

## Thyroid nodule

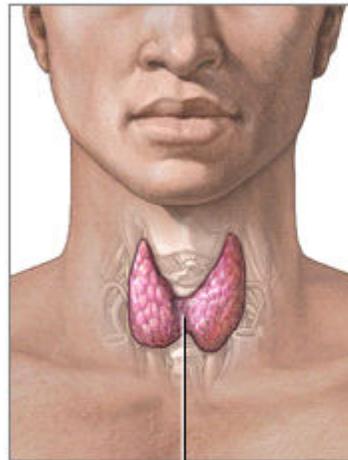
### Definition

A thyroid nodule is a growth (lump) in the thyroid gland. The thyroid gland is located at the front of the neck, just above where your collarbones meet in the middle.

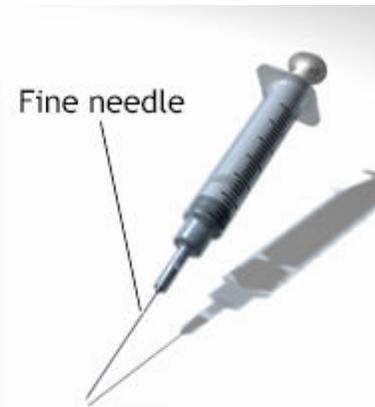
### Causes

Thyroid nodules are caused by an overgrowth of cells in the thyroid gland. These growths can be:

- Not cancer (benign), thyroid cancer (malignant), or very rarely, other cancers or infections
- Fluid-filled (cysts)
- One nodule or a group of small nodules
- Producing thyroid hormones (hot nodule) or not making thyroid hormones (cold nodule)



Thyroid gland



Fine needle

ADAM.

Thyroid nodules are very common. They occur more often in women than in men. A person's chance of getting a thyroid nodule increases with age.

Only a few thyroid nodules are due to thyroid cancer. A thyroid nodule is more likely to be cancer if you:

- Have a hard nodule
- Have a nodule that is stuck to nearby structures
- Have a family history of thyroid cancer
- Have noticed a change in your voice
- Are younger than 20 or older than 70
- Have a history of radiation exposure to the head or neck
- Are male

Causes of thyroid nodules are not always found, but can include:

gland)

- Lack of iodine in the diet

## Symptoms

Most thyroid nodules do not cause symptoms.

Large nodules can press against other structures in the neck. This can cause symptoms such as:

- A visible goiter (enlarged thyroid gland)
- Hoarseness or changing voice
- Pain in the neck
- Problems breathing, especially when lying down flat
- Problems swallowing food

Nodules that produce thyroid hormones will likely cause symptoms of overactive thyroid gland, including:

- Warm, sweaty skin
- Fast pulse and palpitations
- Increased appetite
- Nervousness or anxiety
- Restlessness or poor sleep
- Skin blushing or flushing
- More frequent bowel movements
- Tremor
- Weight loss
- Irregular or lighter menstrual periods

Older people with a nodule that produces too much thyroid hormone may have only vague symptoms, including:

- Fatigue
- Palpitations
- Chest pain
- Memory loss

Thyroid nodules are sometimes found in people who have Hashimoto disease. This may cause symptoms of an underactive thyroid gland, such as:

- Constipation
- Dry skin
- Face swelling

- Feeling cold when other people do not
- Weight gain
- Irregular menstrual periods

Very often, nodules produce no symptoms. Health care providers often find thyroid nodules during a routine physical exam or imaging tests that are done for another reason. A few people have thyroid nodules that are big enough that they notice the nodule on their own and ask a provider to examine their neck.

### Exams and Tests

If a provider finds a nodule or you have symptoms of a nodule, the following tests may be done:

- TSH level and other thyroid blood tests
- Thyroid ultrasound
- Thyroid scan (nuclear medicine)
- Fine needle aspiration biopsy of the nodule or of multiple nodules (sometimes with special genetic testing on the nodule tissue)

### Treatment

Your provider may recommend surgery to remove all or part of your thyroid gland if the nodule is:

- Due to thyroid cancer
- Causing symptoms such as swallowing or breathing problems
- If the fine needle biopsy is inconclusive, and your provider can't tell whether the nodule is a cancer
- Making too much thyroid hormone

People with nodules that are making too much thyroid hormone may be treated with radioiodine therapy. This reduces the size and activity of the nodule. Pregnant women or women who are still breastfeeding are not given this treatment.

Both surgery to remove thyroid gland tissue and radioactive iodine treatment can cause lifelong hypothyroidism (underactive thyroid). This condition needs to be treated with thyroid hormone replacement (a daily medicine).

For noncancerous nodules that do not cause symptoms and are not growing, the best treatment may be:

- Careful follow-up with a physical exam and ultrasound
- A thyroid biopsy repeated 6 to 12 months after diagnosis, especially if the nodule has grown

Another possible treatment is an ethanol (alcohol) injection into the nodule to shrink it.

Follow-up exams are enough.

The outlook for thyroid cancer depends on the type of cancer. For most common kinds of thyroid cancer, the outlook is very good after treatment.

### When to Contact a Medical Professional

Contact your provider if you feel or see a lump in your neck, or if you have any symptoms of a thyroid nodule.

If you have been exposed to radiation in the face or neck area, contact your provider. A neck ultrasound can be done to look for thyroid nodules.

Thyroid tumor - nodule; Thyroid adenoma - nodule; Thyroid carcinoma - nodule; Thyroid cancer - nodule; Thyroid incidentaloma; Hot nodule; Cold nodule; Thyrotoxicosis - nodule; Hyperthyroidism - nodule

---

Review Date: May 13, 2020.

Reviewed By: Brent Wisse, MD, board certified in Metabolism/Endocrinology, Seattle, WA. Also reviewed by David Zieve, MD, MHA, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.



A.D.A.M., Inc. is accredited by URAC, for Health Content Provider ([www.urac.org](http://www.urac.org)). URAC's accreditation program is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s editorial policy, editorial process and privacy policy. A.D.A.M. is also a founding member of Hi-Ethics. This site complies with the HONcode standard for trustworthy health information: [verify here](#).

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed medical professional should be consulted for diagnosis and treatment of any and all medical conditions. Call 911 for all medical emergencies. Links to other sites are provided for information only -- they do not constitute endorsements of those other sites. © 1997-2022 A.D.A.M., Inc. Any duplication or distribution of the information contained herein is strictly prohibited.

