

Another Way To Look At Thyroid Malfunctions

"Even though lab tests are normal, that doesn't mean that the patient has sufficient cellular concentrations of thyroid hormone."

I went to a summer pool party and I couldn't help but notice the mixed edema in the face of one of my friends. I didn't want to start pool party diagnostics so I decided to wait for a private moment at a later date. But later, she casually mentioned that her cholesterol was elevated and that she was always tired. She's in her late 50's and overweight. In conversations I overheard her telling the other ladies that her hair and skin were different than before she had her children. Are you seeing the clinical picture yet? That's right, she is hypothyroid.

I recently discovered another way to look at thyroid malfunctions from Dr. Mark Starr in his fascinating book "Hypothyroidism Type 2." He compares Type 2 Diabetes to what he calls Type 2 Hypothyroidism. Many Type 2 Diabetics have enough insulin to maintain blood sugar equilibrium. Yet somehow their cells are not responding to their existing insulin levels thus additional insulin is prescribed.



Our goal as wellness clinicians is to find ways to re-sensitize the cells by enhancing cell membrane function, provide essential nutrients and reduce the toxic load of the cell. In the same way, when patients display hypothyroid symptoms, Dr. Starr suggests that thyroid hormones may not be active at the cellular level.

Thyroid tests are normal and yet patients have hypothyroid symptoms. He spends 20 pages discussing the limitations of thyroid testing, even the highly accepted TSH. According to Dr. Mark Starr,

better indicators for thyroid function are patient histories, physical exams and the results of a clinical trial. In other words, treat the person not the number on the lab test.

Here are some of the physiological functions of the thyroid. Thyroid hormones increase the transcription or function of a large number of genes, increase the cellular metabolic activity and stimulate carbohydrate and fat metabolism.

Some of the effects of healthy thyroid function on the cardiovascular system include in-

creased blood flow and cardiac output, increased heart rate, increased heart strength, normal arterial blood pressure, increased respiration, increased GI motility, healthy muscle tone and healthy libido. Thyroid symptoms are ubiquitous.

The lack of thyroid hormones is correlated with increased concentrations of cholesterol and triglycerides in blood. Low thyroid has also been associated with fatty deposits in the liver, depression, low energy states and menstrual irregularities. Low thyroid hormones also mean a low metabolic rate. That's why Dr. Broda Barnes, who spent his whole life studying and treating thyroid patients, used the first morning axillary temperatures as a major thyroid indicator. A low temperature barring infection reflects a low metabolic rate. Normal temperatures are 97.8 to 98.2. The lower the temperature the greater the therapeutic need for thyroid support.

How can the deficiency of one hormone have so many different symptoms associated with it? I think it is because healthy thyroid function is related to healthy mitochondrial function. Healthy mitochondrial function means more energy for cells. When thyroid hormones are given to animals, trillions of mitochondria increase in size and number. The total membrane surface of the mitochondria increases almost directly in proportion to the animal's increased metabolic rate. Even Guyton's Textbook of Medical Physiology 2000 edition states that "it seems almost to be an obvious deduction that the principal function of thyroxine (thyroid hormone) might be simply to increase the number and activity of mitochondria."

Dr. Starr uses porcine desiccated thyroid as his therapeutic agent but quickly adds that unless patients have enough iron, magnesium, iodine/iodide and selenium, their hypothyroid symptoms may remain unchanged or get worse.

He also shows how the adrenal glands are essential for healthy thyroid function.

Adrenal cortical hyper function will shut down the thyroid as the body is trying to slow down the destructive fight or flight reaction. But physiological levels of adrenal hormones are often needed even if adequate thyroxin is present. Dr Starr says his therapeutic dose is 1/4 to 1/2 grain which translates to 15 to 30 mg and increases monthly until the patient's "symptoms subside."

He suggests that thyroid should be taken on an empty stomach at least 20-30 minutes before a meal. Biotics Research makes several strengths of porcine thyroid. The low dose is called GTA and contains 5 mg of porcine thyroid and 5mcg of rubidium and selenium. GTA-Forte and GTA-Forte II each contain 20 mg of porcine thyroid as well as different ratios of the trace minerals zinc, selenium, copper and rubidium.

Other Tuesday Minutes will feature updates and further discussions on thyroid therapeutics but let me re-emphasize 2 key concepts. First, that even though lab tests are normal, that doesn't mean that the patient has sufficient cellular concentrations of thyroid hormone.

If the clinical picture dictates, consider Dr. Starr's concept of Type 2 Hypothyroidism. Our goal then would be to enhance cellular function just as we do with Type 2 Diabetes.

The second concept and one that we should communicate to our patients is that thyroid hormone is necessary for healthy mitochondrial function. Low mitochondrial function can present itself as many different diseases or conditions. By providing the spark we need for those energy factories to function, over time we will see many symptoms disappear.

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