



Striving to educate our patients to be more *ProActive* towards a healthier lifestyle.



Is your Thyroid Gland functioning properly?

With the New Year upon us, ProAct encourages you to be mindful of your own health. By knowing the risks, symptoms and causes of thyroid disorders, we can strive to be more *ProActive* about our health this the New Year.

The thyroid gland is a small butterfly shaped gland located in the neck that is responsible for producing hormones that impact almost all metabolic processes in your body. It produces triiodothyronine (T3) and thyroxine (T4). These two hormones can influence virtually every organ system, and small imbalances can lead to major changes in your health. The most common thyroid disorders involve the over or underproduction of thyroid hormones. Hypothyroidism or under-active thyroid disease, is a common disorder where the thyroid gland cannot make enough of the thyroid hormone to keep the body functioning properly. Without adequate thyroid levels the body starts to slow down, lose energy and your metabolism becomes sluggish. Hyperthyroidism is a condition where the thyroid gland is overactive, which results in higher levels of thyroid hormones than your body needs. Initially your metabolism will speed up, however over time the body begins to strain from the overwhelming levels of thyroid hormone and can begin to break down.

Causes:

There are numerous factors that can cause hypothyroidism. The most common cause is Hashimoto's thyroiditis. This is an inflammation of the thyroid gland, which is considered an autoimmune disorder. With this disorder, the body will produce antibodies that will attack and destroy the thyroid gland. Other causes of hypothyroidism are radiation therapy, thyroid surgery, low iodine levels, or use of certain medications (Lithium, Amiodarone, Interferon)

Hyperthyroidism is most commonly caused by a condition called Graves' disease. Graves' disease causes antibodies in the blood to over-stimulate the thyroid gland, causing the gland to grow and secrete higher levels of thyroid hormone. Another condition that can lead to hyperthyroidism is a thyroid goiter, characterized by nodules or lumps on the thyroid gland that can cause an increase production of thyroid hormones. Thyroiditis, or inflammation of the thyroid gland, can result in temporary increases in thyroid levels and symptoms generally resolve over time.

Symptoms:

Symptoms of hypothyroidism can often be confused with symptoms associated with other disorders. Symptoms including extreme sleepiness, low body temperature, unexplained weight gain, slow heart rate, fatigue, and depression can mimic other common disorders. If you are experiencing the above

symptoms for an extended period of time it would be wise to contact your primary care physician. A simple blood test can determine if your thyroid levels are outside of the normal ranges.

Hyperthyroidism is most commonly diagnosed by a rapid pulse or an enlarged thyroid gland, which can be caught during a physical exam performed by your physician. Other common symptoms include the presence of moist smooth skin, a tremor of your fingertips, insomnia, hyperactivity, excessive sweating, and heart palpitations. Graves' disease is often characterized by "exophthalmos" or bulging of the eyes. Again, a simple blood test measuring your thyroxine (T4), triiodothyronine (T3), and thyroid-stimulating hormone (TSH) can confirm the presence of either hypo or hyperthyroidism.

Treatment:

If you are diagnosed with hypo or hyperthyroidism your doctor will prescribe an appropriate medication to help regulate your thyroid levels. Routine blood tests to check thyroid hormone levels should be scheduled, and adjustments to your medication regimen can be made to keep you within normal ranges.

Medications:

Synthroid (Levothyroxine): Levothyroxine is a synthetically prepared isomer of thyroxine (T4), which is a hormone secreted by the thyroid gland. Levothyroxine is indicated for the treatment of primary, secondary, and tertiary hypothyroidism. It is the preferred treatment option because the hormonal content is standardized and the effects of the drug are more predictable.

Cytomel (Liothyronine): Liothyronine is a synthetic version of triiodothyronine (T3). Liothyronine has a much faster onset of action than levothyroxine due to the fact that it is already in its active form and does not need to be converted. Levothyroxine needs to be converted from T4 to its active T3 form to elicit an effect.

Armour Thyroid, Nature Thyroid, Westroid (Desiccated Thyroid): Desiccated thyroid is a naturally occurring thyroid hormone derived from the thyroid glands of pigs. Unlike synthetic versions, desiccated thyroid contains both T3 and T4. There are also larger variations in the T3 and T4 content compared to the available synthetic versions.

Tapazole (Methimazole): Methimazole is an anti-thyroid agent used to treat hyperthyroidism and Graves' disease. It decreases levels of thyroxine (T4) and triiodothyronine (T3) released from the thyroid gland by disrupting the initial step in the production of these hormones.

With regular visits to your doctor and blood tests, thyroid hormones can be regulated to healthy levels.

Wishing you a Happy and Healthy New Year.

-Your ProAct Team

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