Your BEST Thyroid Life

# Optimal Ranges Guide

# GETTING THE BLOOD TESTS YOU NEED

When I started my journey into healing Hashimoto's disease, I thought only a doctor could order my blood tests. After so many expensive trips to the doctor, where I paid for the office visit to get the tests ordered, then when I paid for the blood tests to be drawn, then when I paid again to see my doctor to get my results, I decided I'd had enough. So I cut out the middle man.

Now, this isn't something I'd recommend that everyone do. I made it my personal mission to reverse my Hashimoto's disease so I had been studying it, researching it, learning how to read my own blood test results and asking my doctors to help me understand what each result meant. I also learned to review my blood tests through a functional medical perspective so I could see the patterns of the imbalances in my body.

**Over the past few years, I've acquired some great "street smarts" when it comes to thyroid disease and blood tests.**

Armed with my knowledge and experiences, I decided to order blood tests when I felt I needed them for the things I wanted to check. I've heard plenty of horror stories from clients and thyroid forum participants who have asked their doctor to check for Hashimoto's or Grave's or other thyroid markers, only to receive a condescending pat on the head and to hear, "You don't need that. Your TSH levels are fine." ARGH – HOW FRUSTRATING! That's why I think it's important to be an informed and empowered patient.

## IT'S TIME TO TAKE YOUR HEALTH BACK INTO YOUR OWN HANDS.

Now, I'm not recommending you forgo medical treatment or getting your doctor's opinion. Let's face it, most people don't have the time or desire to become fluent in thyroid blood panels and related markers. I'm not advocating that you start diagnosing yourself or that you try to read your blood tests without a doctor's supervision.

However, if your voice is not being heard, your doctor is refusing to listen to you, and you believe there are some tests that could give you more info about your health or explain some of your symptoms, it's time go out there and get your own blood test taken. How do you do that, you ask? It's simple.

1. Go to Direct Labs and order the blood tests you'd like. You'll pay for the order up front (you can often submit these charges to insurance). From there, you'll receive a doctor's order for your blood tests that you can take to a local lab. (If you get confused, Direct Labs customer service department is very friendly and helpful if you need assistance.)

2. Schedule an appointment with your local lab. I like Lab Corp the best but there are others. Find a nice, clean local lab and bring your order from Direct Labs. Lab Corp definitely takes insurance so often I don't have to pay anything up front. *Also note, it's best to schedule an appointment with them to cut down on wait time.

3. Direct Labs will send you an email letting you know your results are ready. Get your results. If you understand the results, that's great. If not, take them to your doctor or another trusted health care expert for review.

For a quick idea of whether thyroid levels are in the "normal" or "functional" ranges, check the guide **Optimal Ranges for Blood Test Markers including Thyroid Panels** below.

That's it. It's easy. It's painless. It isn't the cheapest option but if you're tired of relying on someone else to get you the tests you need and want, this is a great second option.

## IT'S ALL CONNECTED

What do your gut and your thyroid have in common? Everything, actually.

When you think about it, your gut is a major player in your immune system; it's responsible for bringing good particles—like food and water—into the body and keeping bad particles—like toxins and germs—out.

The problem happens when this system becomes compromised. In leaky gut syndrome, large protein molecules that aren't supposed to get into the bloodstream, break through the intestinal barrier and enter the blood. The body recognizes that they aren't supposed to be there and starts and immune response. Studies have shown that these stepped-up immune responses play a role in autoimmune disorders like Hashimoto's, where the immune system starts attacking the thyroid and other parts of the body.

In addition, a large portion of T4 (about 20%) is converted to T3 in the intestinal tract, and that process requires an enzyme produced by healthy gut bacteria.

In other words: If your gut isn't healthy, your thyroid suffers. But you can love your thyroid by loving your body (and gut!) enough to feed it the foods it needs and leave off the toxins it doesn't.

## RETHINKING NORMAL RANGES

So you had a test and you're "in the normal range." I'm sad to say, welcome to the club. Twelve doctors and two hospitals tested my thyroid and my levels were always in the "normal" ranges.

Fortunately, I finally received a comprehensive thyroid panel from a functional physician, which tested numerous factors that I'd never even heard about before. That is how I was finally diagnosed with Hashimoto's Thyroiditis.

I hadn't known that, while there are "normal lab values" for blood tests, there are also "FUNCTIONAL" or "OPTIMAL" values which actually tell you far more about your what's going on with your body (especially the thyroid). My TSH, T3, T4 and other basic thyroid levels have ALWAYS been in the "normal" range. However, when I was sick, they were not in the OPTIMAL ranges. Below is a list of functional/optimal ranges for thyroid markers. Find your latest blood test results and compare to the chart below.

(For more on the problems with standard lab ranges, watch this **great presentation** by Dr. Bryan Walsh)

| TEST NAME | OPTIMAL/ FUNCTIONAL RANGE | NORMAL RANGE |
|---|---|---|
| **TSH** | 1.3 – 1.8 ulU/ml or 1.5 – 2.2 ulU/ml | .5 - 5.0 ulU/ml |
| **Free T3 or FT3** | 3.2-3.3 pg/ml | 2.3 – 4.2 pg/ml |
| **Free T4 or FT4** | 1.2 – 1.3 ng/dl | .8 – 1.8 ng/dl |
| **Resin T3 Uptake** | 28 -38 mg/dL | 22-39 mg/dL |
| **Total T4 or TT4** | 5.4-11.5 ug/d | 6-12 ug/d |
| **Free Thyroxine Index or FTI** | 1.2-4.9 mg/dl | 4.6-10.9 mg/dl |
| **Thyroxine Binding Globulin or TBG** | 18 -27 ug/dl | 15 -30 ug/dl |
| **TPO Antibody (auto-antibodies)** | < 15 | <15 |
| **Glucose** | 85 – 100 mg/dL | 65 - 115 mg/dL |
| **Uric Acid** | Male: 3.7 – 6.0 mg/dL Female: 3.2 – 5.5 mg/dL | 2.2 - 7.7 mg/dL |
| **BUN** | 13 – 18 mg/dL | 5 – 25 mg/dL |
| **Creatinine** | 0.7 – 1.1 mg/dL | 0.6 - 1.5 mg/dL |
| **Sodium** | 135 – 140 mmol/L | 135 – 145 mmol/L |
| **Potassium** | 4.0 – 4.5 mmol/L | 3.5 - 5.3 mmol/L |
| **Chloride** | 100 – 106 mmol/L | 97 – 107 mmol/L |
| **Carbon Dioxide** | 25 -30 mmol/L | 23 – 32 mmol/L |
| **Anion Gap** | 7 – 12 mmol/L | 6 – 16 mmol/L |
| **Calcium** | 9.2 – 10.1 mg/dL | 8.5-10.8 mg/dL |
| **Phosphorus** | 3.5 – 4.0 mg/dL | 2.5-4.5 mg/dL |
| **Magnesium** | 2.0 – 2.5 mg/dL | 1.5-2.3 mg/dL |
| **Total Protein** | 6.9 – 7.4 G/dL | 6.0-8.5 G/dL |
| **Albumin** | 4.0 – 5.0 G/dL | 3.5-5.5 G/dL |
| **Globulin** | 2.4 – 2.8 G/dL | 2.0-3.9 G/dL |
| **A/G Ratio** | 1.5 – 2.0 Units | 1.1 - 2.5 Units |
| **Total Bilrubin** | 0.2 – 1.2 mg/dL | .1 - 1.2 mg/dL |
| **Alk.Phosphatase** | 70 – 90 U/L | 25 – 120 U/L |
| **LDH** | 140 – 180 U/L | 1 – 240 U/L |
| **AST (SGOT)** | 10 – 26 U/L | 0 – 40 U/L |
| **ALT (SGPT)** | 10 – 26 U/L | 0 – 45 U/L |
| **GGTP** | 10 – 26 U/L | 1 – 70 U/L |
| **Serum Iron** | 85 – 130 mcg/dL | 30 – 170 mcg/dL |

| TEST NAME | OPTIMAL/ FUNCTIONAL RANGE | NORMAL RANGE |
|---|---|---|
| **Cholesterol** | 150 – 200 mg/dL * depending on philosophy 150-220 is also optimal | 130-200 mg/dL |
| **Triglycerides** | 75 – 100 mg/dL | 30-150 mg/dL |
| **HDL Cholesterol** | More than 55 mg/dL | 40-90 mg/dL |
| **LDL Cholesterol** | Less than 120mg/dl | 60-130 mg/dL |
| **Chol/HDL Ratio** | Less than 3.1 | --- |
| **WBC** | 5.0 – 8.0 | 3.7-11.0 |
| **RBC** | Female: 3.9 – 4.4<br>Male: 4.2 – 4.9 | Female: 3.8 – 5.1<br>Male: 4.6 - 6.0 |
| **Hemoglobin** | Female: 13.5 – 14.5<br>Male: 14 – 15 | Female: 11.5-15.0<br>Male: 12.5-17.0 |
| **Hematocrit** | Female: 37 – 44<br>Male: 40 – 48 | Female: 34-44<br>Male: 36-50 |
| **MCV** | 85 – 92 cu microns | 80-98 |
| **MCH** | 27 – 32 cu microns | 27-34 |
| **MCHC** | 32 – 35% | 32 – 36 % |
| **RDW** | Less than 13 | 11.7 - 15 |
| **Platelets** | 150,000 – 450,000 | 155,000 - 385,000 |
| **Neutrophils** | 40 – 60% | 35 – 74% |
| **Lymphocytes** | 25 – 40% | 14 – 46% |
| **Monocytes** | Less than 7% | 4 – 13% |
| **Eosinophils** | Less than 3% | 0 – 7% |
| **Basophils** | 0 – 1% | 0 – 3% |