

FEATURED ARTICLE



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STRESS, DIET, TOXINS AND THEIR EFFECT ON THE THYROID

Many patients come to me feeling exhausted and having difficulty losing weight. Low thyroid is often the cause of these issues, but is improperly diagnosed. Stress and general toxicity has a great impact on the function of the thyroid and its hormones and is often the cause of thyroid deficiency.

The thyroid is an endocrine organ that produces levothyroxine or T4, an inactive hormone that needs conversion to work for energy. This hormone travels through our blood stream to our tissues and organs. Once it reaches the cells, T4 loses iodine via an enzyme and becomes an active form called liothyronine or T3. When under a significant amount of stress, or other factors are inhibiting the function of the enzyme producing active T3, a secondary version of T3 called reverse T3 is formed. The production of this form of thyroid can lead to a form of hypothyroidism that often goes undiagnosed.

Symptoms of low thyroid are many and may include: persistent fatigue particularly on waking, cold extremities, cold intolerance, hair loss, headaches, migraines, poor concentration and memory, constipation, reactive hypoglycemia, low libido, weight gain, muscle stiffness, arthritis and general feeling of depression/malaise. Many people exhibit one or many of these symptoms but when tested through regular blood work, thyroid testing (TSH) often comes up normal. Too often, TSH is considered the best way of diagnosing low thyroid, and our actual thyroid hormones are ignored. Testing TSH does not give the full picture of how our thyroid hormones are working for us. It is important to also test for T4, T3 and reverse T3 (RT3). When RT3 is elevated, our metabolism acts as if there was too little thyroid hormone, which is

hypothyroidism.

Under stress, excess cortisol can cause immune suppression, elevated blood sugars, insulin resistance, abdominal adiposity, hypertension, memory impairment, and impaired conversion of T4 to T3. Our system goes into conservation mode. This results in a down regulation of one enzyme and RT3 becomes elevated. A simple blood test for RT3 can determine if this is the cause of hypothyroid symptoms.

Other factors that inhibit the production of active T3 hormone are selenium deficiency, deficient protein, excess sugar, chronic illness, compromised liver or kidney function, heavy metal toxicity (lead, mercury, cadmium), oral contraceptives/excess estrogen and BPA and other organo-toxins.

If stress is the main cause of reverse T3, one can support the adrenals glands with vitamin C, B vitamins and magnesium. Botanical adrenal support can include ashwaganda, licorice, rhodiola, relera. Meditation, yoga and exercise are lifestyle changes that are excellent adrenal regulators.

Thyroid nutrient support includes iron, iodine, tyrosine, zinc, and selenium. Foods high in selenium and zinc include Brazil nuts and pumpkin seeds. Getting sufficient exercise, testing and removing toxins such as mercury, lead, cadmium, fluoride, bromide, and pesticides, and treating inflammation and food allergies (such as gluten allergies/ceciac disease) are also important thyroid treatment approaches.

Whether it is stress, toxins, nutrient deficiency or chronic illness, the thyroid and the conversion of its hormones can affect how our bodies produce energy and maintain metabolism. By testing appropriately for actual hormones as well as the factors that are inhibiting optimal levels, one can determine how to properly diagnose and treat issues of fatigue and sluggish metabolism.