



STARTER GUIDE

Insulin Resistance

STARTER CHEAT SHEET

Know your symptoms. Know your labs. Know what to ask for.



HOW INSULIN WORKS

1 • YOU EAT

Carbs become **glucose** (sugar) in your blood



2 • PANCREAS

Releases **insulin**: the "key" that unlocks cells



3 • CELLS

Open up and use sugar for energy (or store it)



Insulin resistance = the locks get "sticky"

Pancreas = pumps out MORE insulin to keep up

INSULIN RESISTANCE

Hidden stage • insulin high, sugar "normal"

- Belly weight that won't budge
- Can't lose weight despite real effort
- Sugar & carb cravings
- "Hangry" or shaky between meals
- Sleepy or foggy after meals
- Skin tags (neck, armpits)
- Dark, velvety skin patches
- High triglycerides; low HDL
- Rising blood pressure
- Irregular periods; PCOS
- Fatty liver

BLOOD SUGAR RISING

Prediabetes & type 2 • sugar starts to climb

- Always thirsty
- Peeing more, especially at night
- Hungry soon after eating
- Fatigue, low energy
- Blurry vision
- Cuts & bruises heal slowly
- Frequent yeast, skin or bladder infections
- Tingling or numb hands & feet
- Dry, itchy skin
- Gum problems
- Weight loss without trying (later sign)



Did you know? Insulin can run high for years while blood sugar and A1c still look "normal." That's why fasting insulin matters, and it's the best time to turn things around.

BEFORE YOUR BLOOD DRAW

Ask for a FULL panel: fasting glucose, fasting insulin, A1c, lipid panel, liver enzymes, uric acid, hs-CRP

Pause biotin (hair/skin/nail vitamins) 2–3 days before; it can skew results

Sick, stressed or slept badly? These can raise sugar; reschedule if you can

Fast 8–12 hours: water only. Skip coffee, gum & mints

Test in the morning and skip hard workouts the day before

List your meds: steroids, metformin, GLP-1s & others change results



YOUR INSULIN LABS, DECODED

Part 1 · Blood sugar & insulin: what each lab shows and what to consider

Optimal the range we aim for **Standard** typical lab range (varies by lab)

FASTING GLUCOSE

Your blood sugar after an overnight fast. A late sign: it rises last.

Optimal 75–90 mg/dL

Standard ~70–99 mg/dL

↑ IF HIGH

May mean: 100–125 is prediabetes; 126+ on two tests is diabetes. Stress, poor sleep, illness or steroids can also raise it.

Consider: fasting insulin, A1c; repeat to confirm.

↓ IF LOW

May mean: under 70 can come from a long fast, intense exercise, alcohol or diabetes medication.

Consider: symptoms like shaking or sweating; review meds & meal timing.

FASTING INSULIN

How hard your pancreas works to keep sugar normal. Often the earliest clue.

Optimal 2–6 µIU/mL

Standard ~2.6–24.9 µIU/mL

↑ IF HIGH

May mean: insulin resistance, even when glucose & A1c look normal.

Consider: HOMA-IR; protein, fiber, strength training, sleep; waist size.

↓ IF LOW

May mean: good insulin sensitivity. But low insulin WITH high glucose means the pancreas may not be keeping up.

Consider: C-peptide & antibodies if glucose is high.

HEMOGLOBIN A1C

Your average blood sugar over about 3 months.

Optimal <5.4%

Standard <5.7%

↑ IF HIGH

May mean: 5.7–6.4% is prediabetes; 6.5%+ is diabetes. Iron deficiency can falsely raise it.

Consider: fasting glucose & insulin; ferritin & CBC.

↓ IF LOW

May mean: usually good. Anemia, blood loss or a recent transfusion can falsely lower it.

Consider: CBC; a glucose monitor if numbers don't match symptoms.

HOMA-IR

A score calculated from fasting glucose × insulin. Not always on your report.

Optimal <1.0

>1.9 early · >2.9 significant*

↑ IF HIGH

May mean: your body needs extra insulin to keep sugar normal: insulin resistance.

Consider: recheck in 3–6 months to track progress.

↓ IF LOW

May mean: good insulin sensitivity.

Consider: keep it there: strength training, protein, sleep.

TRIGLYCERIDE : HDL

Triglycerides divided by HDL, from your lipid panel. A simple insulin clue.

Optimal <1.5

Above ~3 suggests IR*

↑ IF HIGH

May mean: insulin resistance; extra sugar & alcohol being turned into fat.

Consider: cut sugary drinks & alcohol; ApoB; liver enzymes.

↓ IF LOW

May mean: healthy fat & sugar handling.

Consider: read with your full lipid panel.



YOUR INSULIN LABS, DECODED

Part 2 · Related markers, patterns and co-factors

LIVER ENZYMES (ALT)

Extra sugar gets stored as fat in the liver, often with no symptoms.

Optimal ALT <25 U/L

Standard ~7–45 U/L*

↑ IF HIGH

May mean: fatty liver, alcohol, some medications or supplements.

Consider: AST, GGT, liver ultrasound; cut sugary drinks & alcohol.

URIC ACID

Rises with fructose, alcohol and insulin resistance. Not just a gout lab.

Optimal <5.5 mg/dL

Standard ~2.5–7.0 mg/dL*

↑ IF HIGH

May mean: insulin resistance, sugary drinks, alcohol, kidney strain.

Consider: hydration; blood pressure; kidney labs.

HS-CRP (INFLAMMATION)

Inflammation and insulin resistance feed each other.

Optimal <1.0 mg/L

Standard <3.0 mg/L*

↑ IF HIGH

May mean: belly fat, poor sleep, gut issues, infection or recent injury.

Consider: recheck when well; heart risk markers; gut health.

HORMONE CLUES

Insulin resistance shifts sex hormones in both women and men.

SHBG: mid-range

Varies by sex & age*

↓ IF SHBG LOW

Women: often with high testosterone & PCOS. **Men:** often with low testosterone.

Consider: testosterone, LH, thyroid panel.

READING THE PATTERN

↑ high · ↓ low · N in range

Glucose	Insulin	A1c	What it may point to
N	N (2–6)	N	Healthy insulin sensitivity
N	↑	N	Early, hidden insulin resistance: the best time to act
90–99	↑	5.4–5.6%	Insulin resistance progressing
100–125	↑	5.7–6.4%	Prediabetes
126+	↑ or N	6.5%+	Type 2 diabetes range (confirm with a repeat test)
↑	↓	↑	Pancreas not keeping up: check C-peptide & antibodies

INSULIN CO-FACTORS WORTH CHECKING

Vitamin D (25-OH) 50–80 ng/mL

RBC Magnesium 5.5–6.5 mg/dL

TSH 0.5–2.0 mIU/L + Free T3

Ferritin

ApoB

Waist <35" women · <40" men

The good news: insulin resistance responds well to change. Protein, fiber, strength training, sleep and stress care can move these numbers in a few months.

*Reference ranges vary by lab and testing method. HOMA-IR = fasting insulin (μIU/mL) × fasting glucose (mg/dL) ÷ 405. Optimal ranges reflect Clarity for You Wellness's functional-medicine approach and are not diagnostic. For education only; always review your results with your healthcare provider.