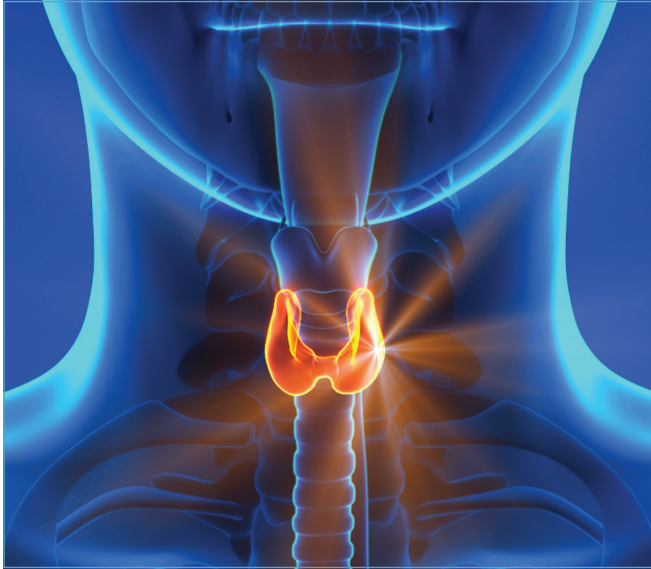


# Hypothyroidism



## What is hypothyroidism?

Hypothyroidism is the name given to the condition that occurs when your thyroid gland is underactive and does not make enough thyroid hormones.

Thyroid hormones keep our metabolism working at the right speed. Every cell in your body relies on them and if your thyroid hormone levels are low it can affect your energy levels. Hyperthyroidism is when you have an overactive thyroid which produces too many thyroid hormones. It is the opposite of hypothyroidism and is not covered here.

Most cases of hypothyroidism are easily treated.

## Where is your thyroid gland?

Your thyroid gland is a small butterfly-shaped organ located in your neck just below your Adam's apple. It extends across both sides of your windpipe.

The pituitary gland, a small peanut-shaped gland at the base of your brain, controls your thyroid gland. When thyroid hormone levels fall too low, the pituitary gland produces thyroid stimulating hormone (TSH) which stimulates the thyroid gland to produce more hormones.

The two main thyroid hormones are T3 (tri-iodothyronine) and T4 (thyroxine). More T4 than T3 is produced; however, T4 is largely inactive and needs to be converted into T3 to stimulate metabolism.

## What causes hypothyroidism?

The most common cause of hypothyroidism is autoimmune thyroiditis (also called Hashimoto's disease), which is when the body's immune system attacks thyroid cells as though they were foreign cells. It is not known what triggers the immune system to do this, but a blood test can detect antibodies against the thyroid circulating in the bloodstream. About one in 10 of all women have these thyroid antibodies and yet most of these patients never develop an underactive gland.

Hypothyroidism may also be caused by cancer radiotherapy, some viral infections, thyroid surgery, iodine deficiency and some medicines (such as amiodarone or lithium). It can be associated with other autoimmune conditions such as type 1 diabetes, rheumatoid arthritis, Addison's disease, and Coeliac disease. People with Down syndrome or Turner's syndrome are more at risk of developing hypothyroidism than people without these conditions. Sometimes treatment for hyperthyroidism can be too effective, resulting in hypothyroidism. Temporary hypothyroidism may also occur in some women after giving birth.

Hypothyroidism is twice as common in women than men and becomes more likely as you age.

## What are the symptoms?

Symptoms of low thyroid hormone levels are often nonspecific and come on gradually. You or your doctor may not notice them initially, and often the condition is picked up first by blood tests.

### Common symptoms of hypothyroidism

- General tiredness or fatigue
- Constipation
- Difficulty concentrating or a poor memory
- Dry, cold and pale skin
- Dry and thinning hair, brittle nails
- Feeling cold most of the time
- Fluid retention causing puffy eyes, face or ankles
- Hoarse or croaky voice
- Irregular menstrual cycles, heavy or longer periods
- Low capacity for exercise
- Low mood or depression
- Muscle and joint aches, pins and needles in the hands
- Weight gain.

## How can my doctor help?

Your doctor can order a blood test to check your thyroid stimulating hormone (TSH) levels and possibly your T4 levels. Other thyroid hormones will be checked by the laboratory if the TSH is abnormal. The results are likely to determine whether your thyroid gland is the cause of your symptoms. If you do not have symptoms, the results can still help your doctor decide if treatment is needed.

Your doctor may also order an antibody test from your blood sample to determine whether autoimmune thyroiditis is behind your low thyroid function.

Infrequently, blood test results may indicate a problem with your pituitary gland or suggest a less common cause for your low thyroid hormone levels. If this is the case, your doctor may refer you to an endocrinologist or another specialist for further tests.

Your cholesterol levels may also be measured because low thyroid hormone levels cause cholesterol levels to rise. High cholesterol levels are a risk factor for heart disease.

### Do I need treatment?

Your test results will show if your thyroid hormone levels are low or within the normal range. Your doctor will take into account your symptoms and other health problems that you may have before having a discussion with you about treatment.

Even if you have a low thyroid hormone level but no symptoms, your doctor might suggest blood tests every six or 12 months to monitor your thyroid function, rather than treatment. Each year, about one in 10 people who are monitored without treatment go on to develop symptoms. However, one in 20 people with antibodies to thyroid hormone find their thyroid function returns to normal spontaneously.

### Treatment for hypothyroidism

In New Zealand, treatment for hypothyroidism involves taking regular tablets of levothyroxine, which is a man-made version of the thyroid hormone, T4. Replacement of T3 is not recommended and studies have shown no benefit in combination T4 and T3 treatment.

Brand names of levothyroxine include Eltroxin and Synthroid. Different brands of thyroxine are not equivalent so talk to your pharmacist if your tablets look different from normal. If you switch brands of levothyroxine you may need a blood test six weeks later.

Levothyroxine needs to be started slowly. Your doctor will start you on a small dose and gradually increase it

over several weeks or months depending on your response. You will need a blood test four to six weeks after starting treatment. This is because it often takes about six weeks for the dose to have its full effect.

Once your TSH target is reached, a further blood test in three to four months will help ensure the TSH level is stable. Ongoing blood tests every six to 12 months help your doctor monitor your thyroid hormone level, ensuring it remains within the normal range because the function of your thyroid gland can change with time.

Women using thyroxine who become pregnant should talk to their doctor as the amount of thyroxine needed can increase. It is best to let your doctor know in advance if you are trying to get pregnant.

Over-replacement of thyroxine can be dangerous so it is important to keep to the dosage advised by your doctor.

### How to take your levothyroxine tablets

- Take in the morning, with water, on an empty stomach, one hour before breakfast
- Do not take calcium, iron, or multivitamin tablets within four hours of levothyroxine
- Take your levothyroxine tablets exactly how your doctor has told you to take them. Do not increase or decrease the dosage without their advice
- Keep your levothyroxine tablets in a cool, dry place. Do not expose them to high temperatures
- Blood tests are an important way to check that you are getting the correct dosage of levothyroxine. Always go to your appointments.
- Always check with your doctor or pharmacist before taking any other medicines with your levothyroxine
- See your doctor if your symptoms of hypothyroidism persist despite treatment or if you develop new symptoms such as sweating, difficulty sleeping, a fast heart rate, or heat intolerance.

#### Original material provided by The Health Media

This information is intended solely for New Zealand residents and is of a general nature only. No person should act in reliance on any statement contained in the information provided, but at all times should obtain specific advice from a health professional. All rights reserved. © Copyright 2021 The Health Media Ltd. No part of this publication may be reproduced without the written permission of the publisher, Phone +64 9 488 4286.