



Understanding Goiter

Patient Education Sheet

This sheet focuses on the signs, symptoms, and diagnosis of, and treatment options for, goiters.

Definition of Goiter

- A goiter is an enlarged thyroid gland. It may be enlarged for several reasons, and it may shrink back to normal by itself. Although a goiter is usually a reliable sign of a thyroid disorder, it does not always need to be treated.

Causes of Goiter

- The most common cause of a goiter is a lack of iodine in the diet. Iodine is an essential part of the process of making thyroid hormone. The thyroid gland becomes enlarged when thyroid-stimulating hormone (TSH), secreted by the pituitary gland, tries to stimulate it to produce more thyroid hormone. If the thyroid cannot produce enough thyroid hormone, it may become enlarged over time. In the United States, iodine has been added to table salt, so the United States has nearly eliminated thyroid disorders caused by lack of iodine.
- Hypothyroidism (too little thyroid hormone), hyperthyroidism (too much thyroid hormone), thyroid nodules, or inflammation of the thyroid gland can also cause a goiter.
- Thyroid nodules are lumps in the thyroid gland that may overproduce thyroid hormone. A person may have one nodule, called a solitary nodule, or several nodules, which are called a multinodular goiter. Thyroid nodules are often harmless, rarely cancerous, and tend to run in families. Sometimes, nodules produce too much thyroid hormone and cause hyperthyroidism. There are several treatment options available, but close observation without treatment is sometimes preferred.
- Inflammation of the thyroid gland may be caused by infection and can cause damage to the thyroid tissue.

The Thyroid Gland—The Basics

- The thyroid is a butterfly-shaped gland located at the base of the neck that lies on either side of the windpipe. It produces and releases thyroid hormone.
- Thyroid hormone affects every cell in the body and controls many of the body's functions.
- The amount of thyroid hormone made by the thyroid gland is regulated by the pituitary gland and the hypothalamus in the brain.
- The pituitary gland releases TSH, which signals the thyroid to produce more thyroid hormone. When the pituitary gland senses that there is the right amount of thyroid hormone in the body, it will decrease thyroid hormone production.
- Physicians can measure the health of the thyroid gland by measuring levels of TSH.

- Too little thyroid hormone production causes a condition known as hypothyroidism; too much thyroid hormone production causes a condition known as hyperthyroidism.

Likelihood of Developing a Thyroid Disorder

- Some people are more likely than others to develop thyroid disorders, including women (especially those age 30 and older), people with a family history of thyroid disease, and people with autoimmune conditions, such as Addison disease, type 1 diabetes, pernicious anemia, rheumatoid arthritis, or lupus.

Signs and Symptoms of a Goiter

- The development of a goiter may make it look like a person's neck has gotten wider; also, there may be more obvious swelling on one side of the neck.
- Other signs and symptoms of a goiter include visible enlargement, throat pain with or without swelling, hoarseness, or difficulty or discomfort in swallowing.
- If the goiter is caused by an underlying thyroid disorder, a person may experience the signs and symptoms of that disorder.

Diagnosing Goiter and Thyroid Disorders

- A physical diagnosis will include an examination of the thyroid gland. The physician will press on the area of the neck where the thyroid is located to determine whether a goiter or thyroid nodules are present.
- Laboratory tests for thyroid disorders include measuring thyroid hormone levels. However, the best test for detecting thyroid disorders is the TSH test. The TSH test can accurately determine the amount of thyroid being produced in the body and confirm the presence of hypothyroidism or hyperthyroidism.
- There are also a number of tests available to evaluate nodules, including thyroid scans, ultrasound, and fine-needle biopsy.

Treatment Options for a Goiter

- If the goiter is caused by hypothyroidism or hyperthyroidism, the physician will treat the underlying disorder, which will reduce the goiter.
- If the goiter is noncancerous, a patient may be given thyroid hormone replacement therapy, which may shrink the goiter.
- Another treatment option is surgical removal of the goiter if it is putting pressure on the throat or causing cosmetic concerns.

More Information

- Patients who have further questions should contact their physician.