

## THYROID

Thyroid hormone is a metabolic hormone secreted by the thyroid gland. It regulates temperature, metabolism, and cerebral function, which results in increased energy, temperature, and warmth. It increases fat breakdown resulting in weight loss as well as lower cholesterol. It protects against cardiovascular disease by lowering cholesterol. It improves cerebral metabolism and prevents cognitive impairment. It relieves symptoms of thin, sparse hair, dry skin, and thin nails. Thyroid effects every cell in the body.

People who suffer from low thyroid (hypothyroid) tend to experience fatigue and low energy, slowness in thinking (brain fog) and actions, forgetfulness, mental confusion, depression, arthritis-like pain and susceptibility to colds and infections. Thyroid production declines with age, similar to other hormones. This is not considered to be true hypothyroid but rather a thyroid insufficiency, which has in the past been thought to not require hormone replacement. Research has proven that improving thyroid levels will alleviate many of the symptoms of thyroid insufficiency and allow our system to function more effectively and efficiently.

Thyroid hormone initially is produced in the thyroid gland as T-4. Once in the body, this circulating T-4 is converted to the active form of thyroid called T-3. As we age, this conversion becomes less effective. In addition, the production of T-4 also diminishes thereby resulting in less stimulation of the cells. Our body needs thyroid hormone for metabolism. If metabolism is low due to inadequate supply of thyroid hormone it will adversely effect every system in the body. We will have less energy as well of symptoms of low thyroid. In addition, the conversion of T-4 to the active form of T-3 also diminishes, resulting in less stimulation of the cells. Mitochondria need thyroid hormone to burn oxygen and produce ATP (fuel that runs the body). If the mitochondria are weakened due to an inadequate supply of thyroid hormone, then we will not be able to burn up proper amounts of oxygen thereby giving us less energy and symptoms of thyroid insufficiency. In addition, we will be unable to keep up mentally and physically as we used to. Also our immune system becomes weaker and less effective. Health care providers have been hesitant to supplement thyroid hormones largely due to a lack of understanding of the importance of optimal thyroid levels and the relationship to improving quality of life.

Many people go to the doctor for complaints of fatigue, lack of energy, weight gain, and other symptoms of low thyroid. These patients are usually told there is no problem with their thyroid because their tests are "normal." Patients seem to know there is a problem with their thyroid, but physicians refuse to acknowledge this. Many patients treated with synthetic T-4 products (Synthroid) will still experience hypothyroid symptoms even though the lab test values appear normal to the physician. This is because a physician tends to rely on one thyroid test, the TSH (thyroid stimulating hormone); which is an indirect measurement of thyroid function. The new paradigm is to measure the free hormones in our body, which is the Free T-3 level. The free hormones are the active hormones and are a more accurate indication of the body's metabolism of the hormone. Correcting these deficiencies of thyroid hormone to optimal levels with natural thyroid results in optimal blood levels, improved metabolism, and resolution of symptoms. Even though thyroid levels may vary, symptoms may not improve until optimal levels are reached (levels similar to our younger years). This is a concept not understood by most physicians, yet wholeheartedly embraced by patients.

Just because lab values fall within a normal range does not mean the levels are optimal or the best they can be. We believe there is room for improvement. Normal levels for a test are an average for the population. People might be low or high and this determines normal levels. But normal for a middle-aged person is low in comparison to a younger person. So a middle-aged level is just as low as everyone else at that age, rather than optimal for a younger person. Physicians call it "normal for your age." Patients call it feeling lousy for your age. By optimizing thyroid levels, symptoms of low thyroid can be alleviated and health benefits assured.

Thyroid hormone in higher doses has been shown to be an effective treatment of chronic fatigue syndrome (CFS). It helps patients with severe bouts of low energy. Treatment with optimal amounts of thyroid is the best way to improve how one feels and functions.

As for those who are taking thyroid, most physicians prescribe only synthetic T-4 medications. Unfortunately, many symptoms persist despite "normal" thyroid levels. The problem is a lack of conversion of T-4 to the active hormone, T-3. This is commonly seen in patients taking synthetic T-4 thyroid hormone. Due to inadequate conversion of T-4 to T-3, patients frequently experience low thyroid symptoms even though their doctors report "normal" TSH and T-4 levels. By using a combination of both T-3 and T-4 in a natural form, optimal levels of T-3 are obtained. A recent study in the NEJM proved that the synthetic T-4 by itself did not eliminate symptoms. It was only the combination of T-4 and T-3 together that resulted in clinical improvement and resolution of symptoms. We find the synthetic thyroid (T-4) replacements are not as effective as the natural replacements, which mimic the hormone naturally produced by the body. Natural thyroid with T-3 is the only way to optimize all thyroid measurement levels. Patients who switch from the synthetic to the natural usually notice an improvement in their symptoms. In spite of the evidence that natural thyroid is much more efficacious, physicians will often only prescribe the T-4 due to drug company influence and habit.

Thin hair, brittle nails, dry skin are all related to low thyroid. Many women who suffer from hair loss and thin hair are usually told by their physicians there is nothing that can be done. In spite of normal thyroid tests, women can often stop hair loss, increase hair growth, and increase hair thickness by optimizing their thyroid levels. All hormones are beneficial; low levels are detrimental.