



THIS WEEK'S TOPIC

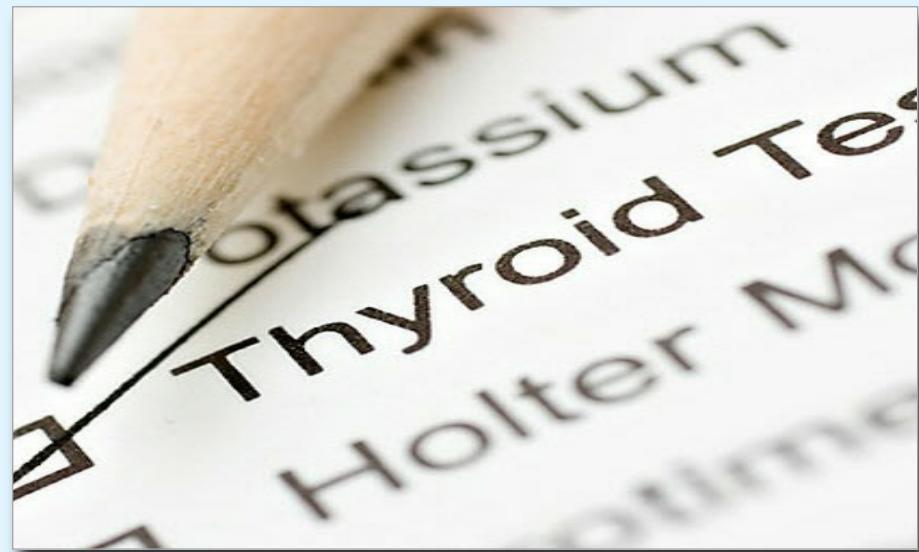
# Therapeutic Evaluation Of The Thyroid

**"I realize thyroid evaluation is controversial but I have seen dramatic results following this therapeutic line of thinking."**

A related Tuesday Minute discusses the profound effect that the thyroid gland has upon metabolism and that lab tests are not always the best way to diagnose the problem. That doesn't mean that we can't use lab tests but we can't rely on them exclusively.

So how can we use the lab to our advantage? My thanks to Dr. Harry Eidenier for his insights and over 30 years experience on this subject. I realize thyroid evaluation is controversial. So right off the bat, I may be stepping on some sacred cows in this discussion. But I can tell you, I have seen dramatic results following this therapeutic line of thinking, both with my patients and the doctors I have shared these ideas with.

First, we look at the patient and see if they have the symptoms. If they don't have the symptoms, we are not going to get microscopic and try to manipulate lab



numbers by using nutrients. We won't discuss all the symptoms here, but fatigue, mental confusion, myxedema, inability to lose weight and feeling cold are probably the big ones. You can see below for an expanded list.

If people have three or more symptoms, the thyroid is probably involved. But here's the million dollar question, "What is causing the imbalance?" Is the thyroid underperforming? Is the pituitary giving the thyroid enough stimulation? Is there an adrenal piece to

the puzzle? Or "Is there a receptor site issue?" as outlined in Dr. Mark Starr's book Hypothyroidism Type 2. If the symptoms are present, the laboratory can be helpful to discern which aspect to focus on.

I always look at Free T4, Free T3 and TSH. Remember lab normals are created using sick people. So I want to be at the upper end of the lab range. For example; if the lab ranges for Free T3 is 2.0 - 4.0, the median is obviously 3.0. I want my levels to be above 3.0. So here's how I look at the

numbers. If the Free T4 is low, either below the lab range or below the median point, then provide the factors necessary to make T4, namely iodine and L-Tyrosine. Thyroxine or tetraiodothyronine needs 4 molecules of iodine and 1 molecule of tyrosine. Our society is so saturated with anti-iodine chemicals like chlorine, fluoride and bromine that it makes sense to provide iodine.

T4 is converted to T3 or triiodothyronine. Most of this conversion is done by the liver and kidney but T3 is what the cells utilize. A small amount of a substance called reverse T3 is also produced. Elevated levels of reverse T3 have been associated with elevated cortisol and / or the liver's inability to break it down. If the reverse T3 is elevated, cellular levels of T3 will be lower. This is the value of using the Free T3 to gain a clearer picture of what is available to the cells.

The ratio of T4 to T3 is roughly 20 parts T4 to one part T3. But T3 is at least 3-4 times more active. Selenium, iodine, B vitamins for Krebs cycle function and essential fatty acids for cell membrane function are important for the T4 to T3 conversion process.

As a side note, if the cell membranes are not healthy, it will be more difficult for the lipophilic thyroid hormones to enter the cells. I have used Meda-Stim as a foundation for the conversion of T4 to T3 and Optimal EFAs to support cell membrane health.

Now here is where we get controversial. Let's consider the TSH, thyroid stimulating hormone. Think about this before you answer. If the TSH is below 2.00 "in the presence of hypothyroid symptoms," that's the key phrase let me say that again... "in

the presence of hypothyroid symptoms," what does that tell you? Hypothyroid symptoms with a low TSH, is the body screaming for more metabolic juice but the pituitary is not responding.

In other words, it is not stimulating the thyroid to make more thyroxin. It's like the pituitary is sluggish. So we feed the pituitary the nutrients and co-factors it needs to work properly. I use Cytozyme-PT/HPT. Each tablet is 40 mg of an ovine pituitary/hypothalamus blend. I also use Thyrostim which provides broad spectrum support for healthy thyroid and pituitary function.

Now let's consider an elevated TSH. The American Association for Clinical Chemistry suggests that the upper range of TSH should be 3.00. The pituitary hormones are screaming to the thyroid "come on, come on, let's have some juice." But the thyroid is too tired or just plain burned out. So if the patient has hypothyroid symptoms and their TSH is 3.00 or greater, start supporting their thyroid with GTA which contains porcine thyroid tissue as well as rubidium and selenium.

I have prepared a summary with more specifics but I think you have the concept. Use optimal values for Free T4 and T3 and use the TSH as a means to determine if we are looking at a tired pituitary, less than 2.00; or sluggish thyroid, greater than 3.00.

This may seem a little complicated if these concepts are new, but believe me it is well worth your effort to understand this fine tuning.

Thanks for reading this week's edition. I'll see you next Tuesday.



# Thyroid Blood Chemistry

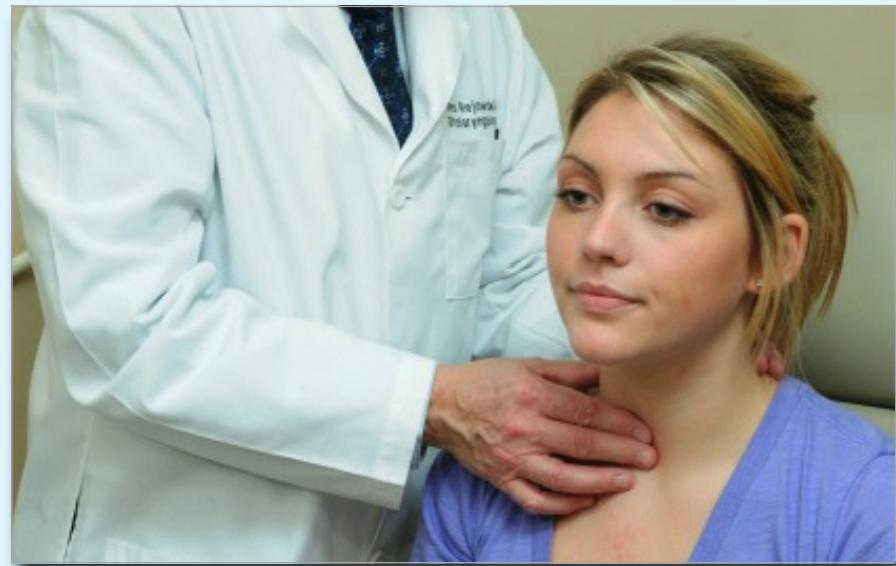
*“I’d like to add some additional clinical pearls for when your results are blocked, even if you have the right protocol.”*

In the upper left hand corner you will notice a tab called "Archives." Click on it and you can access close to 300 programs on various topics, a virtual post graduate course on clinical nutrition.

Concerning the topic for this Tuesday Minute, you can view the links below on hypothyroid, but I'd like to add some additional clinical pearls for when your results are blocked, even if you have the right protocol.

My thanks to Dr. Abbas Qutab and Harry Eidenier for sharing these pearls with me over the years. Adrenal and thyroid functions go hand in hand. Where you find one you will usually find the other. Why? Because adrenal cortical hyper function results in excess cortisol.

T4, as you know, is secreted by the thyroid and must be converted to a form cells can use, T3. T3 is necessary for the conversion of carotenoids to vitamin A as well as the production of progesterone.



Low levels of T3 result in lower ATP production as T3 is needed for healthy mitochondria. Low levels of T3 result in low calcium uptake which means reduced bone calcification. Also, low levels of T3 can mean reduced human growth hormone and reduced blood flow to the kidneys. But perhaps most importantly, low levels of T3 can result in reduced dendritic growth and an increase in senile dementia and Alzheimer's.

Cortisol is necessary to reduce inflammation but excess cortisol blocks the conversion of T4 to T3. This fact alone makes it important to incorpo-

rate lifestyle and dietary modifications to manage excess cortisol.

T4 contains four molecules of iodine. The liver and kidneys are major players to convert T4 to T3 by removing one molecule of iodine. During the conversion process 30-45% of total T3 is converted to active T3. 10-18% of the total T3 is converted to reverse T3.

Reverse T3 is an inactive isomer that interferes with normal thyroid function when elevated. It's normal to have some reverse T3. However, it becomes increased with infection, diabetes, malnutrition

and other major diseases. But the major reason reverse T3 is elevated is due to too much cortisol or excess thyroid hormones.

What's left from the active T3 (the 30-45%) and reverse T3 (the 10-18%) is converted to a sulfated form of T-3 and thyroacetic acid. When we do the math these forms make up 37-60% of total T3. But here's the part I didn't know. Both the sulfated form of T-3 and thyroacetic acid remain inactive until acted upon by gut flora and returned to active T-3.

Let me say that again. 37-60% of the coveted T3 must be activated by the gut flora.

Researchers also tell us stress affects the pH of the gut which affects the health of bacterial flora. 20 years ago Biotics created a product called Thyrostim to provide the factors necessary to stimulate the pituitary to activate the thyroid. I always wondered why a thyroid product contained probiotics. Now it makes sense.

Keep in mind excess cortisol will cause a thinning of the lining of the bowel contributing to, if not causing, leaky gut. Leaky gut causes excess immune activation and probably a major role in the autoimmune condition Hashimoto's thyroiditis. So excess cortisol slows the conversion from T4 to T3, it can increase reverse T3 and affect gut flora and permeability.

Some of the products from Biotics Research that balance adrenals include: ADHS, which stands for adrenal hyper secretor and is a formulation of adaptogenic botanicals; De-Stress, a decapeptide shown to reduce cortisol; Bio-CMP and Potassium-HP, alkaline minerals to slow down the sympathetic nervous system; PheniTropic, a source of GABA that crosses the blood brain barrier, hence relaxation; and Phosphatidylserine, an oil which also has been shown to reduce cortisol.

Another factor that is overlooked and also affects the T4-T3 conversion is the use of estrogenic compounds like birth control pills, hormone replacement therapy, excess consumption of commercialized beef and a sluggish liver. And let's not forget the effects of xenoestrogens from pesticides and plasticizers which block receptor sites similar to estrogen. That's why Dr. Qutab always starts his patients on a detox and then uses Meda-Stim to support the T4 - T3 conversion. Anyone who is on estrogen or for that matter anyone who is on synthetic T4 like Synthyroid gets Meda-Stim, 2 three times a day.

Meda-Stim contains all the conversion factors needed as well as some adaptogenic botanical agents to support thyroid health. It is one of the most valuable products in the Biotics line. Most of us can't or wouldn't want to change the medications that our patients are on; however, by adding Medi-Stim we can maximize their effectiveness.

Another less seen phenomena is that we get the blood thyroid levels normalized and the patient still has symptoms. Years ago Dr. George Goodheart called that phenomena cellular resistance. He found the use of RNA/DNA as found in Nuclezyme-Forte and rubidium as found in Rb-Zyme can overcome most cases of cellular resistance.

Make sure you see the "Thyroid Summary Sheet" below to get all the symptoms and recommendations to balance thyroid function. The big keys are to make sure the conversion from T4 -T3 is smooth by reducing cortisol, healing the gut flora and making sure the estrogens of the world are not inhibiting this important conversion.

Thanks for reading this week's edition of the Tuesday Minute. I'll see you next Tuesday.

# Thyroid Summary Sheet

## Hyperthyroid Symptoms:

Racing heart or increased heart rate, nervousness, tremor, dizziness, shortness of breath, chest discomfort, increased problems sleeping, excessive weight loss, excessive sweating, and elevated basal temperature over 98.2. **Dr. Broda Barnes said if the basal temperature went over 98.2 an immediate reduction in therapy is indicated.** In his case he reduced the desiccated porcine thyroid.

## Hypothyroid Symptoms:

Fatigue, morning headaches that wear off during the day, increase in weight, sensitivity to cold (rule out anemia and atherosclerosis), dry brittle hair, hair that falls out easily, dry, scaly or itching skin, reduced initiative, mental confusion, poor memory, low axillary temperature (below 97.8), muscle cramps at rest, reduced immune function, edema especially facial (myxedema), constipation, loss of outside portion of eyebrows, breast, ovarian or uterine cysts/fibroids, increase in serum lipids, increase or decrease in blood pressure, tinnitus, impaired hearing, depression, premature grey hair, red hair, type 1 diabetes, B-12/folate anemia, and vitiligo.

## Adrenal Function

Additional symptoms of adrenal deficiency include feeling hot all the time, palpitations, low blood pressure (systolic of 100 or less), very slender build, dizziness (especially on standing up quickly), severe allergies, anxiety and feelings of impending doom, hypoglycemia, arthritis, weakness and fatigue after exercise. There is an overlap between the symptoms resulting from hypothyroidism and adrenal insufficiency. Sometimes it is necessary to support the adrenal glands and thyroid simultaneously.

## Fine Turning Laboratory Numbers

**IF symptoms are present, (see above) use the TSH to help determine if the pituitary is under-stimulating the thyroid or if the thyroid is underperforming.** If the pituitary is under-stimulating, use **Cytozyme-PT/HPT** 2 tid and **Thyrostim** 2 tid. If the Thyroid is under performing, use **GTA** if the TSH is under 10 at 1-3 at morning and noon. If the TSH is over 10, use and **GTA-Forte II**. Start with 1 in morning and 1 at noon. Increase monthly as testing and symptoms dictate. When supplementing with any form of thyroid supplementation or medication make sure adequate amounts of iodine are present to prevent breast and uterine problems. Enhancing thyroid functions will utilize bodily stores of iodine which are also needed for healthy breast and uterine function. Fluoride, chlorine, bromine which are abundant in our food supply will deplete natural levels of iodine in the body. Remember, when you increase the metabolic functions of the thyroid, more iodine will be needed; and we don't want to compromise the breast and uterine tissue by increasing metabolism.

**IF... Free T4 is below the lab median or reference range, use Liquid Iodine Forte 60 drops or one tablet of Iodizyme-HP Forte to supply iodine and L-Tyrosine 500 mg three times a day between meals.**

**IF... Free T4 is above the median line and Free T3 is below the lab median or reference range use this in case of under conversion of T4 to T3:** use **Meda-Stim** 2 tid to help balance conversion from T4 to T3. Meda-Stim provides Kreb cycle nutrients, antioxidants and the historically used botanicals sage and pellitory-of-the-wall. Use 2 tid.

## Dietary Suggestions:

Eliminate refined carbohydrates, dairy, gluten and processed foods. Reduce total daily carbohydrate intake if the patient is overweight to 60 gram or less. Eliminate food in the cabbage family, soy, red clover, the skin from poultry, fatty beef, cosmetics containing estrogen and millet. Use only pure water (no well or city water). Increase oil and quality protein. If an increase in dietary protein causes gas and/or bloating, add **Betaine Plus HP** at 1 capsule in the middle of the meal (increase every third day until the patient experiences a slight burning in their stomach and then reduce).

## Additional Notes and Support Nutrients to Consider:

Selenium 200-400 mcg: **Se-Zyme Forte** provides 100 mcg of a food based selenium.

Iron - make sure ferritin is over 100 for men and 130 for women but under 200. **Fe-Zyme** provides 25 mg of iron as well as 8 mg of zinc and 2 mg of copper.

Iodine/ Iodide - **Iodizyme-HP** 1 tablet per day supplies 12.5 mg.

EFAs for cell membrane integrity. **Optimal EFAs** is a mixture of organic GLA, ALA and EPA/DHA from small fish. Use 3 capsules, twice a day

Magnesium 600-1000 mg - **Mg-Zyme** supplies 100 mg of aspartate, gluconate and glycinate, **Aqua Mag-Cl** supplies 200 mg per tsp. (Due to a salty taste it must be mixed with juice to increase patient compliance.)

Porcine glandular: Biotics Research has the only porcine glandular on the market called **GTA**. **GTA by law has to have the thyroxine removed**; however, it has many of the co-factors necessary to feed the thyroid and enhance physiology. **GTA** has 5 mg of porcine thyroid with trace amounts of selenium, rubidium and SOD and catalase, **GTA-Forte II** has 20 mg of porcine thyroid with zinc, selenium, copper, rubidium, with SOD and catalase.

Dr. Broda Barnes used 1 grain or 60 mg and added ½ grain or 30 mg every month until the patient bloomed. Dr. Starr found out that sometimes the recommendation of desiccated porcine thyroid made patients worse. This may happen to patients with severe allergies, chemical sensitivities and chronic pain. These were the patients that needed the therapy the most and yet due to toxins and nutrient deficiencies patients would have an aggravation of symptoms. At these times therapy would have to be reduced and then a detox would be instigated. You see, environmental toxins interfere with thyroid as well as other hormonal functions. If the receptor sites of the cell are already full or blocked, then the body will signal a heightened or alarmed state. Therapeutically we need to explain the process and go back to the basics of clean food and some form of detoxification. The detox reaction will free receptor sites and enhance cellular function. With several patients I have seen low levels of free T3 as part of their clinical picture. These patients chose to start with a detox program and have been happy to see that free T3 levels returned not only to normal but to their optimal levels.

**T4 to T3 Inhibitors**Nutrient Deficiencies

- Iodine
- Iron
- Selenium
- Zinc
- Vitamin A
- Vitamin B2
- Vitamin B3
- Vitamin B6
- Vitamin B12

Medications

- Amiodarone
- Beta Blockers
- Birth Control Pills
- Iodinated Contrast Agents
- Lithium
- Methimazole
- Phenytoin
- Propylthiouracil
- SSRI
- Theophylline

- 
- Aging
  - Alcohol
  - Alpha-Lipoic Acid
  - BPA
  - Chemotherapy
  - Cigarette Smoking
  - Cruciferous Vegetables
  - Diabetes
  - Fasting
  - Fluoride
  - Growth Hormone Deficiency
  - Hemochromatosis
  - Lead
  - Low Adrenal State
  - Mercury
  - Pesticides
  - Soy
  - Stress
  - Surgery
  - Radiation