

Comprehensive Wellness Lab Guide: Unlocking Your Optimal Health

Root-Cause Insights for Prevention, Longevity, and Vibrant Health



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Your Bloodwork Holds the Blueprint to Lifelong Vitality – But Only If You Know How to Read It Correctly

In conventional medicine, the basic labs most doctors order are only a tiny snapshot – not a complete picture. Lab “normal” ranges are based on broad population statistics and often only flag issues once disease is underway. Yet functional and root-cause practitioners know that true prevention and longevity start earlier—by identifying subtle imbalances in nutrients, inflammation, hormones, thyroid function, metabolism, and hidden infections before they drive fatigue, weight gain, autoimmunity, cardiovascular issues, or accelerated aging.

Is this Lab-to-Longevity Blueprint for you?

You’ve noticed you’re not quite performing or feeling the way you used to – whether that’s lower energy, slower recovery, a general sense of being “off,” or simply wanting to optimize your health and protect your longevity before any problems start.

You schedule an appointment, get your bloodwork done, and sit across from your doctor hoping for real answers and a clear plan forward. Instead, you hear the same familiar words: “Your labs are completely normal.” “This is just part of aging.” “See you next year.” You leave the office feeling dismissed and frustrated, knowing deep down there’s more to the story.

This guide was written for you – the person who refuses to accept “normal” when you know you can feel better. The person who wants to understand the real root causes instead of having symptoms (or potential future problems) dismissed as “just aging.” The person ready to move from simply getting by to truly thriving for decades to come.

What You Will Discover Inside This Guide

- A comprehensive lab panel that goes far beyond the minimal tests your regular doctor usually orders
- The powerful difference between standard “normal” ranges and true optimal ranges proven to deliver the lowest disease risk and longest healthspan
- How to finally understand and address the root causes of any current symptoms – and prevent future ones – instead of having them dismissed

This isn't just information. It is your personal roadmap that takes you from feeling unsure or dismissed to empowered, clear, and in full control of your health like never before. Welcome to the Lab-to-Longevity Blueprint – where “normal” ends and optimal living begins.

Every test in this guide is presented with the following details:

- Description of what the test measures and why it matters for root-cause health
- Standard lab ranges & Optimal functional ranges (narrower, evidence-based targets linked to lowest disease risk and best performance)
- What do you learn if you get each test and what could you miss if you do not get the test
- Lifestyle Optimization Recommendations & Supplement support
- Dive deeper suggestions for even more advanced testing & clinical insights

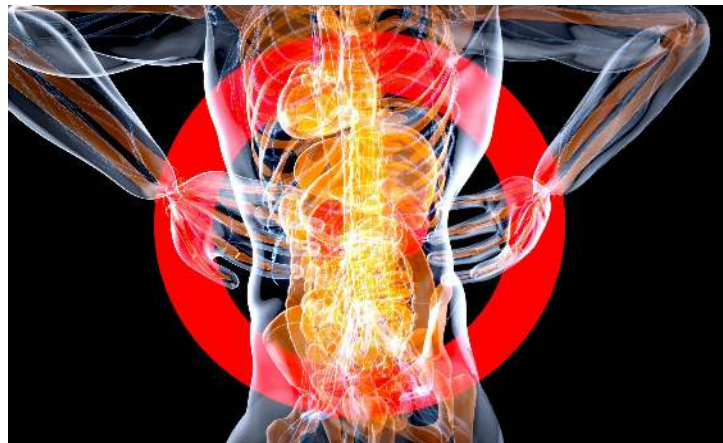


• **White Blood Cells (WBC) with Differential:** Reveal overall immune status and the balance of the five main types of white blood cells (neutrophils, lymphocytes, monocytes, eosinophils, basophils). Possible **symptoms** associated with low WBC = increased infection risk (recurrent colds, slow healing). Possible **symptoms** associated with high WBC = infection, inflammation, or possible bone-marrow disorders such as leukemia or lymphoma (unexplained fevers, night sweats, weight loss, easy bruising, swollen lymph nodes). **Standard:** $3.4-10.8 \times 10^3/\mu\text{L}$; **Optimal:** $5-8 \times 10^3/\mu\text{L}$. **What do you learn if you get this test?** You learn the current state of your immune surveillance system and whether hidden infection, inflammation, or early bone-marrow stress is present at the cellular level. **What could you miss if you do not get this test?** You could miss early immune weakness or over-reactivity that silently increases infection risk, chronic inflammation, or bone-marrow issues, allowing fatigue and disease risk to progress unchecked for years. **Lifestyle & Optimization Recommendations:** Low WBC: eat blueberries, elderberry, pumpkin seeds, and zinc-rich foods; prioritize 8+ hours of quality sleep and daily cold showers. High WBC or abnormal differential: emphasize an anti-inflammatory diet, stress reduction, and gut-healing foods. **Natural support:** Zinc; gentle exercise and hydration.

DID YOU KNOW? White blood cells actually live two different lives. In your **bloodstream** they act as mobile patrol units, circulating and scanning for threats. But once they leave the blood and migrate into your **tissues**, many undergo a dramatic transformation. **Monocytes**, for example, become powerful **macrophages** – the body’s elite “big eaters” and long-lived guardian cells that engulf bacteria, viruses, dead cells, debris, and even cancer cells while directing the entire immune response. This is why a “normal” WBC count on your blood test doesn’t always tell the full story. **Most of the real immune battle and cleanup work happens deep inside your tissues, not in the blood itself.** Your CBC gives you a snapshot of the scouts... the actual defenders and cleanup crew are stationed throughout your organs, muscles, brain, and gut.

Estimated Glomerular Filtration Rate

(eGFR from CMP) Calculated value that estimates how well the kidneys are filtering blood. Declining eGFR is one of the earliest and most reliable signs of lost kidney reserve. Possible **symptoms** associated with low: fatigue, swelling in legs/ankles, high blood pressure. **Standard:** 60–120 mL/min/1.73 m². **Optimal:** >90 mL/min/1.73 m². **What do you learn if you get this test?** You learn the true filtering capacity of your kidneys and how well they are protecting you from toxin buildup and age-related decline. **What could you miss if you do not get this test?** You could miss early kidney function decline that silently accelerates biological aging, raises blood pressure, and increases risk of cardiovascular disease and toxin accumulation. **Lifestyle & Optimization Recommendations:** Drink adequate water daily with electrolytes; eat a kidney-friendly diet rich in vegetables and berries; maintain healthy blood pressure and blood sugar levels; avoid unnecessary medications that stress kidneys. **Natural support:** Hydration, electrolyte balance.



DID YOU KNOW? Your eGFR measures how well your kidneys are filtering blood (in mL/min/1.73 m²):

>90 = Optimal kidney function and strong longevity marker

60–89 = Mild decline (early warning stage)

30–59 = Moderate decline (Stage 3 chronic kidney disease)

15–29 = Severe decline (Stage 4)

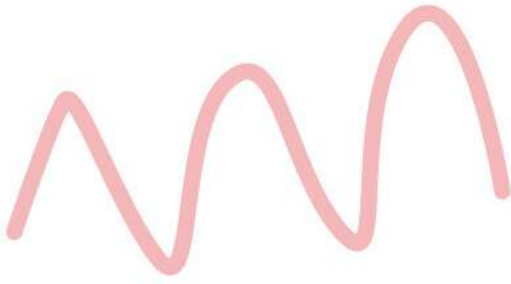
<15 = Kidney failure (Stage 5, end-stage renal disease)

Most conventional doctors don't raise concern until eGFR falls below 60, but by then significant irreversible damage has often already occurred.



- **Calcium** (Ca from CMP): Essential mineral for bone health, muscle contraction, nerve signaling, blood clotting, and hormone regulation. Possible **symptoms** associated with low: muscle cramps, spasms, tetany, tingling in fingers/lips, fatigue, irritability. Possible **symptoms** associated with high: fatigue, confusion, constipation, kidney stones, nausea, bone pain. **Standard:** 8.5–10.5 mg/dL. **Optimal:** 9.5–10.2 mg/dL (upper half of range). **What do you learn if you get this test?** You learn the exact amount of calcium available for bone strength, muscle and nerve function, and cellular signaling at the tissue level. **What could you miss if you do not get this test?** You could miss imbalances that silently weaken bones, impair muscle and nerve performance, or promote calcification in soft tissues and arteries, accelerating aging and cardiovascular risk. **Lifestyle & Optimization Recommendations:** Low calcium: eat leafy greens, almonds, sardines with bones, and fermented dairy; pair with vitamin D and K2-rich foods. High calcium: reduce excess dairy and ensure adequate magnesium intake. **Natural support:** Calcium/Magnesium-rich foods for deficiency, vitamin D, vitamin K2. **Targeted Support:** Physician's Total Health Vitamin D Plus formula.

DID YOU KNOW? Calcium is essential for strong bones and muscle function, but when it ends up in the wrong places it becomes dangerous. Excess calcium buildup in your blood vessels causes vascular calcification that stiffens arteries and significantly raises your risk of cardiovascular disease. Too much calcium deposition in soft tissues promotes chronic inflammation and has been linked to increased cancer risk. High-dose calcium supplements – especially without vitamin K2 and magnesium – can actually accelerate arterial calcification and heart disease risk. The safest and most effective way to get calcium is from whole food sources, where your body naturally regulates absorption and proper placement.



- **Insulin** (fasting): Direct gauge of insulin resistance. High levels promote fat gain, inflammation, and hormone disruption long before blood sugar rises (weight gain around midsection, sugar cravings, fatigue after meals). Possible **symptoms** associated with high: weight gain around midsection, sugar cravings, fatigue after meals. **Standard:** 2.6–24.9 $\mu\text{U}/\text{mL}$. **Optimal:** <10 $\mu\text{U}/\text{mL}$ (lower better). **What do you learn if you get this test?** You learn how much insulin your body is producing and whether early insulin resistance is present at the cellular level. **What could you miss if you do not get this test?** You could miss hidden insulin resistance that is already driving weight gain, inflammation, and hormone imbalance years before blood sugar becomes abnormal. **Lifestyle & Optimization Recommendations:** Eat balanced meals with protein and fiber first; practice time-restricted eating; include daily movement after meals; reduce refined sugars and processed foods; manage stress and prioritize 7–9 hours of quality sleep nightly. **Natural support:** Magnesium, fiber, chromium, cinnamon, berberine. **Targeted Support:** Physician's Total Health Blood Sugar Support formula.

- **To dive deeper:** Fasting glucose (from CMP) combined with fasting insulin allows calculation of the HOMA-IR score, a reliable measure of insulin resistance. Additional useful tests include C-peptide (to assess endogenous insulin production by the pancreas) and fructosamine (which reflects average blood glucose over the past 2–3 weeks).

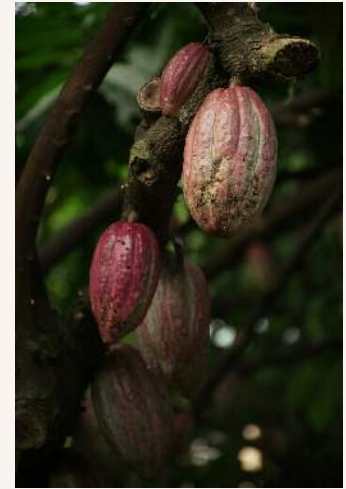
3. Key Nutrients & Minerals

Why this group matters: These are the raw materials for **energy production, immune defense, thyroid function, DNA repair, and methylation**. Methylation is a vital biochemical process that regulates gene expression, detoxification, neurotransmitter production, and cellular repair. Many people carry common **genetic variations in the MTHFR gene** that can impair methylation efficiency, even if the variant is not always fully expressed. Deficiencies in these key micronutrients are epidemic yet rarely tested—correcting them at the cellular level restores vitality and slows biological aging. Optimizing them at the cellular level can restore **energy, immunity, thyroid function, and methylation** faster than almost any other intervention.

- **Vitamin B12:** Essential for nerve health, red-blood-cell formation, and methylation. Levels below 500 pg/mL quietly cause fatigue, brain fog, and neuropathy while raising homocysteine and cardiovascular risk. Possible **symptoms** associated with low: tingling/numbness, memory issues, depression, sore tongue. **Standard:** 211–946 pg/mL. **Optimal:** 500–1000 pg/mL. **What do you learn if you get this test?** You learn whether you have enough B12 for nerve function, energy production, and proper methylation at the cellular level. **What could you miss if you do not get this test?** You could miss a B12 deficiency that silently causes neurological damage, fatigue, and elevated homocysteine, accelerating cognitive decline. **Lifestyle & Optimization Recommendations:** Include B12-rich foods such as eggs, sardines, and nutritional yeast; consider sublingual or methylated forms if absorption is poor; reduce alcohol and stomach-acid-lowering medications when possible. **Natural support:** Methylcobalamin. **Targeted Support:** Physician's Total Health Methyl B-Complex formula.



- **Magnesium** (Red Blood Cell (RBC) preferred): Involved in 300+ enzymatic reactions, including energy production and muscle/nerve function. Deficiency is extremely common and linked to fatigue, cramps, anxiety, and insulin resistance. Possible **symptoms** associated with low: muscle cramps, insomnia, anxiety, constipation, heart palpitations. **Standard:** Serum 1.7–2.2 mg/dL; RBC 4.0–6.4 mg/dL. **Optimal:** Serum 2–2.2 mg/dL; RBC 5.5–6.4 mg/dL. **What do you learn if you get this test?** You learn your true cellular magnesium status (RBC is far more accurate than serum). **What could you miss if you do not get this test?** You could miss a magnesium deficiency that silently causes fatigue, anxiety, muscle cramps, and poor sleep. **Lifestyle & Optimization Recommendations:** Eat magnesium-rich foods such as spinach, almonds, avocado, and dark chocolate; take magnesium glycinate or citrate in the evening; reduce caffeine and alcohol; practice stress-reduction techniques. **Natural support:** Magnesium glycinate or citrate. **Targeted Support:** Physician's Total Health Circulation & Muscle Fuel



DID YOU KNOW?

Most standard blood tests measure magnesium, zinc, and other minerals in the plasma (the liquid part of blood), which only reflects what is floating outside the cells at that moment. However, the vast majority of these minerals actually live inside your red blood cells and other tissues, where they do their real work. That's why Red Blood Cell (RBC) testing is far more accurate and clinically useful – it shows your true intracellular levels and long-term mineral status, while plasma levels can look “normal” even when your cells are deficient. This is one of the reasons functional and longevity medicine prefers RBC testing for magnesium, zinc, and several other key nutrients.

4. Comprehensive Thyroid Panel

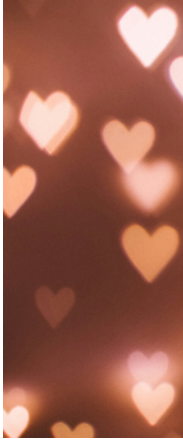
Conventional doctors typically only order **TSH**, which gives a very limited and often misleading view of thyroid health. They rarely test for thyroid antibodies (**TPO** and **Anti-TG**). This is a critical gap because TSH can remain completely normal while **autoimmune attack** on the thyroid is already underway – sometimes for **many years before TSH finally rises** and significant damage becomes obvious. TSH-only testing misses conversion problems, autoimmunity, and stress effects that affect **1 in 5 adults**. A full thyroid panel uncovers the root causes of sluggish metabolism, fatigue, weight gain, and brain fog—critical for restoring energy and longevity.

Most people have never heard of **Reverse T3** or the **Free T3 to Reverse T3 ratio**, yet these are essential for understanding why many with “normal” TSH still feel terrible. Many also have **subclinical hypothyroidism**, which silently slows cellular energy production, impairs mitochondrial function, and accelerates biological aging long before classic symptoms appear. Optimizing the full panel, including Reverse T3 and the ratio, is one of the highest-yield steps for restoring youthful vitality and healthspan.

DID YOU KNOW?

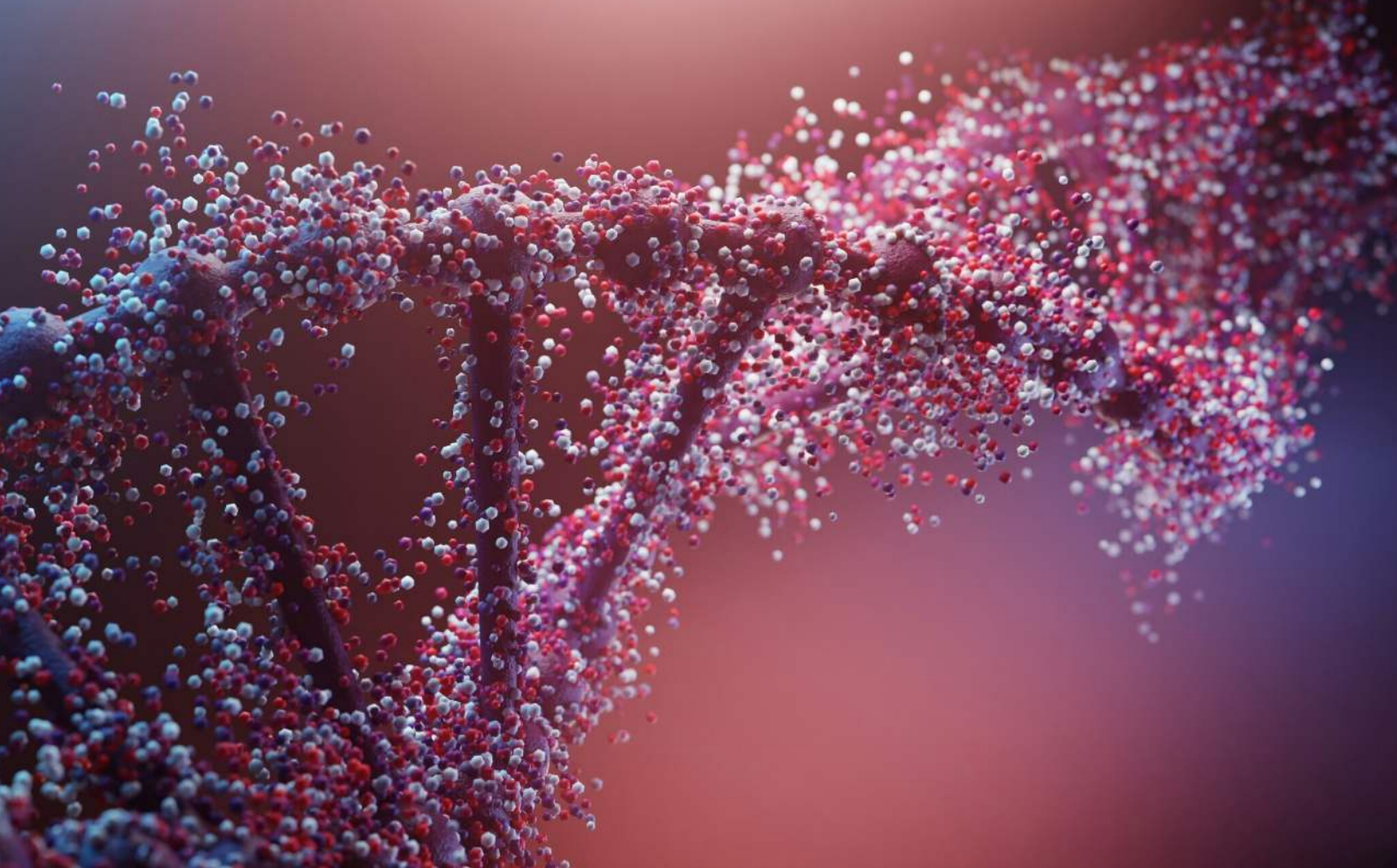
A full thyroid panel is one of the highest-yield tests for restoring energy and metabolism because it reveals conversion issues (from inactive T4 to active hormone T3) and autoimmunity that TSH alone misses in up to 80 % of cases.





- **Lipoprotein-Associated Phospholipase A2** (Lp-PLA2) Enzyme inside plaque that signals high risk of rupture and clot formation. Possible **symptoms** associated with high Lp-PLA2: usually none – it is a silent marker of unstable plaque and arterial inflammation. **Standard:** <225 nmol/min. **Optimal:** <225 nmol/min. Note: High Lp-PLA2 + high hs-CRP (see section 6) was associated with approximately 2.3 times higher risk of MI in older adults. **What do you learn if you get this test?** You learn the level of inflammation and instability inside your artery walls at the plaque level. **What could you miss if you do not get this test?** You could miss vulnerable plaque that raises the risk of sudden heart attack or stroke. **Lifestyle & Optimization Recommendations:** Follow an anti-inflammatory diet, include vitamin C and E-rich foods, and maintain regular physical activity. **Natural support:** Vitamin C/E, magnesium, resveratrol, nattokinase. **Targeted Support:** Physician's Total Health Heart Health formula, Nano Curcumin, Nano Vitamin C.
- **Oxidized Low-Density Lipoprotein** (OxLDL) Formed when the Apo-B protein on LDL particles becomes oxidized; highly pro-inflammatory and damaging to the arterial wall. High levels promote foam-cell formation and plaque buildup. Possible **symptoms** associated with high: chest discomfort, shortness of breath on exertion. **Standard:** <60 U/L. **Optimal:** Lowest possible. **What do you learn if you get this test?** You learn the amount of oxidized (damaged) LDL in your arteries that directly contributes to plaque formation and endothelial dysfunction. **What could you miss if you do not get this test?** You could miss high oxidative stress inside blood vessels that accelerates plaque formation and raises long-term cardiovascular risk. **Lifestyle & Optimization Recommendations:** Eat antioxidant-rich foods such as berries, dark chocolate, and green tea; reduce seed oils and processed foods; include daily movement and stress management. **Natural support:** Antioxidants (resveratrol, quercetin, curcumin). **Targeted Support:** Physician's Total Health Super Antioxidant formula, Nano Curcumin, Nano Boswelia, Nano Quercetin, Nano Vitamin C.

To dive deeper: NT-proBNP (pro-BNP; elevated levels indicate cardiac strain and are a key marker for heart failure risk and diagnosis); Myeloperoxidase (MPO)-inflammatory enzyme released by white blood cells that oxidizes LDL and destabilizes arterial plaque.



6. Inflammation, Methylation & Iron Storage

Why this group matters: Chronic **low-grade inflammation** – which is associated with increased **blood viscosity** (thickening of the blood) and higher **clotting** tendency – along with impaired **methylation** (gene regulation & detoxification), and dysregulated **iron storage** are some of the most powerful silent accelerators of every age-related disease – including **cardiovascular disease, neurodegeneration, cancer, diabetes, and autoimmunity**. These markers function as the body's **early-warning** smoke detectors, revealing the exact **root drivers** long **before overt symptoms** appear. Identifying and correcting them early allows you to extinguish the inflammatory fire at its source and dramatically slow biological aging.

- **High-Sensitivity C-Reactive Protein (hs-CRP or CRP HS):** Most sensitive marker of systemic inflammation. Even mild elevation predicts heart attack, stroke, and accelerated aging. Possible **symptoms** associated with high: joint pain, fatigue, depression, increased infection risk. **Standard:** <3.0 mg/L (<1 low risk, 1–3 medium, >3 high cardiovascular risk). **Optimal:** <1 mg/L. **What do you learn if you get this test?** You learn the precise level of systemic inflammation that is driving cellular damage and accelerating biological aging. **What could you miss if you do not get this test?** You could miss low-grade inflammation that silently promotes heart disease, autoimmunity, and accelerated aging at the cellular level. **Lifestyle & Optimization Recommendations:** Eat an anti-inflammatory diet rich in berries, fatty fish, and vegetables; reduce processed foods and seed oils; include daily movement and stress management practices such as meditation or breathwork. **Natural support:** Curcumin, quercetin, green tea. **Targeted Support:** Nano Curcumin, Nano Vitamin C, Physician's Total Health Super Antioxidant formula.

- **Sedimentation Rate (ESR)** A simple, non-specific blood test that rises in the presence of inflammatory proteins and is used to detect and monitor inflammation, autoimmune disease, infection, and certain cancers. Possible **symptoms** associated with high ESR: joint pain, fatigue, unexplained fever, muscle aches, weight loss. **Standard:** Male 0–15 mm/hr; Female 0–20 mm/hr (age-adjusted). **Optimal:** <10 mm/hr. **What do you learn if you get this test?** You learn the level of general inflammation in your body that reflects ongoing immune activation and tissue damage. **What could you miss if you do not get this test?** You could miss chronic inflammation that is driving joint pain, fatigue, or autoimmune activity at the cellular level. **Lifestyle & Optimization Recommendations:** Eat an anti-inflammatory diet rich in berries, fatty fish, and vegetables; reduce processed foods and stress; include daily gentle movement. **Natural support:** Curcumin, quercetin, green tea. **Targeted Support:** Physician's Total Health Super Antioxidant formula, Nano Curcumin.



7. Hormone & Adrenal Balance

Why this group matters: Hormones are the body's master **chemical messengers**, orchestrating metabolism, mood, muscle, bone, sleep, and repair throughout the entire lifespan — far beyond their roles in reproduction or “sex hormones.”

Most people don't realize that balanced hormones are essential for **energy, cognition, strength, and healthy aging at every stage of life.**

Unfortunately, typical doctors often **dismiss declining hormone levels** as “a normal part of aging” and rarely investigate or address **hormonal deficiencies**, leaving many people suffering unnecessarily from **fatigue, brain fog, muscle loss, and accelerated decline.** Stress and aging-related imbalances — including suboptimal levels of hormone precursors like **pregnenolone and DHEA**, as well as disruptions in active hormones and their metabolites — are major root causes of these symptoms. Optimizing them restores **youthful vitality and healthspan.** **Testosterone** is critically important for women (supporting energy, muscle mass, libido, mood, and bone density), just as **estrogen** plays essential roles in men (cardiovascular health, brain function, and bone strength). The **common myth** that hormones “cause cancer” is outdated and oversimplified; it is not properly balanced hormones, but rather **imbalances, poor metabolism, and unhealthy estrogen metabolites** that drive risk. When optimized correctly, hormones support longevity and actually help reduce disease risk.



DID YOU KNOW?

Measuring **free hormones** provides a better clinical picture because **free hormones** are the unbound, **biologically active** fraction that cells actually use, whereas **total hormone** levels are often heavily influenced by binding proteins. Measuring the free form prevents misdiagnosis caused by **abnormal protein levels**, accurately reflecting hormonal status, especially when total levels appear normal despite patient symptoms.

- **Testosterone (Total Testosterone and Free Testosterone):** Testosterone is the primary anabolic and sex hormone in both men and women. Free testosterone is the unbound, bioavailable form that actually enters cells and does the work – far more clinically relevant than total testosterone alone. Possible **symptoms** associated with low testosterone: fatigue, low libido, erectile dysfunction (men), loss of muscle mass, increased body fat, depression, brain fog, and reduced motivation. Possible **symptoms** associated with high testosterone: acne, irritability, excessive hair growth (women). **Standard: Total Testosterone:** Men 300–1,000 ng/dL; Women 15–70 ng/dL. **Free Testosterone:** Men 50–210 pg/mL; Women 1–8.5 pg/mL; **Optimal:** Upper half to upper third of sex-appropriate range. **What do you learn if you get this test?** You learn your true bioavailable testosterone status and how it affects energy, muscle, libido, mood, and longevity. **What could you miss if you do not get this test?** You could miss a major root cause of fatigue, muscle loss, low libido, and accelerated aging. **Lifestyle & Optimization Recommendations:** Resistance training, 7–9 hours of quality sleep, stress management, and maintaining healthy body composition. **Natural support:** Zinc, magnesium, vitamin D, ashwagandha, fenugreek. **Targeted Support:** Physician's Total Health Hormone Balance and Max Vitality formula (hormone precursors DHEA and Pregnenolone); bio-identical hormone replacement.



Lifestyle: The True Foundation of Longevity

While the lab markers and targeted support in this guide are powerful tools, your daily lifestyle choices remain the most important driver of long-term health, vitality, and graceful aging. No supplement can fully overcome a poor diet, chronic stress, toxin exposure, or lack of sleep and movement.

The foundation of true root-cause health and longevity is built on these essential pillars:

Nutrition: Prioritize an organic, whole-foods diet rich in colorful vegetables, healthy fats (avocados, olive oil, nuts, seeds, and fatty fish), and high-quality proteins. These foods provide the essential micronutrients, fiber, and anti-inflammatory compounds your body needs to repair cells, balance hormones, reduce inflammation, and support optimal detoxification.

Toxin Reduction: Minimize exposure to environmental toxins by choosing glass or stainless steel over plastic, using natural personal care and cleaning products, eating organic when possible, and reducing exposure to EMFs and pesticides. Even small daily reductions in toxic load can significantly lighten the burden on your liver, immune system, and cellular repair mechanisms.

Comprehensive Wellness Lab Guide: Unlocking Your Optimal Health

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YOU'VE REACHED THE END OF THE PREVIEW

This is 19 of 70 pages.

The complete guide decodes all 72 functional lab markers — with optimal ranges, root-cause insights, and targeted protocols for energy, hormones, inflammation, and lifelong vitality.

Inside the complete guide:

- All 72 functional markers — standard vs. true optimal ranges
- Comprehensive Thyroid, Hormone & Cardiovascular panels
- Inflammation, methylation, autoimmune & cancer screening
- Lifestyle protocols + targeted supplement support for each marker

[Get the complete guide →](#)

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