

COMPREHENSIVE METABOLIC, HORMONE, AND LONGEVITY LAB PANEL RECOMMENDATIONS (mens edition)

Most standard annual physicals only check if something is “wrong.”

This panel looks at **how well your body is actually functioning**. Our goal is to identify:

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- Early metabolic dysfunction
- Cardiovascular risk long before symptoms appear
- Hormone and thyroid inefficiencies
- Inflammation and nutrient deficiencies
- Barriers to building muscle, losing fat, and aging well

Keys: "Normal" lab ranges are based on averages, not ideal health. They're derived from large samples where 95% are called "normal," but most people aren't at peak health—they have chronic issues, metabolic dysfunction, and are aging poorly. This skews "average" toward unhealthy. Ranges reflect risk and flag outliers, but as society gets healthier, "high" becomes "normal." We reject "normal" (surviving) and aim for optimal (thriving)!

- Share this document with your primary care physician or concierge provider
- These tests are available through major labs such as LabCorp and Quest Diagnostics
- Not all tests come in one bundle, some may be ordered individually
- Fasting is required for most markers (8-12 hours unless otherwise noted)

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FULL RECOMMENDED LAB PANEL WITH OPTIMAL RANGES

Below is the complete panel, expanded with conventional and optimal ranges for each marker. Optimal values are based on functional medicine, longevity research, and high-performance data. Narrower than averages for thriving.

Symptoms tie into **muscle building, fat loss, and anti-aging**. **Track trends**; retest 3-6 months if optimizing.

METABOLIC & GLUCOSE HEALTH

Test	Conventional Range	Optimal Range	Notes/Symptoms of Suboptimal
Fasting Glucose	70-99 mg/dL	70-85 mg/dL	High end = early resistance. Symptoms: hunger, fog, cravings.
Fasting Insulin	2-25 µU/mL	2-6 µU/mL	Core for metabolic health. Symptoms: fat gain, low T, muscle loss.
Hemoglobin A1c (HbA1c)	<5.7%	4.8-5.2%	2-3 month sugar average. Symptoms: poor recovery, fatigue.

CARDIOVASCULAR & LIPID RISK

Test	Conventional Range	Optimal Range	Notes/Symptoms of Suboptimal
Total Cholesterol	<200 mg/dL	150-200 mg/dL	Context matters with particles.
LDL Cholesterol	<100 mg/dL	<70 mg/dL (high risk)	Prioritize low particles.
HDL Cholesterol	>40 mg/dL (men)	>60 mg/dL	Protective; low = inflammation.
Triglycerides	<150 mg/dL	<80 mg/dL	Diet-driven. Symptoms: energy dips.
Apolipoprotein B (ApoB)	<120 mg/dL	<80 mg/dL	Best plaque predictor. Risk: heart disease.
Lipoprotein(a)	<30 mg/dL or <75 nmol/L	<20 mg/dL or <50 nmol/L	Genetic; monitor for artery damage.
Apolipoprotein A1 (ApoA1)	110-180 mg/dL (men)	>120 mg/dL	Boosts HDL function.
LDL:HDL Ratio	<3.5	<2.0	Simple risk metric.
VLDL Cholesterol	<30 mg/dL	<15 mg/dL	Tied to trigs; reduces stress.

INFLAMMATION & OXIDATIVE STRESS

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Test	Conventional Range	Optimal Range	Notes/Symptoms of Suboptimal
hs-CRP	<3.0 mg/L	<1.0 mg/L	Warning light. Symptoms: pain, fog, slow healing.
Homocysteine	<15 µmol/L	<9 µmol/L	B-vitamin linked. Risk: vascular/cognitive issues.
Ferritin	30-400 ng/mL (men)	50-200 ng/mL	Iron balance. High = inflammation; low = fatigue.
Fibrinogen	200-400 mg/dL	<300 mg/dL	Clotting; high = CVD risk.
Uric Acid	3.4-7.0 mg/dL (men)	3.0-5.5 mg/dL	Diet-related. Symptoms: gout, syndrome.

THYROID FUNCTION (FULL PANEL)

Test	Conventional Range	Optimal Range	Notes/Symptoms of Suboptimal
TSH	0.5-4.5 mIU/L	0.5-2.2 mIU/L	Lower for energy. Symptoms: fatigue, weight gain.
Free T4	0.8-1.8 ng/dL	1.2-2.0 ng/dL	Active form.
Free T3	2.3-4.2 pg/mL	2.8-6.0 pg/mL	Upper for metabolism. Symptoms: depression, aches.
Reverse T3	8-25 ng/dL	<15 ng/dL	High blocks T3; stress marker.
TPO Ab (antibody)	<35 IU/mL	<9 IU/mL	Autoimmune risk.
Tg Ab (antibody)	<4 IU/mL	<1 IU/mL	Hashimoto's flag.

HORMONES

Test	Conventional Range	Optimal Range	Notes/Symptoms of Suboptimal
Total Testosterone	250-1100 ng/dL	750-1250 ng/dL	For vitality. Symptoms: low mood, no gains.
Free Testosterone	35-155 pg/mL	100-200 pg/mL	Bioavailable.
SHBG	10-57 nmol/L	20-40 nmol/L	Balances hormones.
Estradiol (sensitive)	10-40 pg/mL	20-30 pg/mL	Mood/fat balance.
DHEA-S	70-495 µg/dL	300-400 µg/dL	Supports T; adrenal health.
IGF-1	Age-dependent	Upper half	Muscle repair; anti-aging.
Cortisol, AM	6-23 µg/dL	10-18 µg/dL	Stress peak; high = burnout.

OPTIONAL

- Luteinizing Hormone (LH)

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- Follicle Stimulating Hormone (FSH)
- Progesterone
- Prolactin
- Pregnenolone

LIVER & KIDNEY FUNCTION

Test	Conventional Range	Optimal Range	Notes
AST (from CMP)	10-40 U/L	<20 U/L	Liver enzyme.
ALT	7-56 U/L	<25 U/L	Fatty liver flag.
Alkaline Phosphatase	44-147 U/L	50-100 U/L	Bone/liver.
Bilirubin	0.1-1.2 mg/dL	<1.0 mg/dL	Detox.
Albumin	3.5-5.0 g/dL	>4.0 g/dL	Protein.
Globulin	2.0-3.5 g/dL	2.3-3.0 g/dL	Immune.
BUN	6-20 mg/dL	10-16 mg/dL	Kidney waste.
Creatinine	0.7-1.3 mg/dL (men)	<1.0 mg/dL	Muscle/kidney.
eGFR	>60 mL/min	>90 mL/min	Filtration.
Electrolytes	Varies	Mid-range	Hydration.
GGT	9-48 U/L	<20 U/L	Liver stress.
Cystatin C	0.6-1.0 mg/L	<0.8 mg/L	Advanced kidney.

BLOOD HEALTH

- Complete Blood Count (CBC) with Differential:
 - Hemoglobin: 13-17 g/dL (men optimal)
 - Hematocrit: 40-50%; WBC: 4-9 x10³/μL
 - Platelets: 150-400 x10³/μL. (Checks anemia, infection)

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NUTRIENT STATUS

Test	Conventional Range	Optimal Range	Notes/Symptoms
Vitamin D, 25-Hydroxy	30-100 ng/mL	40-60 ng/mL	Low = fatigue, poor recovery.
Vitamin B12	200-900 pg/mL	>500 pg/mL	Nerves/mood.
Folate	>3 ng/mL	>10 ng/mL	Anemia/DNA.
Magnesium, RBC	4.2-6.8 mg/dL	5.5-6.5 mg/dL	Cramps if low.
Zinc	60-120 µg/dL	90-110 µg/dL	T/immunity.

FATTY ACID BALANCE

- **Omega-3 Index or OmegaCheck:** >8% optimal (EPA + DHA % of RBC).
 - **EPA:** >1%
 - **DHA:** >4%
- **Omega-6/Omega-3 Ratio:** <4:1 Symptoms of imbalance: joint pain, brain fog.

MALE-SPECIFIC

- Prostate-Specific Antigen (PSA): <4.0 ng/mL conventional; <1.5 ng/mL optimal (age-adjusted). (Monitor prostate)

OPTIONAL ADVANCED LONGEVITY / EXPOSURE TESTING

- **Heavy Metals Panel:**
 - Lead (<5 µg/dL)
 - Mercury (<5 µg/dL)
 - Arsenic (<7 µg/dL)
 - Cadmium (<1 µg/dL)
 - If any of the above are High = toxicity/fatigue.
- **APOE Genotyping:** Variants (e.g., E4) inform Alzheimer's/CVD risk—lifestyle adjustments.

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A FINAL WORD...

Look, I put this guide together because I got tired of watching good guys grind hard in the gym, eat clean, and still feel stuck: low energy, stubborn fat, no real progress, or just "not feeling like themselves" anymore.

Most doctors are great at spotting **disease**, but they *rarely* dig into what keeps you performing **at your best**. This panel changes that. It gives you the full picture so you can catch small issues early and fix them before they slow you down. This requires that you be proactive and do your due diligence when consulting with your doctors.

This is NOT their default. Even seasoned hormone specialists will sometimes skip over some of these...

Knowledge is power here. Get these labs done, bring the results to someone who understands optimization (your doctor, a functional medicine practitioner, or even share them with me), and start making the tweaks that matter.

You're not just trying to avoid getting sick. You're building the strongest, healthiest, most capable version of yourself for years to come.

Take control. You've got this.

Jeff Later

IFBB Pro | Founder

Muscle Mastery Method