



# Underactive thyroid

Underactive thyroid, known as hypothyroidism, is a condition in which the thyroid gland, found at the base of the front of the neck, is unable to produce sufficient thyroid hormones to fulfill the body's needs. Approximately 5% of individuals aged 12 and older suffer from hypothyroidism.

Primary hypothyroidism may occur due to dysfunction of the thyroid gland, which is commonly caused by an autoimmune condition called Hashimoto's disease. In a small number of cases, hypothyroidism results from dysfunction of the hypothalamus and/or pituitary gland in the brain, referred to as secondary hypothyroidism.

## What are thyroid hormones?

Thyroid hormones include thyroxine (T4) and the biologically active form triiodothyronine (T3). Your thyroid hormones help regulate your body's use of energy and control various functions such as your heartbeat.

## Signs, symptoms, and complications

- Changes in voice (e.g., hoarseness)
- Cold intolerance
- Constipation
- Dry skin
- Fatigue, lethargy
- Goiter (enlarged thyroid gland)
- Hair thinning/loss
- Irregular or heavy menstrual periods
- Weakness



### When untreated, hypothyroidism may result in:

- Cognitive impairment
- Dyslipidemia (irregular lipid levels)
- Hypertension (elevated blood pressure)
- Infertility
- Neuromuscular dysfunction

### Causes and risk factors

- Age: increased risk with advancing age
- Autoimmune conditions (e.g., Hashimoto's disease, type 1 diabetes)
- Certain medical procedures (e.g., thyroid surgery, radioiodine therapy, irradiation)
- Certain medications (e.g., amiodarone, antiepileptic drugs, lithium, some cancer treatments)
- Certain nutrient deficiencies (e.g., iodine, selenium, vitamin D)
- Family history/genetic predisposition
- Gender: being female
- Pregnancy
- Small stature at birth, low body mass index (BMI) during childhood

## Preventing and addressing underactive thyroid

Hypothyroidism treatment generally involves hormone replacement therapy with synthetic thyroid hormones. The following are general diet and lifestyle guidelines that may help support thyroid function.

### Diet

Specific nutrients have been identified as essential to thyroid function and hormone production, including copper, iodine, iron, selenium, zinc, B vitamins, and vitamins A, C, and D. Additionally, certain dietary compounds, such as isoflavones from soy and glucosinolates from raw *Brassica* vegetables, may impair thyroid hormone production. The following table outlines foods and beverages to avoid, moderate, and enjoy for a thyroid-supportive diet.



## Thyroid support: foods to avoid, moderate, and enjoy

Food group	Avoid	Moderate	Enjoy
<b>Fruit</b>	N/A	N/A	All fruits
<b>Vegetables</b>	Raw <i>Brassica</i> vegetables (e.g., broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kale, turnips)	Cooked <i>Brassica</i> vegetables (e.g., broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kale, turnips)  Seaweed (e.g., kelp, dulse)	All other vegetables  Mushrooms
<b>Grains</b>	Gluten-containing grains and flours* (e.g., barley, kamut, rye, spelt, triticale, wheat)	N/A	Gluten-free whole grains (e.g., amaranth, oats, quinoa, rice)
<b>Proteins</b>	Soy and soy products (e.g., edamame, soy beverage, tofu)	N/A	Animal proteins  Eggs  Fish and seafood (e.g., cod, oysters, salmon, sardines, tuna)  Organ meats (e.g., liver)
<b>Dairy</b>	Milk and dairy products containing lactose*	Iodized milk and dairy products	Kefir  Yogurt
<b>Oils &amp; fats</b>	N/A	N/A	Avocado oil  Nuts and seeds (particularly Brazil nuts, pumpkin seeds, and walnuts)  Olive oil
<b>Other</b>	Processed foods  Sweets	Iodized salt	Cocoa, dark chocolate

\*Individuals with Hashimoto's disease commonly experience lactose intolerance and/or celiac disease. In these cases, eliminating lactose, a sugar found in dairy, and gluten, a protein found in grains such as wheat, barley, and rye, may be necessary.

## Physical activity

Regular physical activity may reduce the risk of hypothyroidism and improve thyroid hormone levels in individuals with the condition. Physical activity needs may vary based on age and other factors. Research suggests that three months of regular moderate-intensity [exercise](#), such as jogging or aerobic circuit training, may be beneficial for individuals with hypothyroidism and subclinical hypothyroidism.

## Stress management

Chronic stress may play a role in the development of Hashimoto's disease. Learn to recognize signs of stress in your body, such as low energy, changes in mood, and difficulty sleeping. Incorporate stress-reduction techniques, such as:

- Mindfulness practices (e.g., [breathing exercises](#), [meditation](#), muscle relaxation)
- Regular moderate-intensity exercise (e.g., 30 minutes of walking)
- Realistic goal-setting to reduce overwhelm
- Social support from family, friends, colleagues, and community or religious associations



## References

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This handout was developed and medically reviewed by Fullscript's Integrative Medical Advisory team.

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