

Heyday Health

The Man's Guide to Understanding Your Bloodwork

The 7 biomarkers every man over 30 should track — what they mean, when to worry, and what to do about it.

[FREE GUIDE](#)

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Why Your Bloodwork Matters More Than You Think

Most men get bloodwork once a year — if that. They glance at the "normal" stamp and move on. But "normal" doesn't mean optimal, and the gap between the two is where energy, focus, muscle, and drive disappear.

Here's the problem: standard lab ranges are built from population averages that include sick, sedentary, and aging men. A "normal" testosterone level for a lab might be 264 ng/dL — a number that would leave most 35-year-olds feeling like they're running on fumes.

This guide breaks down the 7 most important biomarkers for men's health. For each one, you'll learn:

- ✓ What it measures and why it matters
- ✓ The optimal range (not just "normal")
- ✓ What low or high values actually mean for how you feel
- ✓ What you can do about it

THE OPTIMIZATION GAP

"Normal" lab ranges cover the 2.5th to 97.5th percentile of the general population. Optimal ranges are narrower — targeting where men report feeling their best, performing their best, and aging the slowest.

Whether you're dealing with fatigue, weight gain, brain fog, or just a sense that something's off — your bloodwork holds the answers. Let's decode it.

The Big 7: Key Biomarkers

These are the markers that paint the clearest picture of a man's hormonal health, metabolism, and vitality.

Total Testosterone

THE FOUNDATION

Optimal: 600–900 ng/dL

Total testosterone is the master hormone for men. It drives muscle mass, bone density, fat distribution, libido, mood, cognitive function, and cardiovascular health. After age 30, levels decline ~1-2% per year — and modern men are starting from lower baselines than previous generations.

↓ IF LOW

Fatigue, weight gain (especially belly), low libido, brain fog, irritability, loss of muscle mass, poor sleep

↑ IF HIGH

Rarely an issue naturally; very high levels may indicate external supplementation. Monitor estradiol and hematocrit alongside.

Free Testosterone

WHAT'S ACTUALLY AVAILABLE

Optimal: 15–25 pg/mL

Only 2-3% of your testosterone is "free" — unbound and available for your body to use. The rest is bound to SHBG and albumin. You can have normal total T but low free T, which means your body isn't getting enough of the hormone it needs.

↓ IF LOW

Same symptoms as low total T, even if total T looks normal. Often missed by standard labs.

↑ IF HIGH

Usually not a concern unless accompanied by high total T and symptoms.

PRO TIP

Always test **both** total and free testosterone. A man with total T of 500 but free T of 8 pg/mL is effectively low-T, even though the total number looks "fine."

Estradiol (E2)

THE BALANCING ACT

Optimal: 20–35 pg/mL

Yes, men need estrogen — but in the right amount. Testosterone converts to estradiol via the aromatase enzyme. Too little and you get joint pain, low mood, and poor libido. Too much and you get water retention, mood swings, and the dreaded chest fat.

↓ IF LOW

Joint pain and stiffness, fatigue, depression, decreased bone density, low libido

↑ IF HIGH

Water retention/bloating, mood swings, gynecomastia (chest tissue), acne, erectile issues

SHBG (Sex Hormone Binding Globulin)

THE GATEKEEPER

Optimal: 20–50 nmol/L

SHBG is a protein that binds to testosterone and takes it out of circulation. High SHBG = less free testosterone available. It's one of the most overlooked markers and explains why some men feel terrible despite "normal" total T.

↓ IF LOW

Associated with insulin resistance, metabolic syndrome, type 2 diabetes risk. May lead to more estrogen conversion.

↑ IF HIGH

Reduces free testosterone. Can be driven by aging, liver stress, hyperthyroidism, or excess alcohol.

THE SHBG + FREE T CONNECTION

If your SHBG is above 50, your free testosterone is almost certainly low — even if your total T is in the 500-600 range. This is the #1 reason men feel like crap despite "normal" labs.

TSH (Thyroid Stimulating Hormone)

YOUR METABOLIC THERMOSTAT

Optimal: 1.0–2.5 mIU/L

Your thyroid controls your metabolic rate — how efficiently you burn calories, regulate body temperature, and produce energy. TSH is the signal your brain sends to your thyroid. High TSH means your thyroid is underperforming; low TSH means it's running too hot.

↓ IF LOW (< 0.5)

Anxiety, rapid heart rate, unexplained weight loss, tremors, insomnia, heat intolerance

↑ IF HIGH (> 4.0)

Fatigue, weight gain, cold sensitivity, constipation, dry skin, brain fog, depression

Fasting Insulin

THE EARLY WARNING SYSTEM

Optimal: 3–8 μ U/mL

Fasting insulin is the earliest marker for metabolic dysfunction — it rises years before blood sugar does. High insulin means your body is working overtime to manage glucose, and it's directly linked to fat storage, inflammation, and accelerated aging.

↓ IF LOW

Rarely a concern unless extremely low; may indicate autoimmune issues.

↑ IF HIGH (> 12)

Insulin resistance, belly fat accumulation, increased inflammation, higher disease risk, energy crashes

WHY YOUR DOCTOR MIGHT MISS THIS

Most standard physicals don't include fasting insulin — they test glucose and A1C instead. By the time those are abnormal, you've been insulin resistant for years. Fasting insulin catches it early, when it's still reversible.

Hematocrit (HCT)

BLOOD THICKNESS MONITOR

Optimal: 42–50%

Hematocrit measures the percentage of red blood cells in your blood. It's critical for men on TRT because testosterone stimulates red blood cell production. Too high and your blood becomes thick, increasing cardiovascular risk. This is why regular monitoring is essential.

↓ IF LOW (< 38%)

Anemia, fatigue, shortness of breath, dizziness, pale skin

↑ IF HIGH (> 54%)

Increased blood clot risk, headaches, dizziness, elevated blood pressure. Requires intervention.

Quick Reference: Your Biomarker Cheat Sheet

MARKER	OPTIMAL RANGE	WHY IT MATTERS
Total Testosterone	600–900 ng/dL	Energy, muscle, mood, drive
Free Testosterone	15–25 pg/mL	What your body actually uses
Estradiol (E2)	20–35 pg/mL	Hormonal balance, mood
SHBG	20–50 nmol/L	Controls free T availability
TSH	1.0–2.5 mIU/L	Metabolic rate, energy
Fasting Insulin	3–8 μ IU/mL	Metabolic health, fat storage
Hematocrit	42–50%	Blood health, safety on TRT

What to Do With This Information

Knowing your numbers is step one. Here's how to actually use them.

Step 1: Get Tested

Don't rely on a standard physical. Request a comprehensive male hormone panel that includes **all 7 markers** listed in this guide. Morning blood draws (before 10 AM, fasted) give the most accurate results — testosterone peaks in the morning.

Step 2: Compare to Optimal, Not Just "Normal"

Use the optimal ranges in this guide, not the lab's reference range. A total T of 300 is "normal" by lab standards but could be the reason you can't lose weight, think clearly, or feel like yourself.

Step 3: Look at the Full Picture

No single marker tells the whole story. Total T + Free T + SHBG + E2 together reveal whether your hormonal system is actually working for you. That's why cookie-cutter clinics that only check total T miss the mark.

Step 4: Talk to a Specialist

Your PCP is great for general health, but hormone optimization requires specialized knowledge. A provider who understands the interplay between these markers can create a protocol tailored to your body — not a one-size-fits-all prescription.

HOW OFTEN SHOULD YOU TEST?

Baseline: Now, if you haven't in the last 6 months.

On treatment: Every 8–12 weeks for the first 6 months, then every 3–6 months.

Maintenance: At least twice a year, even if you feel great.

Ready to Find Out Where You Stand?

Take the 60-second Heyday quiz. We'll tell you if you're a candidate for optimization — and if you are, we'll send a lab kit to your door.

[TAKE THE QUIZ →](#)

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