

The Importance of Getting Regular Health Tests

Analysis by [Dr. Joseph Mercola](#)

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STORY AT-A-GLANCE

- › Regular lab testing provides precise, actionable insights that enable early detection of possible diseases to improve long-term health outcomes
- › Iron overload testing is crucial since excess iron is more common than deficiency; check serum ferritin levels and GGT enzyme levels for accuracy
- › Hormone testing reveals metabolic health by measuring cortisol for stress levels, testosterone for mortality risk, and insulin resistance through HOMA-IR calculations
- › Comprehensive biomarker monitoring includes vitamin D levels, complete thyroid panel beyond thyroid-stimulating hormone (TSH), and NAD+ testing for cellular function
- › Biannual gut microbiome testing provides insights into bacterial balance, enabling smarter dietary decisions

When was the last time you had a thorough assessment of your health? Guessing about the current state of your health can lead to risky assumptions and dangerous oversights. Without concrete information, symptoms are likely to be misinterpreted or dismissed, allowing underlying issues to progress unnoticed. On the other hand, too much intake of a specific nutrient will also lead to health issues.

Lab testing removes uncertainty by providing precise, actionable insights into your health. By leveraging data-driven results, you gain clarity about your body's true state, enabling you to select the optimal strategy to boost your health and proactively address

concerns. The following are the tests I recommend that you take to keep you updated on what's happening inside your body.

How to Test for Iron

One good reason why I recommend taking regular tests is to catch an unsuspecting health problem affecting many people — iron overload. In fact, **it's more widespread than iron deficiency**. In addition, I've also written a paper about the duality of iron as a toxin and a nutrient, which will be published in the future. The recommendations I mention below stem from the findings of that specific research.

- **How iron is normally tested** — Checking for excess iron is straightforward and starts with a basic **serum ferritin test**, which shows how much iron your body has stored. This test reveals if your iron storage has reached higher-than-normal levels.

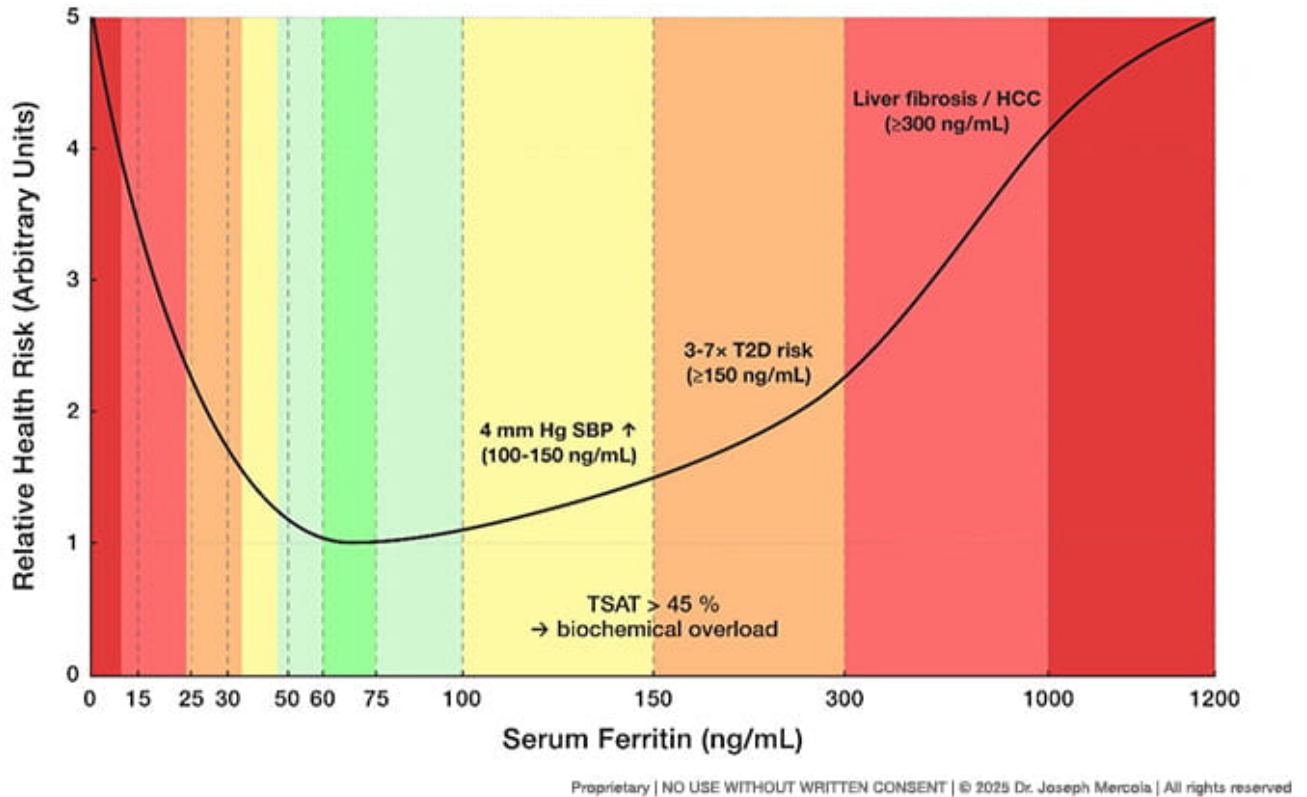
For context, transferrin refers to a protein produced in your liver that transports (hence the “transfer” in the name) iron molecules it binds to, transporting it to tissues. One example is your bone marrow, which requires iron to create new blood cells.¹

- **Transferrin saturation (TSAT)** — While a serum ferritin test is a cornerstone test, it shows an incomplete picture. It works best alongside a TSAT test.

TSAT levels — calculated as serum iron divided by total iron-binding capacity (TIBC) then multiplied by 100 — shows the current amount of transferrin protein that's bound to iron. Thus, it shows you the current iron levels you have available for erythropoiesis, commonly known as red blood cell production.

- **Results to watch out for** — When it comes to serum ferritin levels, I believe that the ideal range is between 30 and 100 ng/mL (nanograms per milliliter). This is sufficient for hemoglobin synthesis and avoids iron accumulation that can lead to oxidative stress in your body.

U-Shaped Risk Curve for Iron Status



As for TSAT, my research indicates that the ideal range is between 25% and 35%. If regular tests show a range above 35%, you likely have iron overload. At 35% to 40%, iron that isn't bound by transferrin protein — also known as toxic non-transferrin-bound iron (NTBI) — will damage your vital organs.² In fact, TSAT ranges between 45% and 55% are linked to a 60% to 67% increase in all-cause mortality.

- **Ideal ranges** — To summarize, healthy results should show TSAT levels between 25% and 35%, alongside serum ferritin levels between 30 and 100 ng/mL.

Now, if your combined results show TSAT levels below 20% and serum ferritin levels below 15 micrograms per liter (µg/L), you likely have depleted iron reserves. Conversely, TSAT levels above 45% and ferritin levels above 100 ng/mL indicate excess iron. Taken altogether, serum ferritin not only serve as diagnostic markers — they also function as risk predictors.

Optimal Iron Ranges for Homeostasis

Marker	Optimal Range	Clinical Notes
TSAT	25-35%	Balances availability and minimizes overload risk. Persistent >45% warrants investigation.
Serum Ferritin	30-100 ng/mL	Ensures adequate stores without excess stress. Levels >100 ng/mL may require monitoring.

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- **Other tests that detect iron** — A comprehensive assessment usually includes an iron panel, complete blood count (CBC), gamma-glutamyl transferase (GGT), and a metabolic panel to fully understand your body's iron status and overall health.

A healthy ferritin level is between 20 and 40 ng/mL. If results show that you're below 20 ng/mL, you're deficient in iron, which isn't what you also want to happen. Conversely, you want your ferritin below 100 ng/mL, which is the maximum cut off.

- **GGT test** — This refers to the enzyme mainly produced by the liver, and is responsible for breaking down medications and toxins. When too much iron builds up in your body, it can harm your liver cells, causing GGT levels to rise significantly in your bloodstream.

What's great about this test is that it also gives you insights on your excess free iron, as well as your risk for sudden death, insulin resistance, and cardiometabolic disease. Once you have your results, refer to the table below to know where you stand:

Ideal GGT Level, Average level, above "Normal" GGT Level
units per liter (U/L) which your risk for
chronic disease
increases
significantly

Men	Less than 16 U/L	25 U/L	Up to 70 U/L
Women	Less than 9 U/L	18 U/L	Up to 45 U/L

Fine-Tuning Your Lifestyle for Longevity

Testing for possible nutrient deficiencies (or overload) is just one aspect of the big picture. You also need to test for other biomarkers, such as your hormones (testosterone, cortisol, and insulin) to detect your current stress levels. Doing so will lead to better metabolic health management.

- **How cortisol is measured** — Cortisol is produced by your adrenal glands, and it can be detected via your blood, urine, or saliva. Once samples are provided, be sure to follow your doctor's instructions to generate the most accurate results possible.³

According to the Cleveland Clinic, cortisol in the blood, urine, or saliva are at their highest during the early morning and then decline afterward — midnight is the lowest point.⁴

- **What your cortisol levels tell you about your health** — In addition to measuring your stress levels, cortisol tests help rule out other conditions. For example, Addison's disease occurs when your body isn't producing enough cortisol. Conversely, Cushing's syndrome is marked by high cortisol levels. Tumors are also marked by elevated cortisol.⁵

Finding out your current cortisol levels is important for overall health. [It drastically accelerates aging](#) and even contributes to muscle degradation over time. Lastly, it contributes to inflammation and a weakened immune system.

- **The importance of testosterone** — [In a previous article](#), I cited research showing the link between sex hormones and mortality risk in men. Basically, if your testosterone levels drop by 213 ng/dL (nanograms per deciliter), you have a higher risk of all-cause mortality. In addition, testosterone levels below 153 ng/dL were associated with increased cardiovascular mortality risk.
- **Ideal testosterone range** — To find out your current levels, you'll need to have your blood tested. That said, what's a healthy range? [In this article](#), I mentioned 300 to 1,000 ng/dL as a baseline.
- **Testing for insulin resistance** — In addition to cortisol, another crucial test that I recommend you take is measuring your insulin resistance. This is essential because results will serve as warning signs for your metabolic health. That said, insulin resistance is measured via the Homeostatic Model Assessment of Insulin Resistance (HOMA-IR) test. It calculates how your fasting glucose and insulin levels interact, and finds out how your body uses insulin.
- **Interpreting HOMA-IR results** — Below is a breakdown on how the HOMA-IR test is calculated. A score below 1 means you are currently insulin-sensitive and functioning well. Anything above that means that you currently have insulin resistance.

HOMA-IR = (Fasting Glucose x Fasting Insulin) / 405, where

- Fasting glucose is measured in mg/dL
- Fasting insulin is measured in μ U/mL (microinternational units per milliliter)
- 405 is a constant that normalizes the values

If you're using mmol/L for glucose instead of mg/dL, the formula changes slightly:

HOMA-IR = (Fasting Glucose x Fasting Insulin) / 22.5, where

- Fasting glucose is measured in mmol/L (millimoles per liter)
- Fasting insulin is measured in μ U/mL, and
- 22.5 is the normalizing factor for this unit of measurement

Testing for Other Important Biomarkers

So far, I've covered the importance of having your iron, cortisol, insulin resistance, and testosterone levels tested. While they may seem like a lot, there's still a few more tests that need to be done.

- **Monitor your vitamin D** — This nutrient is a crucial contributor to optimal health, and I've espoused [its importance](#) for many years now. Considering this, a simple blood test is all you need to know your current levels.

My recommended range is between 60 ng/mL and 80 ng/mL, and the cutoff for sufficiency is around 40 ng/mL. Once you've confirmed your level, you'll know how much sun exposure or supplementation (if needed) is necessary for you to reach the ideal range. Then, retest in the next three to four months to make sure you've hit your goals.

- **Don't forget your thyroid hormones** — Your endocrine system is a complex network of glands and organs that regulate hormone production. Among the many hormones produced in your body, the ones produced in the thyroid are perhaps the most important because they help regulate metabolism and are found in nearly every physiological process within you.
- **Understanding thyroid antibodies** — Examples include thyroglobulin antibodies (TgAb) and thyroid peroxidase antibodies (TPOAb). Results will give you deeper insight into whether autoimmune processes are attacking your thyroid gland.

Pairing these antibody results with symptoms helps you make meaningful connections and clarifies what's really going on with your body, particularly if you're dealing with an autoimmune condition.

- **Traditional thyroid assessments aren't effective anymore** — Testing for thyroid-stimulating hormone (TSH) alone often misses underlying issues. That's because TSH levels fluctuate significantly and you'll even appear relatively normal even when you're actually experiencing severe symptoms.

For instance, individuals with Hashimoto's thyroiditis might have completely normal hormone levels yet feel persistently unwell. Similarly, basal body temperature is also an unreliable indicator of thyroid health, as it can be influenced by multiple factors unrelated to thyroid function.

- **How to test thyroid function** — A full thyroid assessment should show the following results:
 - Low TSH
 - T3 levels in the upper range
 - rT3 levels in the lower range
 - Moderate T4 levels

However, note that even "normal" results will not guarantee that your thyroid is functioning properly. For deeper insight, test for rT3 and cholesterol. Small amounts of rT3 are normal and act as a buffer against thyroid overactivity. On the other end, elevated rT3 is problematic because it competes with T3, reducing your metabolic rate. Elevated cholesterol levels also usually signal suboptimal thyroid function.

Importance of NAD⁺ Testing

Nicotinamide adenine dinucleotide (**NAD+**) is an important molecule in your body. It plays a role in converting food to energy, as well as maintaining DNA integrity and proper cell function.

- **A new test will come out soon** — I'm excited to announce the upcoming Mitochondrial Wellness Test Kit, which will provide a snapshot of your latest mitochondrial function. While helpful, certain specialized tests will be needed to understand the nuances of your health.
- **Current NAD+ testing is unsatisfactory** — NAD+ rapidly deteriorates once it's outside your cells, making accurate measurement tricky. Because of this fragility, samples require immediate handling and specialized techniques to avoid losing accuracy.

Typically, precise NAD+ measurement demands blood samples to be drawn and analyzed swiftly within the same specialized research facility — something not possible at most regular clinics. Transporting samples between labs also compromises results significantly due to degradation. However, these challenges haven't stopped our mission to deliver valuable health insights.

- **NAD+ testing standards will rise** — My team and I have developed an innovative approach that bypasses the complexity of direct NAD+ measurement. Instead, our method evaluates your NAD+ status indirectly by examining the redox balance among these essential markers — acetoacetate and betahydroxybutyrate, lactate and pyruvate, and the oxidized and reduced forms of glutathione.
- **The test will be affordable** — I'm proud to share that this cutting-edge NAD+ test is inexpensive, giving more people access to their current cellular health. More announcements will be made once this product is available.

Assessing Your Gut Health

Another crucial aspect of your health that needs to be tested regularly is your gut function. As you know, certain gut strains are beneficial, while others aren't. Thus, figuring out which bacteria are dominating your gut will give you an insight to what's happening.

- **Gut Microbiome Wellness Test Kit** — Just like the Mitochondrial Wellness Test Kit, my team and I will be releasing the Gut Microbiome Wellness Test Kit. It's uniquely crafted to help you gain insights into your gut bacteria's profile. It will seamlessly pair with the upcoming Mercola Health Coach app, providing you with a seamless end-to-end journey — from collecting your sample to interpreting your results.

To paint a picture of this process, you'll need to send over a fecal sample.

Afterward, you'll be provided with a detailed breakdown of key bacterial species, allowing you to make smarter dietary and lifestyle decisions. To encourage broad access among the public, we're also giving it an affordable price tag.

- **Frequency of gut microbiome testing** — One major reason why we've made this test affordable is to encourage repeat testing, ideally twice a year. This is needed to see whether your situation has improved or worsened, and you cannot know what your status is if a single test already requires a significant amount of cash.

Tips on Addressing Nutritional and Hormonal Deficiencies

The reason why I recommend you get yourself screened is to help save you time and money. For example, if one vitamin is already at an optimal range, you can focus your effort on others that need more attention. That said, I recommend going through the following articles. They contain helpful strategies to help you maintain optimal health after you've completed your tests:

- [Everything You Need to Know About Vitamin D for Your Health](#)
- [High Iron Levels Threaten Bone Health and Increase Fracture Risk](#)
- [How Low Testosterone Affects Men's Health](#)

- [Blocking Cortisol Extends Lifespan by Improving Mitochondrial Function](#)
- [Key Nutrients to Support Optimal Thyroid Health](#)
- [The Crucial Role of NAD+ in Optimal Health](#)
- [Unlocking the Secrets of Gut Health](#)

Frequently Asked Questions (FAQs) About Regular Health Screenings

Q: Why is guessing about your health risky?

A: Guessing or relying on symptoms alone can result in serious health issues going undetected, delaying necessary treatments and reducing your chances of successful recovery. Accurate lab testing removes uncertainty, providing clear insights into your health status.

Q: What tests are essential for assessing iron overload?

A: Begin with a serum ferritin test, which reveals how much iron your body stores. For a comprehensive view, consider an iron panel, Complete Blood Count (CBC), gamma-glutamyl transferase (GGT), and a metabolic panel to fully evaluate your iron levels and overall health risks.

Q: Why is it important to monitor cortisol and testosterone levels?

A: Cortisol levels reflect stress and inflammation, significantly influencing aging, muscle health, and immune function. Testosterone is linked directly to mortality risk, cardiovascular health, and overall vitality. Regularly testing these hormones helps

detect and manage imbalances early, protecting your long-term health.

Q: How can you accurately assess your thyroid health?

A: Traditional testing methods, like TSH levels or basal body temperature alone, often fail to identify underlying thyroid conditions such as Hashimoto's thyroiditis. Testing thyroid antibodies (TgAb and TPOAb), along with a comprehensive panel (TSH, T3, T4, reverse T3, cholesterol), provides a clearer picture and helps target autoimmune-related thyroid issues.

Q: How do NAD+ and gut microbiome tests contribute to overall wellness?

A: Measuring NAD+ indirectly through redox balance markers provides critical insights into mitochondrial and cellular health, influencing energy and metabolic functions. Gut microbiome testing identifies beneficial and harmful bacterial strains, guiding informed dietary and lifestyle adjustments. Both tests are designed to be affordable, accessible, and offer actionable results for improving overall wellness.

Sources and References

- ¹ [iCliniq, March 28, 2024](#)
- ² [Indian J Clin Biochem. 2012 Aug 31;27\(4\):322-332](#)
- ^{3, 4, 5} [Cleveland Clinic, "Cortisol Test"](#)