

Hypothyroidism

Definition

Hypothyroidism is a condition in which the thyroid gland does not make enough thyroid hormone. This condition is often called underactive thyroid.

Causes

The thyroid gland is an important organ of the endocrine system. It is located at the front of the neck, just above where your collarbones meet. The thyroid makes hormones that control the way every cell in the body uses energy. This process is called metabolism.

Hypothyroidism is more common in women and people over age 50.

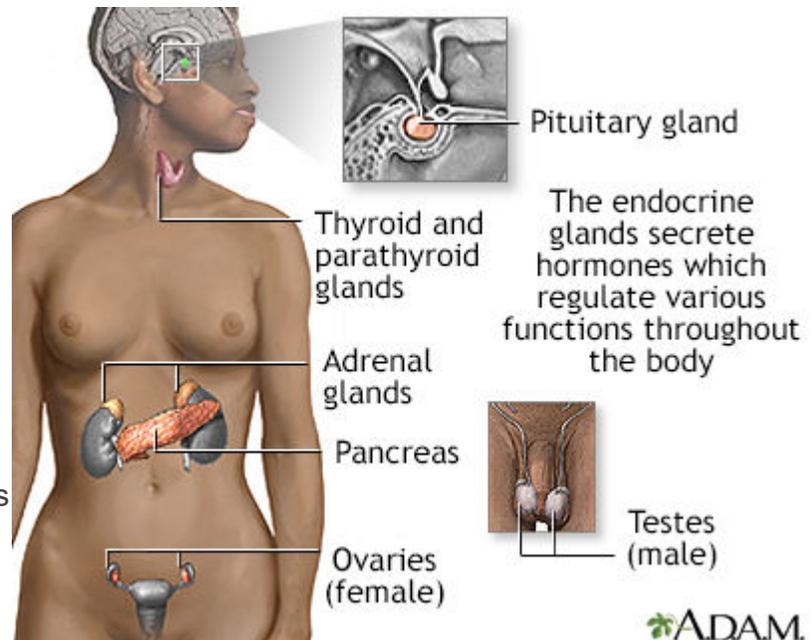
The most common cause of hypothyroidism is thyroiditis. Swelling and inflammation damage the thyroid gland's cells.

Causes of this problem include:

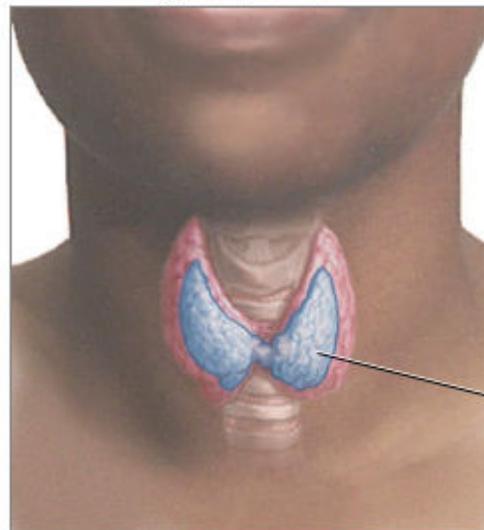
- The immune system attacking the thyroid gland
- Viral infections (common cold) or other respiratory infections
- Pregnancy (often called postpartum thyroiditis)

Other causes of hypothyroidism include:

- Certain medicines, such as lithium and



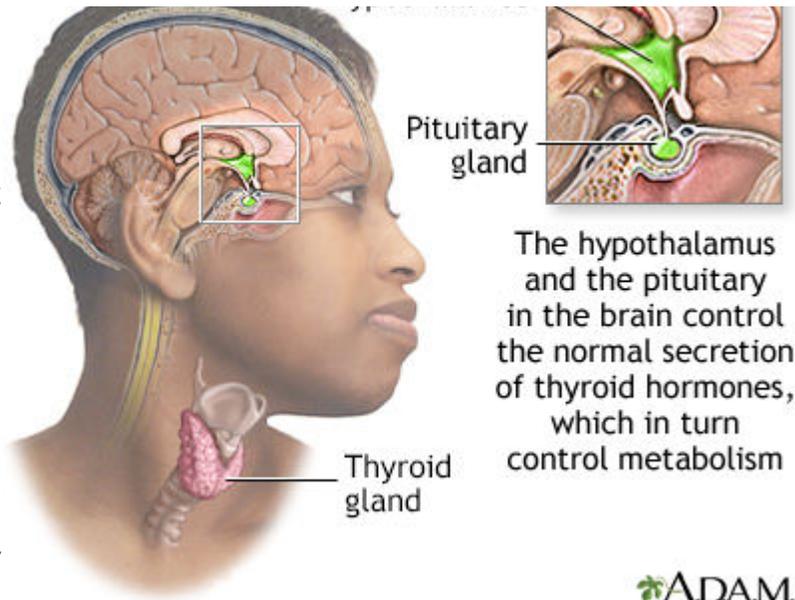
Hypothyroidism



In hypothyroidism, levels of thyroid hormone are low. The thyroid gland can be small or large (goiter), depending on the cause of the disorder

ADAM.

- types of chemotherapy
- Congenital (birth) defects
 - Radiation treatments to the neck or brain to treat different cancers
 - Radioactive iodine used to treat an overactive thyroid gland
 - Surgical removal of part or all of the thyroid gland
 - Sheehan syndrome, a condition that may occur in a woman who bleeds severely during pregnancy or childbirth and causes the destruction of the pituitary gland
 - Pituitary tumor or pituitary surgery



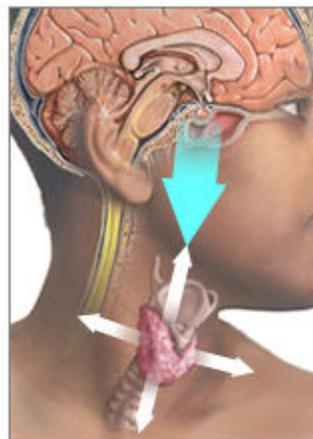
Symptoms

Early symptoms:

- Hard stools or constipation
- Feeling cold (wearing a sweater when others are wearing a t-shirt)
- Fatigue or feeling slowed down
- Heavier and irregular menstrual periods
- Joint or muscle pain
- Paleness or dry skin
- Sadness or depression
- Thin, brittle hair or fingernails
- Weakness
- Weight gain

Late symptoms, if untreated:

- Decreased taste and smell



Primary hypothyroidism: thyroid can't produce amount of hormones pituitary calls for



Secondary hypothyroidism: thyroid isn't being stimulated by pituitary to produce hormones

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- Puffy face, hands, and feet
- Slow speech
- Thickening of the skin
- Thinning of eyebrows
- Low body temperature
- Slow heart rate

Exams and Tests

The health care provider will do a physical exam and may find that your thyroid gland is enlarged. Sometimes, the gland is normal size or smaller-than-normal. The exam may also reveal:

- High diastolic blood pressure (second number)
- Thin brittle hair
- Coarse features of the face
- Pale or dry skin, which may be cool to the touch
- Reflexes that are abnormal (delayed relaxation)
- Swelling of the arms and legs

Blood tests are also ordered to measure your thyroid hormones TSH and T4.

You may also have tests to check:

- Cholesterol levels
- Complete blood count (CBC)
- Liver enzymes
- Prolactin
- Sodium
- Cortisol

Treatment

Treatment is aimed at replacing the thyroid hormone you are lacking.

Levothyroxine is the most commonly used medicine:

- You will be prescribed the lowest dose possible that relieves your symptoms and brings your blood hormone levels back to normal.
- If you have heart disease or you are older, your provider may start you on a very small dose.
- Most people with an underactive thyroid will need to take this medicine for life.
- Levothyroxine is usually a pill, but some people with very severe hypothyroidism first need to be treated in the hospital with intravenous levothyroxine (given through a vein).

to 3 months. After that, your thyroid hormone levels should be monitored at least once every year.

When you are taking thyroid medicine, be aware of the following:

- Do not stop taking the medicine, even when you feel better. Continue taking it exactly as your provider prescribed.
- If you change brands of thyroid medicine, let your provider know. Your levels may need to be checked.
- What you eat can change the way your body absorbs thyroid medicine. Talk with your provider if you are eating a lot of soy products or are on a high-fiber diet.
- Thyroid medicine works best on an empty stomach and when taken 1 hour before any other medicines. Ask your provider if you should take your medicine at bedtime. Taking it at bedtime may allow your body to absorb the medicine better than taking it in the daytime.
- Wait at least 4 hours after taking thyroid hormone before you take fiber supplements, calcium, iron, multivitamins, aluminum hydroxide antacids, colestipol, or medicines that bind bile acids.

While you are taking thyroid replacement therapy, tell your provider if you have any symptoms that suggest your dose is too high, such as:

- Anxiety
- Palpitations
- Rapid weight loss
- Restlessness or shakiness (tremors)
- Sweating

Outlook (Prognosis)

In most cases, thyroid hormone level becomes normal with proper treatment. You will likely take a thyroid hormone medicine for the rest of your life.

Possible Complications

Myxedema crisis (also called myxedema coma), the most severe form of hypothyroidism, is rare. It occurs when thyroid hormone levels get very, very low. The severe hypothyroid crisis is then caused by an infection, illness, exposure to cold, or certain medicines (opiates are a common cause) in people with severe hypothyroidism.

Myxedema crisis is a medical emergency that must be treated in the hospital. Some people may need oxygen, breathing assistance (ventilator), fluid replacement, and intensive-care nursing.

Symptoms and signs of myxedema coma include:

- Below normal body temperature
- Decreased breathing

- Low blood sugar
- Unresponsiveness
- Inappropriate or uncharacteristic moods

People with untreated hypothyroidism are at increased risk of:

- Infection
- Infertility, miscarriage, giving birth to a baby with birth defects
- Heart disease because of higher levels of LDL (bad) cholesterol
- Heart failure

When to Contact a Medical Professional

Call your provider if you have symptoms of hypothyroidism.

If you are being treated for hypothyroidism, call your provider if:

- You develop chest pain or rapid heartbeat
- You have an infection
- Your symptoms get worse or do not improve with treatment
- You develop new symptoms

Myxedema; Adult hypothyroidism; Underactive thyroid; Goiter - hypothyroidism; Thyroiditis - hypothyroidism; Thyroid hormone - hypothyroidism

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