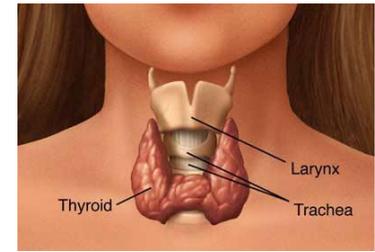


Thyroid Disorder - Hypothyroidism

What is the thyroid?

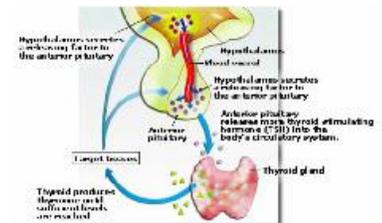
The thyroid gland is a butterfly-shaped endocrine gland that is normally located in the lower front of the neck. The thyroid glands secrete thyroxine, also called T₄ and triiodothyronine, T₃.

The thyroid gland produces hormones that influence virtually every organ system in the body. Thyroid hormones (T₄ and T₃) are carried through the blood to every tissue in the body. They are essential for normal growth and development. These hormones are critical for maintaining your body temperature and controlling heart rate, appetite and digestive tract function. Low level of thyroid hormone can cause you to gain weight, slow down your heartbeat, decrease your body temperature and muscles contraction and can cause constipation.



Thyroxine is converted into triiodothyronine in the liver and other peripheral tissues. It contains four molecules of iodine. Triiodothyronine is the more active form and has three molecules of iodine.

Thyroid hormone secretion is controlled by a feedback mechanism involving the hypothalamus, the anterior pituitary and the thyroid gland. High level of thyroid-stimulation hormone (TSH) means low level of T₄ and T₃ in your blood. TSH signals to your thyroid gland to make thyroid hormone.



What is hypothyroidism?

Hypothyroidism is a condition in which the thyroid gland does not produce sufficient thyroid hormone. Too little of the thyroid hormones slows down the chemical reactions in the body causing physical and mental changes.

How does hypothyroidism occur?

Causes of hypothyroidism include:

- ★ **Hashimoto's disease:** An autoimmune disorder. This condition is an inflammation of the thyroid gland
- ★ **Thyroid surgery:** Complete or partial removal of the thyroid gland.
- ★ **Radiation treatment for hyperthyroidism** (an overactive thyroid gland): Radioactivity destroys the glands thus your body will need synthetic thyroid hormone replacement. Individuals who have had X-ray treatment for cancers of the head and neck may develop hypothyroidism.
- ★ **Medications:** A number of medications. Some examples are lithium, amiodarone or too high dosage of anti-thyroid medicine ie. Propylthiouracil or Methimazole.
- ★ **Viruses:** Cause transient hypothyroidism by infecting and causing the thyroid gland to stop producing hormone.
- ★ **Secondary hypothyroidism:** A condition where the pituitary gland fails to stimulate the thyroid enough to meet your body's needs.
- ★ **Iodine deficiency:** A lack of iodine in your diet.
- ★ **Congenital hypothyroidism:** Some are born without the thyroid glands or with glands that cannot produce thyroid hormone

Anyone can have hypothyroidism. It is most common in women over age 50. The risk of development the disorder increases with age.

What are the symptoms?

The insidious slowing of your body's processes can take months therefore making it difficult for you to recognize the disease.

A condition that develops after years of untreated hypothyroidism is called myxedema. Myxedema can cause you to become cold, slows your speech and movement and is associated with a high mortality rate.

How is it diagnosed?

Your healthcare provider will ask about your symptoms and examine you. If the provider suspects that you may have hypothyroidism, you will have blood tests done. These tests will measure the levels of thyroid hormones and your pituitary's thyroid-stimulating hormone (TSH).

How is it treated?

Hypothyroidism is a chronic disease. It is not reversible and requires lifelong thyroid hormone replacement. Your healthcare provider will prescribe synthetic thyroid hormone medication. Most people need only small doses to replace their gland's normal production. After starting treatment, your healthcare provider will repeat the blood tests to be sure you are taking sufficient amount. It may take several weeks to months to find the right dosage for you.

If you are at risk or have coronary artery disease, your provider will prescribe a low dose of hormone tablets initially and increase as needed. Replacing thyroid hormone too quickly can worsen coronary artery disease and can potentially induce a heart attack.

Women prone to osteoporosis may have greater bone loss if they take too much thyroid hormone. For this reasons, your thyroid hormone blood level will be checked periodically to ensure it is within the normal range.

Usually hypothyroidism improves within a week after hormone therapy has begun. Most symptoms go away within a few weeks. Mild hypothyroidism may cause no symptoms. If the disease progresses, it can become disabling over a long time. Untreated hypothyroidism may cause enlargement of the heart leading to cardiovascular complications, slowing of mental processes and eventually loss of consciousness.

What compounding products are available for me to use?

At Inland Compounding, your thyroid medication can be individualized to your needs. We can prepare thyroid hormone medication in various dosage forms and strength including unique delivery mechanisms. Currently, the dosage form available are slow-released capsules in various ratios of T4:T3 and T3 transdermal cream. For additional information, please contact Raylene Mote.

How can I take care of myself?

Individuals with hypothyroidism, especially older adults, sometimes don't seek medical treatment because they don't know that they have a problem. They may accept their symptoms of fatigue, muscle weakness, dry skin, depression, feeling cold and constipation as signs of aging.

When you have hypothyroidism, be sure to:

- ★ Take your medicine
- ★ Report any signs and symptoms of hypothyroidism (dry skin, puffy face, constipation, fatigue)
- ★ Get your thyroid hormone level check periodically
- ★ Keep your follow-up appointments

Where do I find additional resources on thyroid disorders?

- ★ American Thyroid Association 1-800-849-7643 (<http://www.thyroid.org>)
- ★ The Thyroid Society 1-800-THYROID (<http://the-thyroid-society.org/>)
- ★ National Women's Health Resource Center 1-877-986-9472 (<http://www.healthywomen.org/healthtopics/thyroiddisorders>)