than glucose alone.

ON THIS PROTOCOL

Tends to drop substantially on carbohydrate restriction, often the most reliably improved marker in this entire panel, since there's simply less circulating glucose to manage.

HOMA-IR

Calculated, lower generally favorable

A calculation combining fasting glucose and insulin into a single estimate of how resistant your cells currently are to insulin's signal.

ON THIS PROTOCOL

Because it uses fasting glucose in the formula, the mild glucose elevation described above can make this number read slightly worse than the insulin trend alone would suggest. Insulin is usually the more informative half of this equation on a low-carb pattern.

Cholesterol & Triglycerides

This is the panel that changes the most, and gets discussed the most, on this protocol.

Read it as a set, not marker by marker.

Total Cholesterol

Sum of all fractions

Cholesterol is a structural molecule your body uses to build cell membranes and hormones. The total figure alone says little without the breakdown beneath it.

Triglycerides

<150 mg/dL typical

Fat circulating in the blood for energy use or storage. Generally considered one of the more useful metabolic health indicators on any diet.

ON THIS PROTOCOL

Tends to drop substantially and consistently, often one of the earliest and most reliable improvements people see after adopting the diet.

HDL-C

Higher generally favorable

Often described as the particle that ferries cholesterol back to the liver for clearance. Tends to move opposite to triglycerides.

ON THIS PROTOCOL

Tends to rise on a low-carbohydrate pattern, generally considered a favorable directional shift.

LDL-C

Highly individual response

The particle that carries cholesterol from the liver out to tissues. Its behavior on this protocol is genuinely one of the most actively studied questions in this space right now.

ON THIS PROTOCOL

A subset of lean, metabolically healthy people see LDL-C rise sharply, sometimes to 200mg/dL or higher, alongside low triglycerides and high HDL, a pattern researchers now call the "lean mass hyper-responder" phenotype. It appears tied to carbohydrate restriction specifically and reverses when carbohydrate intake increases.

HIDDEN TRAP

A sharply elevated LDL-C in an otherwise lean, metabolically healthy person on this diet is a real, reproducible, and actively studied pattern, not a lab error and not automatically a crisis. It also isn't automatically nothing. Current research hasn't settled what it means for long-term cardiovascular risk in this specific phenotype. If your LDL rises significantly, that's a conversation for your physician, and often a case for looking deeper with an ApoB test or a coronary calcium score rather than treating the LDL number alone as the full story.

Organ Function Markers

These markers reflect how your liver and kidneys are handling a higher protein and fat load. Almost all of them need context from your training and supplement habits to read correctly.

ALT / AST

0–40 IU/L typical

Enzymes released when liver cells are stressed or damaged. AST is also present in muscle tissue, so it isn't liver-specific on its own.

ON THIS PROTOCOL

A recent hard training session can temporarily raise AST from muscle breakdown alone, unrelated to the liver. ALT is the more liver-specific of the two when the two disagree.

GGT

5–40 U/L typical

An enzyme particularly sensitive to alcohol intake and bile duct function, generally considered a useful secondary liver marker.

Creatinine & eGFR

Varies by age, sex, muscle mass

A byproduct of muscle metabolism, used to estimate how well your kidneys are filtering blood.

ON THIS PROTOCOL

Higher muscle mass and creatine supplementation both raise creatinine independent of actual kidney function, which can make eGFR estimates read lower than true filtration rate in well-muscled clients.

BUN

7–20 mg/dL typical

A measure of urea, a byproduct of protein breakdown, cleared by the kidneys.

ON THIS PROTOCOL

Runs naturally higher on a higher-protein pattern. On its own, an elevated BUN with a normal creatinine and eGFR generally points to protein intake, not kidney strain.

Electrolyte Panel

Carbohydrate restriction changes how the kidneys handle sodium, which pulls the rest of this panel along with it, especially in the first few weeks.

Sodium

135–145 mEq/L typical

The primary regulator of fluid balance and blood pressure. Lower carbohydrate intake reduces insulin, which in turn tells the kidneys to excrete more sodium.

ON THIS PROTOCOL

This is the mechanism behind most early-adaptation symptoms. It's generally why higher deliberate sodium intake, well beyond conventional low-sodium advice, is a standard part of adapting to this way of eating.

Potassium

3.5–5.0 mEq/L typical

Essential for muscle contraction and nerve signaling, and closely tied to sodium balance.

ON THIS PROTOCOL

Follows sodium losses in early adaptation. Cramping, particularly in the calves, is a classic early sign worth flagging to your coach or physician.

Magnesium

1.7–2.2 mg/dL typical (serum)

Involved in several hundred enzymatic reactions, including sleep regulation and muscle relaxation.

ON THIS PROTOCOL

Serum magnesium reflects only about one percent of your body's actual stores, so a "normal" reading doesn't rule out functional deficiency. Symptoms like cramping, insomnia, or heart palpitations are often more informative than the lab value alone.

Uric Acid

3.5–7.2 mg/dL typical

A byproduct of purine metabolism, cleared through the kidneys.

ON THIS PROTOCOL

Commonly rises temporarily during the first two to three weeks of adaptation, since ketones compete with uric acid for kidney excretion. This usually normalizes with time and adequate hydration, though anyone with a personal history of gout should discuss this specifically with their physician before starting.

Thyroid Function

This is the panel most likely to confuse people on a low-carbohydrate diet, because one marker in it moves in a way that looks alarming but usually isn't.

TSH

0.27–4.20 mIU/L typical

A pituitary signal that rises when it senses too little thyroid hormone in circulation, and falls when there's plenty.

ON THIS PROTOCOL

Generally stays within its typical range on a well-formulated protocol, even when Free T3 (below) drops.

Free T4

12.0–22.0 pmol/L typical

The storage form of thyroid hormone, converted into the active form (T3) by tissues throughout the body.

ON THIS PROTOCOL

Usually stays stable on a low-carbohydrate pattern.

Free T3

3.1–6.8 pmol/L typical

The active form of thyroid hormone that tissues actually use to regulate metabolism.

ON THIS PROTOCOL

Often drops on very low carbohydrate intake, sometimes called "low T3 syndrome," generally understood as an adaptive, energy-conserving response rather than a thyroid failing. It's not typically classified as true hypothyroidism.

HIDDEN TRAP

A dropped Free T3 with a normal TSH and normal Free T4 usually reads as adaptation, not disease. That said, fatigue, feeling cold, and hair thinning are real symptoms worth acting on if they show up. If they do, raising carbohydrate intake to roughly 50 to 75 grams a day often resolves it while keeping most of the benefits of a lower-carbohydrate pattern intact. Discuss this specifically with your physician if symptoms are present.

hs-CRP

One marker, one job: a general read on how much systemic inflammation is currently present in your body.

hs-CRP

<1 mg/L generally favorable

Produced by the liver in response to inflammatory signals, primarily interleukin-6. It rises with infection, injury, and chronic low-grade inflammation alike, so it doesn't tell you the cause, only that something is currently active.

ON THIS PROTOCOL

Often trends down as excess body fat and blood sugar variability decrease. A single high reading is frequently just a recent cold or a hard workout rather than anything chronic, worth retesting a few weeks later before drawing any conclusion.

Vitamin D, B12 & Ferritin

The three micronutrient markers worth checking on a meat-forward pattern, one you'll likely need to actively manage and two you probably won't.

Vitamin D (25-OH) 30–50 ng/mL commonly cited sufficient

Reflects your body's stored vitamin D, sourced mainly from sun exposure and, to a much smaller degree, from diet.

ON THIS PROTOCOL

Diet composition barely moves this one either way. It's driven almost entirely by sun exposure and supplementation, so it's worth checking regardless of what you eat, especially with limited sun or darker skin tone.

Vitamin B12 Lab-specific, deficiency flagged below range

Essential for red blood cell formation and nerve function, found almost exclusively in animal foods.

ON THIS PROTOCOL

A meat-forward diet is typically one of the more reliable ways to keep this well-supplied, since B12 is abundant in red meat, organ meat, and eggs.

Ferritin Roughly 20–250 ng/mL, range differs by lab and sex

Your body's iron storage protein. It also behaves as an acute-phase inflammatory marker, meaning it can read falsely high during illness or inflammation.

ON THIS PROTOCOL

Tends to run comfortably within range or higher on a diet rich in red meat and organ meat. Very high readings paired with normal inflammation markers are worth discussing with your physician, since they can occasionally point to iron overload conditions unrelated to diet.

The One-Page Recap

A condensed table of what tends to move, and in which direction, on a well-formulated protocol. This is a general pattern, not a promise about your specific bloodwork.

PANEL	TYPICALLY TRENDS	WORTH A SECOND LOOK IF
Glucose / Insulin	Fasting insulin drops, glucose may sit slightly higher	Both glucose and insulin are elevated together
Triglycerides / HDL	Triglycerides fall, HDL rises	Triglycerides rise instead of falling after 8+ weeks
LDL-C	Individual, can rise sharply in lean responders	Sharp rise paired with a family history of early heart disease
Liver Enzymes	Generally stable	ALT or GGT climb without a recent hard training session
Electrolytes	Sodium and potassium needs rise	Cramping, palpitations, or fatigue despite supplementing
Uric Acid	Transient early rise, normalizes in weeks	Personal or family history of gout
Thyroid	Free T3 may drop, TSH usually stable	Fatigue, feeling cold, or hair thinning appear
hs-CRP	Trends down over time	Stays elevated across two tests, weeks apart
Ferritin	Comfortably in range or higher	Very high, without a recent illness to explain it

Ranges throughout this guide are typical adult reference ranges drawn from common clinical sources and will vary by lab, age, sex, and individual history. Always interpret your own results with your physician.



Numbers are a starting point for a conversation, not the end of one.

Bring your latest panel to your next session and we'll go through it together, marker by marker, in the context of how you're actually training, eating, and feeling.

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