

REVITALINE HEALTH

Precision Hormone & Longevity Medicine

Your Complete Hormone Health Guide

Understanding Your Testosterone Levels,
Lab Results & Path to Optimization

WHY THIS GUIDE MATTERS

Testosterone drives energy, strength, libido, mood, and cognitive sharpness. Yet most men — and many providers — don't fully understand how to read hormone results or recognize when optimization could be life-changing. This guide gives you the clinical knowledge to take control of your health.

40%

of men over 45
have low testosterone

1%

annual T decline
since the 1980s

5–10%

of affected men
currently treated

INSIDE THIS GUIDE

- 01 Understanding Your Testosterone
- 02 Reading Your Lab Results
- 03 The Complete Hormone Panel
- 04 Treatment Options Explained
- 05 Lifestyle Optimization
- 06 Your Next Steps

UNDERSTANDING YOUR TESTOSTERONE

What Testosterone Actually Does

Testosterone is the principal androgen governing male physiology — and its influence extends far beyond sexual health. Every organ system depends on adequate testosterone: your heart, brain, bones, muscles, and metabolic machinery are all directly regulated by this hormone. When levels fall below your personal optimal range, the downstream effects are systemic.



PHYSICAL SYMPTOMS

- Persistent fatigue that sleep won't fix
- Progressive muscle loss & weakness
- Increasing abdominal body fat
- Reduced stamina & endurance
- Loss of morning erections
- Joint discomfort & bone density loss
- Reduced recovery after exercise

MENTAL & EMOTIONAL SYMPTOMS

- Mental fog & poor concentration
- Flattened motivation & drive
- Depression or emotional blunting
- Heightened irritability & anxiety
- Reduced confidence & edge
- Poor sleep quality
- Loss of competitive drive

■ THE TESTOSTERONE DECLINE CRISIS

Average testosterone levels have dropped ~1% per year since the 1980s. A 40-year-old man today has significantly lower testosterone than a 40-year-old in 1985 — independent of aging. Approximately 40% of men over 45 are affected, yet only 5–10% receive any treatment.



READING YOUR LAB RESULTS

Normal vs. Optimal: A Critical Distinction

"Normal" lab ranges represent the middle 95% of the tested population — not the level at which you feel and function your best. At RevitaLine, we evaluate your results against optimal ranges: the values associated with vitality, sharpness, and peak physical function. A result labeled "within normal limits" may still be significantly below your personal optimal.

CLASSIFICATION	LEVEL	TYPICAL EXPERIENCE
Clinically Low	Below 264 ng/dL	Significant deficiency symptoms — evaluation urgent
Low-Normal	264 – 400 ng/dL	Fatigue, low libido, brain fog, depression
Suboptimal	400 – 650 ng/dL	Functional but not thriving; subtle symptoms
Optimal	650 – 900 ng/dL	Energetic, sharp, strong libido, positive mood
Upper Optimal	900 – 1,100 ng/dL	Peak performance — appropriate for select patients

Table 1: Testosterone classification and typical patient experience

Age-Adjusted Optimal Targets

AGE	AVG (ng/dL)	OPTIMAL TARGET	EVALUATE IF BELOW
25 – 34	600–700	650–850 ng/dL	500 ng/dL
35 – 44	500–650	650–800 ng/dL	450 ng/dL
45 – 54	450–600	650–750 ng/dL	400 ng/dL
55 – 64	400–550	600–700 ng/dL	350 ng/dL
65+	350–500	550–650 ng/dL	300 ng/dL

Table 2: Age-adjusted testosterone values (ng/dL)

THE COMPLETE HORMONE PANEL

Beyond Total Testosterone: The Full Picture

Total testosterone alone tells an incomplete story. At RevitaLine, every initial evaluation includes a comprehensive panel — enabling precise, personalized treatment rather than guesswork.

MARKER	WHAT IT MEASURES	OPTIMAL RANGE	CATEGORY
● Total Testosterone	Overall production from testes & adrenals	650–900 ng/dL	
● Free Testosterone	Bioavailable; unbound to proteins	17+ ng/dL	
● SHBG	Binding protein — affects free T	20–50 nmol/L	
● Estradiol (E2)	Estrogen balance — critical on TRT	20–35 pg/mL	
● LH	Pituitary signal to testes	2–9 mIU/mL	
● FSH	Fertility & sperm production signal	1–12 mIU/mL	
● Prolactin	Elevated levels suppress testosterone	< 15 ng/mL	
● PSA	Prostate health baseline	< 4.0 ng/mL	
● CBC / Hematocrit	Red blood cell monitoring (TRT safety)	HCT < 52%	
● Metabolic Panel	Kidney & liver function	Within reference	
● Thyroid (TSH/ft3/ft4)	Thyroid dysfunction mimics low-T	Per reference	
● Vitamin D	Deficiency linked to lower testosterone	50–80 ng/mL	

Table 3: RevitaLine comprehensive hormone panel with optimal ranges

WHY FREE TESTOSTERONE IS THE KEY MARKER

Only 2–3% of your testosterone is "free" and immediately available for use. Two men can show identical total testosterone of 700 ng/dL — yet one thrives while the other struggles — because their free testosterone and SHBG differ. RevitaLine providers never treat a number; we treat the patient.

TREATMENT OPTIONS

Your Treatment Options, Explained Clearly

TESTOSTERONE CYPIONATE (INJECTABLE)

★ FIRST-LINE

What it does: The gold standard of TRT. Consistent, reliable blood levels with easy dose adjustment.

Best for: Most men — the preferred first-line treatment. Simple to self-administer subcutaneously at home.

HCG (ADD-ON TO TRT)

COMBINATION

What it does: Preserves testicular size, intratesticular testosterone, and fertility while on TRT.

Best for: Men on TRT who wish to maintain fertility or testicular function.

TESTOSTERONE CREAM OR GEL

ALTERNATIVE

What it does: Topical daily application. No injections required.

Best for: Only when injections are not feasible. Transfer risk to partners; less stable levels.

CLOMIPHENE (CLOMID)

SELECT CASES

What it does: Oral medication that stimulates endogenous testosterone production. Preserves fertility.

Best for: Select younger men with secondary hypogonadism. Variable efficacy.

TYPICAL STARTING PROTOCOL AT REVITALINE

- Testosterone Cypionate: 100–150 mg/week in two equal injections for stable blood levels
- Dose refined at 6–8 week intervals based on follow-up labs and symptom response
- HCG (500–1,000 IU, 2–3x/week) may be added for fertility preservation
- Anastrozole used selectively only when estradiol rises excessively — not prescribed routinely

LIFESTYLE OPTIMIZATION

Optimize Your Hormones Naturally

These evidence-based factors meaningfully influence testosterone production. Men who combine lifestyle optimization with clinical treatment consistently see the strongest outcomes.

■ Sleep 7–9 Hours Nightly

Testosterone is primarily synthesized during deep slow-wave sleep. Even one week of sleep restriction measurably suppresses testosterone levels.

■■ Prioritize Resistance Training

Compound lifts — squats, deadlifts, presses — produce acute T surges and chronically upregulate androgen receptor sensitivity.

■■ Reduce Excess Body Fat

Adipose tissue contains aromatase — the enzyme that converts testosterone to estrogen. Reducing abdominal fat directly improves your T-to-estrogen ratio.

■ Manage Chronic Stress

Cortisol and testosterone are inversely related. Chronic stress suppresses the HPG axis, reducing LH and downstream testosterone production.

■ Minimize Alcohol

Even moderate consumption impairs Leydig cell function and increases hepatic SHBG production, reducing both total and free testosterone.

■■ Optimize Vitamin D

Vitamin D functions as a steroid hormone precursor. Deficiency — extremely common in the northeastern US — is independently associated with lower testosterone.

■ Ensure Zinc & Magnesium

Both are rate-limiting cofactors in testosterone biosynthesis. Deficiencies are common among active men due to sweat losses.

■ Limit Endocrine Disruptors

Minimize BPA (plastics), phthalates, and environmental xenoestrogens that directly interfere with androgen signaling at the receptor level.

YOUR NEXT STEPS

Your Path to Hormone Optimization

01

Request Comprehensive Testing

A full hormone panel — not just total testosterone — drawn in the morning (7–10 AM), fasted. Include free testosterone, SHBG, estradiol, LH, FSH, PSA, CBC, and metabolic panel.

02

Schedule a RevitaLine Consultation

Our providers review your labs in the context of your symptoms, goals, and health history. Telehealth and in-person appointments available. We treat you, not a number.

03

Define Your Goals

Better energy? Improved body composition? Restored libido? Sharper focus? Your goals drive your protocol. Optimization looks different for every patient.

04

Commit to the Process

Expect 3–6 months to fully optimize your protocol. Energy and mood often improve in 4–6 weeks; full benefits in body composition develop over several months.

Ready to Take the Next Step?

Schedule your consultation at RevitaLine Health. In-person and telehealth available.

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This guide is for educational purposes only and does not constitute medical advice. Hormone therapy should only be initiated under the supervision of a licensed healthcare provider following comprehensive evaluation. RevitaLine Health providers are licensed in New York State.