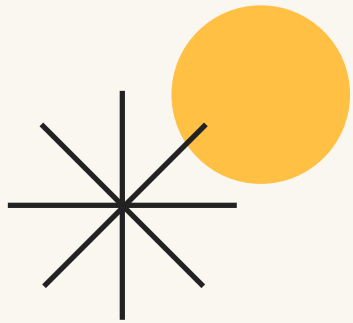
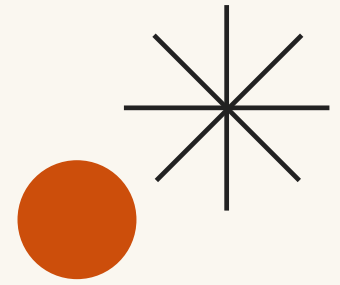


Pharm Phacts

Hypothyroidism

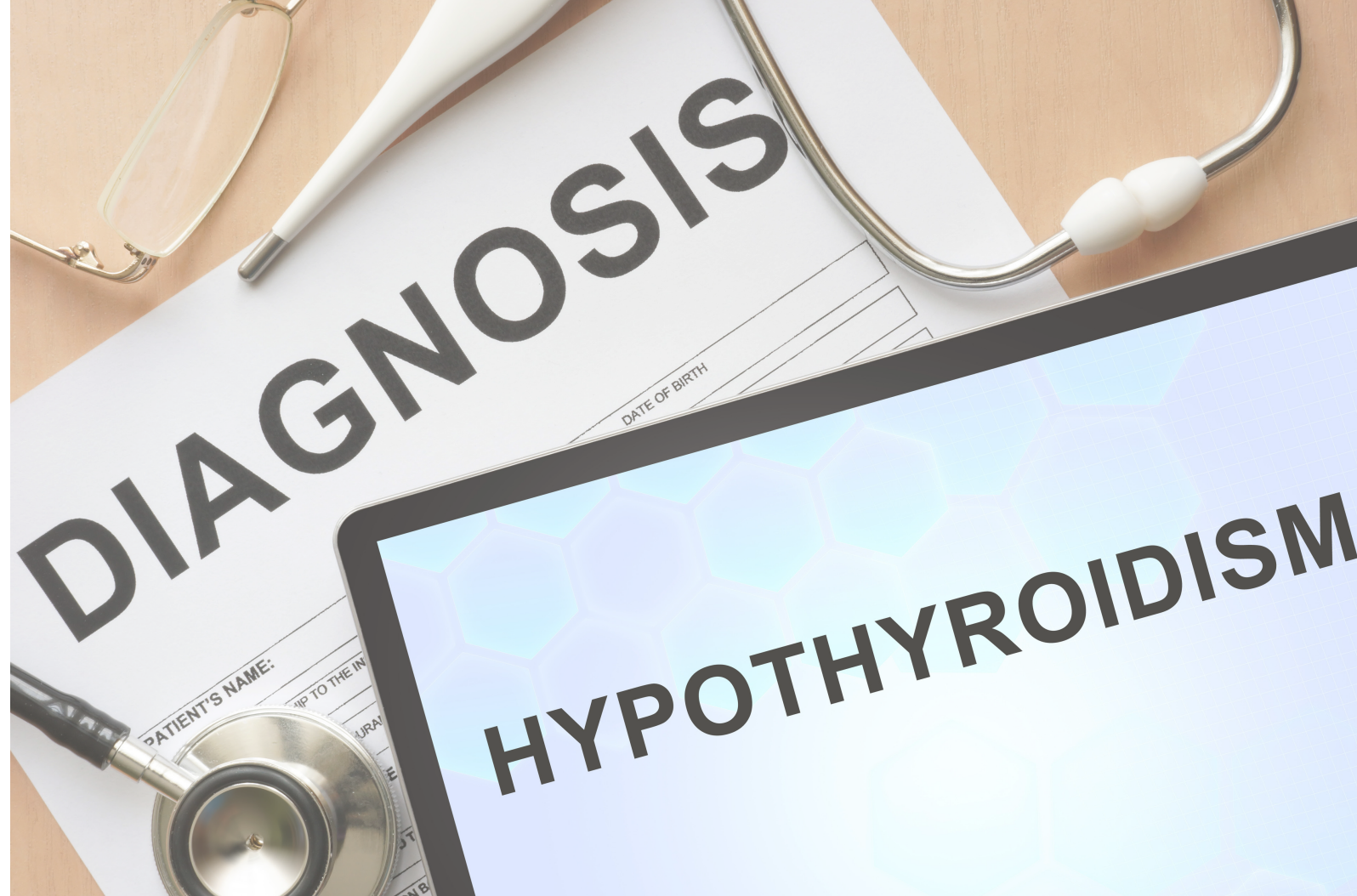


February 2025



Presented by the AUPCC

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What is Hypothyroidism?

Hypothyroidism, or an underactive thyroid, occurs when the thyroid gland doesn't produce enough thyroid hormone.¹ The thyroid is a small, butterfly-shaped organ in the front of the neck.¹ It releases hormones into the bloodstream that help regulate various functions in the body.² These hormones are crucial for controlling metabolism, which is how the body turns food into energy.² This process is important for maintaining energy levels, supporting growth and development, and regulating body temperature.² Additionally, thyroid hormones influence the function of several organs including the heart, liver, kidneys, and brain.²

Risk factors for hypothyroidism

Over 5% of Americans (around 20 million people) aged 12 and older are diagnosed with hypothyroidism.^{1,2} Women are more likely to be affected, with approximately 1.5% to 2% of women diagnosed compared to only 0.2% of men.³ Other risk factors include individuals aged 60 years and older, the presence of an autoimmune disease (Hashimoto's disease, type 1 diabetes, celiac disease, lupus rheumatoid arthritis, etc), individuals with a family history of heart disease, prior radiation to the head or neck, thyroid removal, and pregnancy.¹

Signs and Symptoms

The symptoms of hypothyroidism usually develop slowly and can be hard to notice at first. Since thyroid hormones help control metabolism, not having enough of them can make it slower.^{1,2} This can lead to things like feeling tired, gaining weight, or having trouble staying warm.

Other symptoms of thyroid hormone include^{1,2}

- Constipation
- Dry skin
- Puffy face
- Hoarse voice
- Muscle weakness
- Muscle aches
- Heavy or irregular menstrual cycles
- Depression and/or anxiety

If left untreated hypothyroidism can lead to complications such as goiter (enlargement of the thyroid gland), infertility, miscarriages, heart disease, heart failure, osteoporosis, etc.^{1,2}

Diagnosis

A thyroid function test is a blood test to measure hormone levels and check how well the thyroid is working.³ This test measures thyroid-stimulating hormone (TSH), which signals the thyroid gland to produce and release thyroid hormones.³ It also measures thyroxine (T4), one of the main thyroid hormones.³ High TSH levels combined with low T4 levels often indicate hypothyroidism.³ Additionally, high TSH levels with normal T4 levels may suggest a risk of developing hypothyroidism in the future.³

What is Hashimoto's Disease?

Hashimoto's disease is the most common cause of underactive thyroid.⁴ It is an autoimmune disease, which means the body's immune system mistakenly attacks the thyroid.⁴ This attack causes swelling and damage to the thyroid, making it harder for the gland to produce the hormones your body needs.⁴

Causes

The exact cause of Hashimoto's disease isn't fully known, but there are three possible reasons it might develop.⁴ One is genetics, which means if someone in your family has Hashimoto's, you could have a higher chance of getting it too.⁴ Secondly, viruses like Epstein-Barr and hepatitis C, as well as bacteria like *Helicobacter pylori*, may trigger the immune system to attack the thyroid gland.⁴ Environmental factors such as stress and exposure to harmful chemicals can also contribute to the development of Hashimoto's disease.⁴

Risk Factors

Women are seven times more likely to develop Hashimoto's compared to men. The condition is most common in women between the ages of 30-50 years.⁴ Having other autoimmune disorders, like type 1 diabetes, rheumatoid arthritis, or lupus, can raise your chances of getting Hashimoto's disease.⁴

Treatment

Levothyroxine (Synthroid) is the preferred treatment for hypothyroidism.⁵ This medication is a synthetic version of the thyroid hormone called Thyroxine or T4.⁵ It works by increasing the thyroid hormone levels in your body, helping to restore normal metabolism.⁵

Levothyroxine commonly comes in pill form, but it is also available for children and those who have difficulty swallowing.⁵ Determining the correct dose of Levothyroxine varies for each patient and is based on several factors, including age, existing medical conditions, and the severity of hypothyroidism.^{5,6} Common side effects include nausea, vomiting, dizziness, and constipation.⁶



Monitoring:

At the beginning of your treatment for thyroid issues, your doctor will closely monitor your thyroid hormone levels through blood tests conducted every 6 to 8 weeks.⁵ This frequent monitoring is essential to ensure that the medication is effectively regulating your thyroid function and to adjust the dosage if necessary.⁵ Depending on your response to the medication, your doctor may make adjustments to your dosage to find the optimal level that works for you.⁵ Once you reach the appropriate dosage and your thyroid levels stabilize, the frequency of your check-ups will change.⁵ After approximately 6 months of consistent treatment at the right dose, your doctor will conduct another blood test to ensure that your hormones remain within the desired range.⁵ If everything looks good, you can expect to have your thyroid levels checked once a year thereafter.⁵

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