



NATUROPATHIC WISDOM NOTES

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Quote: There were times when I could not afford to sacrifice the bloom of the present moment to any work.

Walden by Thoreau

Thyroid Health: Hypothyroidism

Thyroid health is extremely important for optimal health of the body. The thyroid is a small butterfly shaped gland located in the neck, consisting of two lobes and weighing less than an ounce. It controls the metabolism of the body, the process by which food is transformed into energy, and many vital biochemical reactions. Every organ and every tissue is affected by the hormone secretions of this gland. Hypothyroidism is the definition of the under functioning thyroid. Extreme hypothyroidism is easily diagnosed as cretinism resulting in moon shaped face, course features, thick nostrils and lips, slow and difficult speech, weakness, listlessness and apathy. Fortunately this extreme form is rare but mild to moderate or subclinical hypothyroidism is much more common, affecting up to 40% of the population.

The most common symptom is fatigue, but this often may not be the presenting complaint. Other common symptoms that can come on slowly are severe headaches, repeated infections, skin problems, menstrual disturbances, concentration difficulties, Chronic fatigue, fibromyalgia, depression, poor equilibrium, paranoid symptoms, infertility, muscle aches, hearing disturbances, gout, arthritis, hypoglycemia, malabsorption syndromes of digestion, burning and prickly bodily sensations, elevated cholesterol with increase risk of heart disease, (Dr. Barnes noted that in his practice heart disease risk was reduced by 94 % on those patients whose thyroid function was optimal).

The hypothalamus stimulates the pituitary gland (both contained in the brain) to produce thyroid stimulating hormones (TSH). TSH then stimulates the thyroid to produce and release thyroxine (T4). T4 is then converted to triiodothyronine (T3) with the help of the enzyme 5-deiodinase (which is selenium dependant) and four times more active than T4. This conversion of T4 to T3 takes place in the liver and kidney. T4 can also be converted to reverse T3 which is physiologically inactive. The 5-deiodinase enzyme can be inhibited by prolonged stress, acute and chronic illness, toxic metals such as cadmium, mercury and lead, steroids, burns, aging, chemical exposure, cold exposure, liver disease, kidney disease, severe injury, surgery, and poor nutrition. This imbalance in the peripheral function of T4 is called "euthyroid sick syndrome" or "low T3 syndrome". The liver plays a predominant role in this extra-thyroid peripheral metabolism and, to a lesser degree, the kidney. Drugs that affect T3 metabolism are corticosteroids, propylthiouracil, radioactive contrast agents, Amiodarone, and Propranolol.

The reason subclinical hypothyroidism is not diagnosed and therefore not treated by the conventional medical doctors is that their only method of diagnosis is the TSH or T4 blood test and these often fall within normal limits. The normal limit for TSH is .35-5.0 mU/L and T4 is 9.0- 20 pmol/L. These ranges are considered by many functional medicine doctors to be too wide and their TSH range is .90-2.0 and T4 15-18. What does this mean? Well the main circulating hormone for the thyroid is actually T3 and this is often not measured. TSH (thyroid stimulating hormone) secreted by the pituitary is stimulated when there isn't enough T4 and T3 circulating in the periphery. When this number is larger than normal it is the pituitary's effort to "wake" up the thyroid to work harder and it is the physicians' clue that the thyroid needs help.

The standard treatment is to give synthetic T4 hormone until the TSH comes within it's normal range. Some times this amount is enough for the patient, but more often than not the dose does not improve all symptoms and patients seek out functional medicine doctors for help. T3 is often the hormone that is missing and this can be administered in addition to T4. It is the most active form of the thyroid hormone circulating and is given in a slow release form or in twice daily doses as Cytomel. It was felt previously that by giving T4, T3 levels would normalize but in recent studies this is not necessarily true. Those patients given both T4 and T3 were found to have better performance tests on learning, mental flexibility and attention and also had less depression and generally felt better. Sustained release form of T3 is absorbed more slowly over a 24 hour period and is important to prevent higher than normal transitory levels of T3 if the hormone is absorbed too quickly which can cause heart palpitations.

Testing for Hypothyroidism:

1. Dr. Broda Barnes back in the 1970's developed the basal body temperature test where the body's temperature is taken first thing in the morning for several mornings, especially during the period. If temperatures average less than 36.5 C or 97.8 F then a diagnosis of hypothyroid is made.
2. Dr. Thom DDS suggests taking the temperature several times during the day as the temperature does vary through out the day, for three days and then take the average.
3. Paint a 1inch diameter circle of Lugol's iodine solution around the umbilicus. If it disappears within a 24 hour period then there is an increase need for iodine and probably a hypothyroid condition.
4. Measure T4, TSH and Reverse T3 as well as T3 in a blood test.

Wilson's Syndrome:

This according to Dr. Wilson is a build of reverse T3 (rT3) due to the dysregulation of the conversion to T3 after any of the above stresses. Reverse T3 starts to build up and then starts to use up the enzyme needed to convert T4 to T3. The body tries to correct this by increasing the production of TSH and T4 only to have rT3 increase but not the active T3 form. The Irish, Russian, American Indian, Scotch and Welsh are the most common to develop Wilson's syndrome. It is diagnosed using body temperatures. The treatment is to reduce the rT3 levels by gradually increasing and decreasing dosing of time released T3 hormone, a re-booting of the thyroid so to speak. Body temperature is monitored and when it returns to normal the patient is weaned off the T3 prescription. This method does not work in all cases especially if there are imbalances in other organs such as the adrenal glands, liver, kidney and ovaries.

Suggested Treatments:

1. Iodine: The thyroid captures 60mcg iodide daily to ensure an adequate supply for thyroid synthesis. Dr. Guy Abraham has conducted research since 2002 and published a series of articles stating that the RDA of iodine is way too low. 12.5 mcg is the optimal amount for the thyroid and the rest of the body. It lowers the risk of breast cancer associated with those taking thyroid supplements. The Japanese have traditionally consumed more iodine from seaweed than any other population and Japan has the lowest rate of any type of cancer (except stomach cancer) anywhere else in the world. Japan along with Iceland (high-iodine-intake countries) have the lowest rates of goiter (enlarged thyroid) and breast cancer. Ask Dr. Pincott for dosages and sources of iodine and iodide, the two best sources to take together. Iodine can also aid the body in getting rid of heavy metals such as lead, cadmium, arsenic, aluminum and mercury. If you take too much iodine you can cause an underactive thyroid and many people are allergic to iodine.
2. Selenium : increases the conversion of T4 to T3 and reduces breast cancer risk associated with low selenium and concurrent low T3 levels.
3. Zinc: required for T3 and free T4 activity.
4. B12: deficiency may cause decrease conversion of T4 to T3.
5. Vitamin C and E protect against the lipid peroxidation associated with heavy metal exposure.
6. Vitamin D is necessary for thyroid hormone production in the pituitary gland, and possibly in the early stages of T-3 (thyronine) binding to its receptor. See my articles on Vitamin D at www.DrPincott.com
7. Tyrosine: thyroid hormone is made up of the amino acid tyrosine with some iodines attached.
8. Bladderwack: or Fucus vesiculosus contains iodine and stimulates the production of T4 but is contraindicated in over active thyroid disorders.

9. Withania (ashwagandha) is an Ayurvedic remedy that regulates the function of the thyroid, increasing both T3 and T4, and adrenal glands. It also provides immune modulating, anti-inflammatory and anti-anemic activity.
10. Commiphora muku or gugulu is an Ayurvedic herb that increases T3 production.
11. Bacopa: is a Ayurvedic nervine herb used to treat debility and nervous breakdown as well as stimulating thyroid function.
12. Brassica species contain sulphur that if **not cooked** interfere with thyroid hormone synthesis. These include cabbage, cauliflower and brussel sprouts.
13. Treat the liver with Livit 2 to optimize T3 production.
14. Essential fats including omega 3 from Carlson's cod liver oil or Nutra Sea herring oil for optimal functioning of all cell membranes.
15. Vitex and progesterone to treat estrogen dominance: when estrogen levels are too high thyroid hormones are less effective which is why many women on the Pill or HRT end up on thyroid medication. Low thyroid increases prolactin levels which increase the risk of ovarian cysts, weight gain, and breast cancer. Tamoxifen blocks the utilization of iodine in the formation of thyroid hormones. Women with breast cancer have lower T3 hormones and elevated TSH levels. Oral estrogen therapy in the case where a friendly form of estrogen is required to help a woman through menopause may induce a hypothyroidism. The increase of thyroid-binding globulin (and therefore lowering of available thyroid hormone) does not occur in the transdermal form of estrogen.

Recommended Reading:

- ✓ Hypothyroidism The Unsuspected Illness by Dr. Broda Barnes
- ✓ Wilson's Thyroid Syndrome Denis Wilson MD
- ✓ The Thyroid Solution by Ridha Arem M.D.
- ✓ The Thyroid Support Book by Sara Rosenthal
- ✓ Dr. Abraham's articles www.optimox.com
- ✓ Iodine : Why you Need It, Why You Can't Live Without It by David Brownstein M.D.

New on my Website:

Check out my new recipes for Gazpacho and Peanut Sauce with Rice Noodles.

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