



# NDT: A Nature-Thyroid Update

## Natural Dessicated Thyroid

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Many of you know me from *The Paleo Thyroid Solution* by Elle Russ, and my interview published at the end of the book. We discuss many of the misunderstandings by most MDs regarding how to test for and treat hypothyroidism. One of the controversies we delve into is the importance of measuring the “active” thyroid hormone **free T3**, the precursor “storage form” of thyroid hormone **freeT4**, and the inactivated version of freeT4 known as **ReverseT3**. “Free” hormone simply means not bound to proteins in the blood stream such as Thyroid Binding Globulin, thus free to function. Finally, one can measure the **TSH**, a pituitary hormone that reflects thyroid function, **Thyroid Stimulating Hormone**.

Measuring the thyroid antibodies to TPO-thyroid peroxidase, and Tg- thyroglobulin allows one to accurately diagnose autoimmune thyroid disease frequently called “Hashimoto’s”, the most common cause of hypothyroidism. If one accurately measures the three thyroid hormones, the pituitary hormone and, when the diagnosis is Hashimoto’s, the thyroid antibodies, one can accurately treat the thyroid dysfunction and the course of the autoimmune disease underlying it.

Every doctor knows that the peripheral deiodination of T4 to T3 plays the most important role in the cellular function of T3, and we hope that the serum free T3 accurately reflects converting the stable storage form of thyroid hormone T4 into the active form of thyroid hormone free T3. The free T3 and the reverse T3 together is our best assessment of intracellular thyroid function the doctor has. No test is perfect, so we must listen to the person with hypothyroidism as well as listen to the full array of lab tests.

What I have found over the decades of measuring thousands of thyroid panels is that one can never assume that if the thyroid hormone you are prescribed corrects TSH or free T4 on the lab tests that you have truly corrected hypothyroidism serologically or clinically. Furthermore, you cannot prove over-correction of hypothyroidism by too low of a TSH (the TSH has an inverse relationship to actual thyroid function) without measuring freeT3 to reverse T3 (RT3).

Which takes us to prescribing thyroid hormone. Like most doctors I started out by prescribing T4-only prescriptions like Synthroid, because that was what I was taught to do. I was taught that things like NDT were too “unreliable”, this was based on pharmaceutical coercion and not real data and our patients have suffered the consequences. Once you learn to measure the right tests you find that T4 only prescriptions fail to adequately correct thyroid functions 75-80% of the time. That is based on my clinical experience as no actual studies looking at symptoms and FT3:RT3 ratio exist that would sway most MDs, as there is no impetus from Big Pharma to measure such things.

*Let me be clear, T4 alone rarely works to correct both symptoms and the full thyroid panel.*

The simplest next option has been NDT. Dried pork thyroid standardized to the measurement of one grain (65 mg) providing 38 mcg T4 and 9mcg of T3, at a ratio of 4.2:1 T4:T3. As T3 is about four times stronger than T4 one grain of NDT is actually equivalent to 75 mcg (not 100 as some sources cite) of a

T4 only prescription. When I prescribe Nature-Throid – NDT it is because it has historically worked! That means symptom relief and a great thyroid panel. Some people can take it once a morning on an empty stomach, others need to split it into two or (rarely) three doses.

*When you don't prescribe T4 only, there is far less of a push to create RT3, the T3 receptor blocker.*

Nature-Throid (and WP Thyroid) has recently been recalled. All lots of all dosages, as apparently Big Pharma was right! Actually, each lot is testing between 87-90% of stated dosage, which although not horrible, is totally unacceptable. No attempt at communication is getting through which is also a sign of a bad company, no one knows when or if they are coming back.

*My current recommendations in response to the Nature-Throid recall:*

1. ***Don't Panic!*** This is a mild, consistent dose reduction that you might or might not notice. The valid reasons why doctors, like myself, have prescribed NDT have not changed. What happened at RLC Labs, the manufacturer, I am not sure. Unfortunately, failures of this kind seem to be coming eerily often.
2. ***Don't Stop*** your Nature-Throid, as it is still at 87-90% potency, and there is no issue of contamination. Contact your provider, please request a thyroid panel especially if you feel like your hypothyroid symptoms have returned. Even if they have not, getting blood tests helps us determine the extent of the problem.
3. ***Consult Your Physician:*** What I choose to do and what other physicians choose might be different. I, personally, have found the other NDT brand commercially available, Armour Thyroid, too unreliable to recommend. However, I do have patients who have come to me happy with their Armour and, as long as their labs look good, I continue them on it.
4. ***Compounding Pharmacy:*** We have successfully used compounding pharmacies for many prescription medicines from Low Dose Naltrexone to Bioidentical Hormones and many others. Our office will be trying to find the most cost-effective way to convert your Nature-Throid prescription to the bio-equivalent dosage of NDT at the compounding pharmacy of your choice. The retail cost of Nature-Throid is \$19 per month for the 1 grain dosage, \$27.50 for the 2 grain, and \$30.50 for the 3 grain. I am hoping your compounding pharmacy can keep the prices similar. I am still working on what it will cost to switch thyroid medicines as we go to print!
5. ***Start your new prescription,*** only after getting your replacement Rx will you stop the Nature-Throid. After a minimum of 6 weeks, preferably a full 12 weeks, on your new Rx get follow-up lab tests. Get tests earlier if you question how you are doing on the new Rx.

There remain so many options from an expense standpoint: switching back to T4, generic levothyroxine, or brand-name T4, Synthroid or Tirosint, may save you money if you have insurance-based Rx coverage. Combined with taking Selenium Synergy (Jarrow) twice daily might help overcome some of the T4:T3 conversion issues with this strategy. Other options include T3-only prescriptions for those with documented ongoing high RT3 issues, this might be the time to consider this exciting strategy. Also, this might be the time to play with different T4:T3 ratios when consulting with your physician and pharmacist.

I know 2020 has been a long year, compared to everything else, switching thyroid is a mild inconvenience that might just further spark creative ways that you and your doctor can help improve your thyroid, your metabolism, your health!

Your Journey to Health and Healing,

Gary E Foresman MD