

Goiter (enlarged thyroid)

Definition of thyroid gland:

The thyroid gland is a butterfly-shaped gland located at the base of the neck. In certain cases, the thyroid gland may get swollen and become enlarged. This abnormal enlargement of the thyroid gland is known as a goiter.

A large goiter can be painful resulting in symptoms such as coughing and difficulty breathing or swallowing.

The most common cause of goiters is iodine deficiency due to insufficient dietary intake of iodine.

A goiter is more often due to the over- or underproduction of thyroid hormones or to nodules that develop on the gland itself.

Symptoms:

Not all goiters cause signs and symptoms. When signs and symptoms do occur they may include:

- A visible swelling at the base of the neck that may be particularly obvious when you shave or put on makeup .
- A tight feeling in the throat .
- Coughing.
- Hoarseness.
- Difficulty swallowing.
- Difficulty breathing.

A number of factors can cause the thyroid gland to enlarge. Among the most common are:

- Iodine deficiency.
- Graves' disease.
- Hashimoto's disease.
- Multinodular goiter.
- Solitary thyroid nodules.
- Thyroid cancer.
- Pregnancy.
- Thyroiditis.

Goiter Treatment:

Goiter treatment depends on the size of the goiter, the symptoms, and the underlying causes. If the goiter is small and doesn't cause problems, then it might not require treatment, and the doctor may simply observe the progression of the case.

There are three ways to treat goiter:

- **Medications:**

If the patient has hypothyroidism, thyroid hormone replacement with levothyroxine will resolve the symptoms of hypothyroidism as well as slow the release of thyroid-stimulating hormone from your pituitary gland, often decreasing the size of the goiter. For inflammation of the thyroid gland, the doctor may suggest aspirin or a corticosteroid medication to treat the inflammation.
- **Surgery:**

Removing all or part of the thyroid gland (total or partial thyroidectomy) is an option if the patient has a large goiter that causes difficulty breathing or swallowing, or in some cases, if the patient has a nodular goiter causing hyperthyroidism. Surgery is also the treatment for

thyroid cancer. The patient may need to take levothyroxine after surgery, depending on how much of the gland is removed.

- **Radioactive iodine:**

In some cases, radioactive iodine is used to treat an overactive thyroid gland. The radioactive iodine is taken orally and reaches the thyroid gland through the bloodstream, destroying thyroid cells. The treatment results in diminished size of the goiter, but eventually may also cause an underactive thyroid gland. In such cases patients may also need to take levothyroxine for the rest of their lives.

Goiters can affect anyone. They may be present at birth and occur at any time throughout life. Goiters are more common after age 50.

Goiter diagnosis and tests:

Some common risk factors for goiters include:

- **A lack of dietary iodine:**

People living in areas where iodine is in short supply and who don't have access to iodine supplements are at high risk of goiters.

- **Gender:**

Women are more prone to thyroid disorders than men, so they're also more likely to develop goiters.

- **Age:**

The risk of developing goiters increases after the age of 50.

- **Medical History:**

A personal or family history of autoimmune disease increases the risk of developing goiters.

- **Pregnancy and menopause:**

Thyroid problems are more likely to occur during pregnancy and menopause.

- **Medications:**

Some medical treatments can increase the risk of goiters, such as

immunosuppressants, antivirals, heart medications and psychiatric drugs.

- **Exposure to radiation:**

The risk of goiters increases if the patient had radiation treatments near the neck or chest area, or if the patient has been exposed to radiation in a nuclear facility, test or accident.

Complications:

Small goiters that don't cause physical or cosmetic problems aren't a cause for concern. But large goiters can make it hard to breathe or swallow and can cause a cough and hoarseness. Goiters that result from other conditions, such as hypothyroidism or hyperthyroidism, can be associated with a number of symptoms, ranging from fatigue and weight gain to unintended weight loss, irritability and trouble sleeping.

Diagnosis and Tests:

The doctor may discover an enlarged thyroid gland simply by feeling your neck and having you swallow during a routine physical exam. In some cases, your doctor may also be able to feel the presence of nodules.

- **A hormone test:**

Blood tests can determine the amount of hormones produced by the thyroid and pituitary glands. If the thyroid is underactive, the level of thyroid hormone will be low. At the same time, the level of thyroid-stimulating hormone (TSH) will be elevated because the pituitary gland tries to stimulate the thyroid gland to produce more thyroid hormones.

- **An antibody test:**

Some causes of a goiter involve the production of abnormal antibodies. A blood test may confirm the presence of these antibodies.

- **Ultrasonography:**

A wand-like device (transducer) is held over the neck. Sound waves



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bounce through the neck and back, forming images on a computer screen. The images reveal the size of the thyroid gland and whether the gland contains nodules that the doctor may not have been able to feel.

- **A thyroid scan:**

During a thyroid scan, the patient will have a radioactive isotope injected into the vein on the inside of their elbow. The patient then lies on a table with their head stretched backward while a special camera produces an image of the thyroid on a computer screen. This scan provides information about the nature and size of the thyroid, but it is more invasive, time-consuming and expensive than an ultrasound test.

Clinical Health Education Department

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