AN ESSENTIAL GUIDE TO
THE TOP 5 THYROID TESTS

BY LOUISE O’CONNOR
DEDICATION

To you dear reader, I truly believe no matter what obstacles you face it really is possible for you to take charge, and ultimately improve your thyroid health. Yes, you can feel so much better than you ever imagined. And I'm excited for the journey ahead!

DISCLAIMER

An Essential Guide To The Top 5 Thyroid Tests is a source of information for educational purposes to assist you in living well. The information presented in this e-guide should not be used as a substitute for advice from your doctor, or other qualified healthcare practitioner. If you have a specific health concern it is recommended you seek advice from your doctor, or qualified healthcare practitioner. Never ignore or delay seeking professional advice relating to your personal health issues.

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PURPOSE OF THIS E-GUIDE

I believe in the power of information; it really can make a difference, and it may even help promote positive change in our world. That’s why for many years now I have been researching and writing on thyroid health from my Naturopathic perspective. It’s my mission to create greater awareness of the importance of optimal thyroid health.

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It may sound shocking, but many individuals go undiagnosed due to a lack of proper testing.
LET’S GET STARTED

Are you ready to feel so much better than you ever imagined?

My e-guide answers common questions such as...

+ Why testing is vital to get a proper diagnosis.
+ What are the most important thyroid tests?
+ What each thyroid test measures.
+ The difference between standard and optimal reference ranges.

THE BOTTOM LINE?

The best thing to do is to become your own health advocate. I urge you to seek out a healthcare practitioner who will take your concerns seriously, to help you navigate the journey ahead. Ask questions, be prepared to discuss why you want comprehensive testing. And always trust your intuition.
WHY COMPREHENSIVE TESTING IS VITAL

To feel your best, you need your thyroid working in tip-top shape. Even a small dip in thyroid function impacts your health and happiness.

If you suspect your thyroid is working below par the first step is to get comprehensive testing. This is the only way you will get a very clear picture of what’s happening with your thyroid health.

*Before we delve into testing let’s review some basic thyroid facts.*

Your thyroid is located just below your voice box. This small butterfly shaped gland is part of your endocrine system. Endocrine glands secrete hormones which continuously zip around your body acting as potent chemical messengers to ensure your body is working properly.

Your body uses iodine, and the amino acid tyrosine to manufacture your thyroid hormones. These hormones are responsible for keeping you warm, maintaining a steady basal metabolic rate, and firing up energy metabolism within your cells. B vitamins derived from your diet, or a nutritional supplement team up with your thyroid hormones to support cellular energy production. This makes certain all your organs and body systems have the necessary power to function properly.

When there’s a drop in thyroid hormone activity the two hallmark symptoms are a consistently low body temperature, and ongoing fatigue.

Low production, along with reduced activity of your thyroid hormones is termed hypothyroidism. If you are experiencing hypothyroidism you probably already know it triggers a harmful domino effect that leads to an extensive range of physical, and emotional symptoms.
THE TOP 5 THYROID TESTS

+ Thyroid Stimulating Hormone (TSH)
+ Free T4 (FT4)
+ Free T3 (FT3)
+ Reverse (RT3)
+ Thyroid Antibodies: thyroid peroxidase Abs (TPO Ab) and antithyroglobulin Abs (ATG Ab)

Getting your thyroid health back on track is no easy task. One of the biggest hurdles is getting proper testing. That said, on a positive note, you can become more empowered by gaining a better understanding of what are the most important tests you should discuss with your healthcare practitioner.

Let’s keep it simple, these are the top 5 thyroid tests that I recommend you get done. These are the most important as the results will provide significant clues as to how well your thyroid is functioning, even what kind of thyroid problem you are dealing with. Plus, a comprehensive thyroid panel that includes these five tests is extremely useful to monitor your thyroid health recovery.

When speaking to your healthcare practitioner it’s a good idea to list symptoms you feel relate to your thyroid health. You should also inform them if you have a family history of thyroid problems. As you may already know, it’s possible to be genetically susceptible to developing a thyroid issue.

Keep in mind your test results don’t tell the whole story. A skilled healthcare practitioner will interpret the results in the context of how you feel, your medical history, the symptoms you are experiencing, and any other factors that are impacting on your health.
Transforming your thyroid health doesn’t have to be complicated.

I firmly believe a holistic, patient-centered treatment approach makes things so much easier.

At the end of this e-guide you will find a one page checklist that lists these tests. You can print and take this handy checklist with you when you next visit your healthcare practitioner. You may find it’s easier to get more than TSH tested when you are very specific about what you want tested.
Thyroid Stimulating Hormone (TSH)

TSH is made in your pituitary gland, located deep within your brain. When your body requires more thyroid hormones it sends a message back to the pituitary to release more TSH. This hormone then travels to the thyroid via the bloodstream to stimulate hormone production within the thyroid. In other words, TSH is the hormone that triggers your thyroid into action.

It’s worth taking the time to find a healthcare practitioner who will listen to you, and is willing to test more than TSH at your first visit.

Naturopaths, and doctors who practice functional medicine are usually more open to discussing comprehensive testing.

In Australia, doctors and Naturopaths can arrange private testing using pathology laboratories such as Healthscope Functional Pathology, and NutriPATH Integrative Pathology.

This private testing is not covered by a Medicare rebate, and you will be billed for the tests. For instance, it costs around $230.00 for a complete thyroid panel. With all things considered, I think the cost is reasonable as this is now one of the few ways you can get properly tested.

WHAT EACH THYROID TEST MEASURES

+ **Thyroid Stimulating Hormone (TSH)**

TSH is made in your pituitary gland, located deep within your brain. When your body requires more thyroid hormones it sends a message back to the pituitary to release more TSH. This hormone then travels to the thyroid via the bloodstream to stimulate hormone production within the thyroid. In other words, TSH is the hormone that triggers your thyroid into action.
The TSH test measures the amount of TSH circulating in your bloodstream. A low TSH result indicates a hypothyroid state, and a high TSH result points towards a hyperthyroid state.

**+ FREE T4**

The major thyroid hormones are; thyroxine (T4) and triiodothyronine (T3). The three and four indicate the number of iodine molecules contained within the hormone. T4 is released by the thyroid in larger quantities. It’s the ‘storage’ thyroid hormone that is converted through to T3 when your body requires a greater thyroid response.

**+ FREE T3**

T3 is your biologically active thyroid hormone, and is therefore a critical marker of thyroid health. Low T3 is associated with a range of hypothyroid symptoms such as weight gain, fatigue, brain fog, a slow heart rate, hair loss, and a cold body temperature.

*Why testing ‘free’ T4 and T3 matters.*

Did you notice I specified ‘free’ T4 and ‘free’ T3? Let me explain why this is important.

All cells in your body have thyroid hormone docking sites. The free, unbound T4 and T3 in your bloodstream is free, and available to your cells. In other words, these hormones can get on with the essential job of firing up your metabolism.

*Testing both free T4 and T3 will also tell you how well your body is converting T4 to T3.*

Low T3 points towards a ‘conversion’ issue. It’s next to impossible to assess activation of T4 to T3 if you don’t test these two hormones.

Conversion of T4 to T3 takes place throughout the body, particularly the liver. This is the reason thyroid health experts often discuss the important role this organ plays in thyroid health.

It’s also worth noting the enzyme pathway that converts T4 to T3 is zinc and selenium dependent. When you are low in these two minerals your body will struggle to effectively activate T4 to T3. This is an important point to consider if you are taking a T4-only thyroid medication.
Reverse T3 (RT3), often dubbed the 'hibernation' hormone, is a metabolically inactive form of T3 that has a powerful effect on slowing your metabolism. In other words, it has the opposite effects of T3.

Under normal conditions T4 converts to both T3 and reverse T3 to ensure your basal metabolic rate is running smoothly. Not too fast, not too slow is the goal. Consequently, when RT3 is not required to put the brakes on the metabolic rate it’s swiftly eliminated.

RT3 has a similar structure to T3 and can therefore lock into the T3 cell receptor. This blocks T3 from doing its job. Problems arise when your body pools RT3, and excessive amounts of RT3 end up docking to the T3 receptor. Over time this pushes your body into a hypothyroid state.

Here’s the thing.

You may be told the RT3 test has no diagnostic value. However, this is not true. Nowadays holistic health practitioners view RT3 testing as essential to properly diagnosis, and manage a thyroid hormone imbalance. It’s going to take some time for mainstream medicine to catch up.

Don’t wait, go ahead and get your RT3 tested.

If you have signs of sluggish metabolism, a slow pulse rate, and constant fatigue testing your RT3 is particularly important. You could also suspect RT3 dominance when your free T4 is in range, but your free T3 is very low.

From my experience, excess RT3 is produced by the body in response to long term illness, chronic inflammation, and/or enormous stress.

+THYROID ANTIBODIES

The thyroid peroxidase Abs (TPO Ab), antithyroglobulin Abs (ATG Ab), and TSH receptor Abs (TRAb) tests measure the quantity of thyroid antibodies in your blood. Raised thyroid antibodies suggests your immune system is mounting an autoimmune attack on the thyroid. These tests are useful to check for autoimmune thyroid disorders such as Hashimoto's thyroiditis, subacute thyroiditis, postpartum thyroiditis, and Grave's disease which is a hyperthyroid autoimmune disorder.
If your thyroid antibodies are above normal it’s not wise to ‘watch and wait’ to see what happens. Autoimmune thyroid disorders are associated with inflammation and swelling of the thyroid which can lead to diminished thyroid function. If you’ve chosen a medical professional who’s a good match, they are more likely to feel comfortable exploring treatment options with you.

**STANDARD AND OPTIMAL RANGES**

In this section I have listed the top 5 thyroid tests along with the standard reference ranges. Since we are working towards optimal results I have also noted what I consider to be an optimal range where appropriate.

1. **Thyroid Stimulating Hormone (TSH)**
   - Standard Reference Range: 0.4 - 4.0 mIU/L.
   - Optimal Range: 0.5 - 2.0 mIU/L.

2. **Free T4 (FT4)**
   - Standard Reference Range: 10 - 25 pmol/L.
   - Optimal Range: 14 - 20 pmol/L.

3. **Free T3 (FT3)**
   - Standard Reference Range: 4.0 - 8.0 pmol/L.
   - Optimal Range: 4.5 - 6.0 pmol/L.

4. **Reverse (RT3)**
   - Standard Reference Range: 230 - 540 pmol/L.

RT3 levels increase when peripheral conversion of T4 to active T3 is impaired. The standard reference range is useful here. If an individual has an RT3 dominance issue it’s common to see RT3 well above 540. When RT3 is above 540 this finding should be considered along with the free T3 result.
Medicare Australia does not rebate the RT3 test as it’s not considered a standard test. Before doing the test it’s likely you will be required to agree to pay the pathology company directly for the test. The pathology companies are charging around $80 for this test. Healthscope Functional Pathology, and NutriPATH Integrative Pathology include the RT3 test as part of the comprehensive thyroid panel.

+ **Thyroid Antibodies:** thyroid peroxidase Abs (TPO Ab) and antithyroglobulin Abs (ATG Ab).
  Standard Reference Range: < 60 U/ml.
  If your thyroid antibodies are above normal it indicates your immune system is attacking your thyroid.

+ **TSH receptor antibodies (TRAb).**
A positive result indicates Grave’s disease.

**IMPORTANT NOTES**

Free T4 and free T3 values are higher if you are taking thyroid hormone medication.

If you are located outside of Australia you will have different measurement values and standard reference ranges.
USEFUL RESOURCES

ONLINE RESOURCES

NutriPATH Integrated Pathology
http://nutripath.com.au


The Australian Thyroid Foundation. Do I Have A Thyroid Disorder?

https://medlineplus.gov/thyroiddiseases.html


FIND A PRACTITIONER

Australian Traditional Medicine Society (ATMS).
http://atms.com.au

The Australasian College of Nutritional and Environmental Medicine (ACNEM).
http://acnem.org

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You are subscribed to my Thyroid Health eNewsletter. Please stay subscribed as it contains the inside scoop on a wide range of thyroid health issues that matter.
CHECKLIST TO PREPARE FOR YOUR NEXT APPOINTMENT

Print this one page to take with you. It lists the five main thyroid tests, along with space to list other tests you wish to discuss, your current symptoms, your medical history & any questions you’d like answered.

COMPREHENSIVE THYROID PANEL - TOP 5 TESTS

+ Thyroid Stimulating Hormone (TSH)
+ Free T4 (FT4)
+ Free T3 (FT3)
+ Reverse (RT3)
+ Thyroid Antibodies: thyroid peroxidase Abs (TPO Ab) and antithyroglobulin Abs (ATG Ab). TSH receptor antibodies (TRAb) are tested if hyperthyroid symptoms.

OTHER TESTS TO DISCUSS

CURRENT SYMPTOMS

MEDICAL HISTORY

QUESTIONS & NOTES

Write down the questions you want answered during your visit.