CONDITION

Chronic thyroiditis

Learn how chronic thyroiditis, also called Hashimoto disease, affects thyroid function and how it is diagnosed, treated, and monitored.

WHAT IT IS
Chronic autoimmune inflammation of the thyroid gland

BODY SYSTEM
Hormone system

MAIN SYMPTOMS
Tiredness, feeling unusually cold, dry skin, constipation

WHAT CAUSES IT
Autoimmune, trigger not fully understood

HOW IT IS DIAGNOSED
TSH, free T4 and TPO antibody blood tests

MAIN TREATMENT
Thyroid hormone replacement

CAN IT BE CURED?
No, hormone replacement manages the condition

IS IT AN EMERGENCY?
Sometimes, severe confusion or trouble breathing

LONG-TERM OUTLOOK
Usually managed successfully with treatment and monitoring

Overview

Chronic thyroiditis usually refers to Hashimoto disease, also called chronic autoimmune thyroiditis. It happens when the immune system mistakenly attacks the thyroid gland. The thyroid is a small, butterfly-shaped gland at the front of the neck. It makes hormones that help control energy use, body temperature, heart function, digestion, and many other processes.

The inflammation caused by Hashimoto disease can gradually damage thyroid cells. Over time, the gland may stop making enough thyroid hormone. This is called hypothyroidism , or an underactive thyroid.

The condition often develops slowly. Some people have thyroid antibodies or an enlarged thyroid for years while their thyroid hormone levels remain normal. Others develop mild or clear hypothyroidism. Early in the condition, damaged thyroid cells may briefly release extra

hormone, but long-term overactivity is not typical.

Chronic thyroiditis matters because untreated hypothyroidism can affect the heart, cholesterol, mood, menstrual cycles, fertility, pregnancy, and daily functioning. Treatment can replace the missing hormone. Most people who need treatment can manage the condition successfully with regular blood tests and a consistent medication routine.

Symptoms

Chronic thyroiditis may cause no symptoms at first. Symptoms usually appear when thyroid hormone production falls. Because they often develop gradually, they may be mistaken for stress, aging, sleep problems, or another health condition.

Possible symptoms of hypothyroidism include:

Symptoms alone cannot confirm chronic thyroiditis. Many of these concerns have other possible causes, and some people with abnormal thyroid blood tests have few symptoms.

The thyroid may become enlarged, producing a goiter . A goiter can cause fullness or pressure at the front of the neck. It may be visible, but it is often painless.

Occasionally, early inflammation releases stored thyroid hormone. This temporary phase is sometimes called hashitoxicosis . It may cause a fast heartbeat, shakiness, sweating, anxiety, heat intolerance, or weight loss. These symptoms should be assessed because other thyroid disorders can cause similar findings.

- Tiredness or reduced stamina
- Feeling unusually cold
- Dry skin or thinning hair
- Constipation
- Unexplained weight gain or difficulty losing weight
- Muscle aches, weakness, or cramps
- Slower thinking, poor concentration, or forgetfulness
- Low mood
- A slower heart rate
- Heavy, irregular, or less frequent menstrual periods
- Fertility problems

- A hoarse voice
- Puffiness around the face or eyes

Causes and risk factors

Hashimoto disease is an autoimmune condition. The immune system produces antibodies and immune cells that target thyroid tissue. Why this begins is not fully understood. A combination of inherited susceptibility and environmental or hormonal factors is likely involved.

Factors associated with a higher likelihood of chronic autoimmune thyroiditis include:

Iodine is needed to make thyroid hormone, but excessive iodine exposure can worsen thyroid dysfunction in some susceptible people. Sources may include high-dose supplements, some medicines, and iodine-containing medical products. Normal dietary iodine intake is not the same as taking large supplemental amounts.

Some medicines can affect thyroid function or trigger thyroid inflammation. If thyroid tests change after a medicine is started, a clinician can review whether the medicine may be contributing. Medicines should not be stopped without medical guidance.

Hashimoto disease is not contagious. It is also not caused by stress alone, although illness and stress may make existing symptoms more noticeable.

- Having a close relative with Hashimoto disease or another autoimmune condition
- Having another autoimmune disease, such as type 1 diabetes, celiac disease, rheumatoid arthritis, or autoimmune adrenal disease
- Being female, although people of any sex can be affected
- Middle or older age, although the condition can occur in children and younger adults
- Pregnancy or the period after delivery, when immune activity changes
- Certain chromosomal conditions, including Turner syndrome and Down syndrome

Diagnosis

Diagnosis starts with a medical history, physical examination, and blood tests. A clinician may examine the neck for thyroid enlargement, tenderness, or nodules.

The main blood tests are:

Some people have an elevated TSH but a normal free T4. This is called subclinical hypothyroidism . It is a laboratory description, not a measure of how important a person's

symptoms are. A clinician may repeat testing before making treatment decisions because TSH can change temporarily.

Thyroglobulin antibodies may sometimes be measured, but they are not required in every case. T3 testing is usually less helpful when evaluating suspected hypothyroidism.

A thyroid ultrasound is not routinely needed when blood tests and the examination fit Hashimoto disease. It may be used if the gland is uneven, significantly enlarged, or contains a possible nodule. Ultrasound can show the thyroid's structure, but it cannot determine thyroid hormone function.

A needle biopsy is generally used to evaluate certain thyroid nodules, not to confirm routine Hashimoto disease. An antibody result or ultrasound finding by itself should be interpreted together with thyroid hormone tests and the person's clinical situation.

Biotin, a vitamin found in some hair and nail supplements, can interfere with certain thyroid laboratory tests. Tell the clinician and laboratory about supplements before testing. Follow their instructions about whether and when to pause biotin.

- Thyroid-stimulating hormone, or TSH: TSH is made by the pituitary gland in the brain. It signals the thyroid to produce hormone. In primary hypothyroidism, TSH usually rises because the body is trying to stimulate a thyroid that is not responding adequately.
- Free thyroxine, or free T4: T4 is a major thyroid hormone. A low free T4 with a high TSH usually indicates clear, or overt, primary hypothyroidism.
- Thyroid peroxidase antibodies, or TPO antibodies: These antibodies support a diagnosis of autoimmune thyroiditis. A positive result does not always mean that treatment is needed, because thyroid function may still be normal.

Treatment and management

Treatment depends mainly on thyroid function, symptoms, age, pregnancy status, other health conditions, and whether the blood-test changes persist.

People with normal TSH and free T4 levels usually do not need thyroid hormone simply because TPO antibodies are present. Periodic testing may be recommended because thyroid function can decline over time.

For clear hypothyroidism, the standard treatment is levothyroxine , a manufactured form of T4. It replaces hormone that the thyroid can no longer produce adequately. The body converts T4 into the active hormone T3 as needed.

The appropriate amount differs from person to person. Clinicians consider factors such as

body size, age, heart health, pregnancy, laboratory results, and other medicines. Blood tests are used to adjust treatment rather than relying on symptoms alone.

Levothyroxine works best when taken consistently. Food and certain products can reduce absorption. These may include iron, calcium, antacids, and some medications for digestive conditions. A pharmacist or clinician can explain how to separate these products from thyroid medicine. Taking the same formulation consistently can also reduce unexpected changes in thyroid levels.

Treatment for subclinical hypothyroidism is individualized. A clinician may consider how high the TSH is, whether it remains elevated, symptoms, antibody results, age, cardiovascular risk, and whether the person is pregnant or planning pregnancy. Observation with repeat testing is appropriate in some cases.

Pregnancy requires special attention because thyroid hormone supports fetal development, especially early in pregnancy. People taking levothyroxine should contact their maternity or thyroid care team promptly after learning they are pregnant. Testing and medication adjustments are often needed earlier and more frequently than usual.

There is no proven diet that removes thyroid antibodies or cures Hashimoto disease. A balanced diet can support general health, but high-dose iodine or "thyroid support" supplements may be harmful. Some such products contain unpredictable amounts of iodine or thyroid hormone. Selenium supplements are not a substitute for established treatment and should not be started specifically for Hashimoto disease without discussing the evidence and risks with a clinician.

If celiac disease or another related condition is diagnosed, treating it is important for overall health and may also affect how well levothyroxine is absorbed.

Complications

Untreated or undertreated hypothyroidism can contribute to high cholesterol and may increase cardiovascular risk. It can also worsen constipation, fatigue, low mood, nerve symptoms, and menstrual or fertility problems.

During pregnancy, poorly controlled hypothyroidism is associated with health risks for both the pregnant person and the developing baby. Early testing and appropriate treatment reduce avoidable risk.

A large goiter can sometimes create neck pressure or interfere with swallowing. Thyroid nodules may also occur and should be evaluated according to their examination and ultrasound features.

Severe, long-standing hypothyroidism can rarely lead to myxedema coma , a life-threatening state involving major slowing of body functions. Despite its name, a person may not initially appear to be in a coma. Emergency symptoms can include severe confusion, extreme drowsiness, trouble breathing, marked weakness, or an unusually low body temperature.

Taking too much thyroid hormone also causes problems. Overtreatment may produce a fast or irregular heartbeat, tremor, sleep difficulty, or bone loss over time. This is why dose changes should be guided by blood tests and a clinician.

Hashimoto disease is associated with an increased risk of a rare cancer called primary thyroid lymphoma, but most people with Hashimoto disease never develop it. A thyroid that enlarges rapidly, becomes unusually firm, or causes increasing swallowing or breathing difficulty needs prompt assessment.

Follow up

After levothyroxine is started or changed, TSH is commonly rechecked after enough time has passed for hormone levels to stabilize, often about six to eight weeks. Once results and symptoms are stable, testing is usually less frequent. The exact schedule depends on age, pregnancy, other health conditions, and whether medicines or body weight have changed.

People with thyroid antibodies but normal thyroid function may need periodic TSH testing, often around once a year when ongoing risk is present. A clinician may recommend a different interval based on previous results.

Routine follow-up is appropriate for gradual changes such as returning fatigue, constipation, cold intolerance, menstrual changes, or mild neck fullness. Arrange an earlier review if symptoms appear after a medication change or if doses have been missed regularly.

Seek prompt medical advice for a new neck lump, rapid thyroid enlargement, worsening hoarseness, increasing trouble swallowing, or a persistent fast or irregular heartbeat.

Seek emergency care for severe trouble breathing, fainting, chest pain, severe confusion, extreme drowsiness, or rapidly worsening neck swelling that affects the airway.

Sources

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