

Hyperthyroidism

Savannah Tilton
Beal College
ZO - 115 Anatomy and Physiology
Faith Hamer
August 22th 20

Hyperthyroidism

Hyperthyroidism is any condition where there is too much thyroid hormone being produced in the body. Having this disease means that you have an overactive thyroid. Another term that people might use for this disease is thyrotoxicosis, which means that the level of thyroid hormone is too high.

Not many people are aware of how much your thyroid gland can affect your body. The thyroid is the butterfly-shaped gland of the endocrine system that is located in the front of the neck. The thyroid's job is to create hormones that every tissue in the body needs. Thyroid hormone is such an important thing we need as humans because it helps the body use energy, stay warm, and helps the other organs in our work efficiently. This endocrine gland is just one part of our bodies that hyperthyroidism affects

The Cause Of Hyperthyroidism

“The most common cause (in more than 70% of people) is overproduction of thyroid hormone by the entire thyroid gland. This condition is also known as Graves' disease. Graves' disease is caused by antibodies in the blood that turn on the thyroid and cause it to grow and secrete too much thyroid hormone. This type of hyperthyroidism tends to run in families and it occurs more often in young women. Little is known about why specific individuals get this disease. Another type of hyperthyroidism is characterized by one or more nodules or lumps in the thyroid that may gradually grow and increase their activity so that the total output of the thyroid hormone into the blood is greater than normal. This condition is known as toxic nodular or multinodular goiter.”

(Hyperthyroidism)

There are two other types of hyperthyroidism that can occur. Thyroiditis is caused by a problem with the immune system or a viral infection that can make it so the thyroid gland leaks thyroid hormone that the body has stored. Symptoms like this can also be caused by taking too much of a thyroid hormone that is given to people you suffer from hypothyroidism. Hypothyroidism is when the thyroid gland doesn't produce enough thyroid hormone, so patients that have this condition need to take pills that have thyroid hormone inside them.

Signs and Symptoms

Thyroid hormone plays such a large roll in helping control the pace of our body's metabolism. When there is an overproduction of thyroid hormone, every function in the body tends to speed up. This increase can in metabolism can cause nervousness, irritability, increased sweating, heart racing, hand tremors, anxiety, difficulty sleeping, thinning of your skin, fine brittle hair, and weakness in your muscles. Most people with hyperthyroidism experience weight loss and sometimes find it hard to gain weight. Having this condition causes your metabolism to increase so much that your body begins to break down, which causes you to become very tired. Being overly tired is a very common symptom of hyperthyroidism. Some patients who suffer from Graves' disease (which is a type of hyperthyroidism) can have symptoms such as enlarged bulging eyes along with swelling right above the thyroid gland, which is called a goiter.

Body Systems Affected

When it comes to hyperthyroidism, this disease affects a lot of the human body. The reasoning is because it controls the speed of our metabolism, all the way down to the molecular level. One of the most common symptoms has to do with our hearts. Patients that have hyperthyroidism are

known to have elevated heart rates, heart palpitations, and heart racing. All of these symptoms take a toll on your body after a while and wear it down.

Not many people who have hyperthyroidism know about how it affects their muscles and bones. Some patients experience Bursitis, which is inflammation of a bursa. Bursae are found in the elbows, knees, and shoulders. Hyperthyroidism can also cause your eyes to swell and bulge.

Having hyperthyroidism myself, I have experienced many of these symptoms. One that not a lot of people talk about is the skin rash you can develop. When your thyroid is overactive and causing processes to speed up, this can sometimes cause an overproduction of cells. An overproduction of skin cells can cause small yet sometimes large red rashes on your arms and legs. These rashes can occur anywhere on your body but are most common on your arms and legs.

Doctors Who Can Help

People who don't have severe symptoms normally start out by seeing their family physician, who can then direct them to the specialist they think you will need to see to receive more in-depth care. An Endocrinologist is the main specialist that people with hyperthyroidism have to see in order to receive proper diagnoses and treatment. These doctors may consult other types of specialists such as Lipidologists, who specializes in the prevention of dyslipidemia or other related metabolic diseases.

Diagnostic Tests

One of the first things the doctor is going to check when looking to see if you have hyperthyroidism is to check your thyroid. A doctor will start by checking with their hands to see if they can feel any abnormalities of the area around your thyroid. The doctor will usually then talk to you about symptoms you have been experiencing and if you have anyone in your family that has been diagnosed with hyperthyroidism. Following the first check-up, they will order blood work. The blood work will look at the levels of the specific thyroid hormones. Doctors can also order x-rays, ultrasounds, and MRIs to see if there are any nodules on your thyroid that might be affecting the amount of hormones secreted.

Treatment

Radioactive iodine - This is taken by mouth and absorbed by the thyroid gland. Once absorbed it causes the thyroid gland to shrink. When radioactive iodine is taken, symptoms will start to subside within several months. With this treatment, it's possible to make your thyroid slow down too much and become underactive(hypothyroidism). If the decrease is significant enough the patient may have to take medication to replace the hormone thyroxine.

Anti-thyroid Medications - These medications help gradually reduce the symptoms of hyperthyroidism by slowing down the production of hormones by the thyroid gland. This medication is usually found in a pill form and you have to take it on an empty stomach in the morning in order for your body to properly absorb the medication. Symptoms usually begin to improve within several weeks to months, but treatment with anti-thyroid medications typically continues at least a year and often longer.

Beta-Blocker - This type of medication is usually used to treat high blood pressure and don't affect thyroid levels, but it can ease symptoms of hyperthyroidism, such as tremors, rapid heart rate, and heart palpitations.

Surgery - For more severe cases of both hyperthyroidism and hypothyroidism, you can have either part or all of your thyroid removed. Some of the reason for having surgery is that a patient is pregnant, is unable to tolerate anti-thyroid drugs, or can't have radioactive iodine therapy.

Prognosis

“If you receive definitive treatment for your Graves' hyperthyroidism (such as radioactive iodine or surgery), you will eventually develop hypothyroidism (underactive thyroid). Even if you are treated with antithyroid drugs alone, hypothyroidism can still occur. Your doctor will check your thyroid function tests frequently to assess thyroid function following treatment. When hypothyroidism occurs, you will need to take a thyroid hormone tablet once a day at the right dose.” (Hyperthyroidism)

Works Cited:

Hyperthyroidism. (n.d.). Retrieved August 23, 2020, from <https://www.thyroid.org/hyperthyroidism/>

Hyperthyroidism (overactive thyroid). (2020, January 07). Retrieved August 23, 2020, from <https://www.mayoclinic.org/diseases-conditions/hyperthyroidism/diagnosis-treatment/drc-20373665>