

Reproductive Facts

Patient fact sheet developed by the
American Society for Reproductive Medicine



Hypothyroidism and Pregnancy: What Should I Know?

What is hypothyroidism?

Hypothyroidism (underactive thyroid) is when the thyroid gland produces less thyroid hormone than it should. The thyroid gland is found in the lower part of the throat and partially wraps around the upper windpipe (trachea).

What does the thyroid gland do?

The thyroid gland produces two hormones: triiodothyronine (T3) and thyroxine (T4). These hormones play an important role in metabolism. Metabolism is the body's ability to transform food into energy. The thyroid gland is controlled (regulated) by thyroid-stimulating hormone (TSH). TSH is produced by the pituitary gland, which is located in the brain.

What are the symptoms of hypothyroidism?

When the thyroid gland produces less thyroid hormone than it should (hypothyroidism), the body's metabolism slows down which causes a variety of symptoms. At first, the symptoms of hypothyroidism may not be noticed, but over time these symptoms may become more obvious and severe and can include the following:

- Fatigue (feeling tired)
- Weight gain
- Constipation
- Irregular periods
- Loss of sex drive
- Hair loss
- Brittle hair and nails
- Dry, itchy skin
- Difficulty learning and remembering
- Infertility
- Miscarriage
- Repeated miscarriage

What causes hypothyroidism?

The most common cause of hypothyroidism in the US is an autoimmune disorder called Hashimoto's thyroiditis. With this disease, the body's immune system mistakenly sends out antibodies (substances made by your immune system usually to protect you against infections) to damage the cells in the thyroid gland. This may cause the thyroid gland to enlarge, which is known as goiter.

Hypothyroidism and goiter can also result from not getting enough iodine in your diet. Hypothyroidism can also occur after thyroid surgery or radioactive iodine therapy to treat hyperthyroidism (overactive thyroid). In many cases, the specific cause of hypothyroidism is not known.

How is hypothyroidism diagnosed?

The main test used to detect hypothyroidism is measuring blood levels of TSH. An elevated TSH level usually means the thyroid gland is not making enough thyroid hormone, and the pituitary gland has responded by making more TSH to try to get the thyroid hormone levels where they should be.

Other blood tests include measuring T4 and thyroid autoantibodies. T4 is a hormone produced directly by the thyroid gland. It is typically low in patients with hypothyroidism.

An autoantibody is an antibody that attacks the cells and tissues of oneself instead of attacking invading infections. Thyroid autoantibodies are seen in patients with Hashimoto's (autoimmune) thyroiditis.

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How does hypothyroidism affect my fertility and my baby if I become pregnant?

Hypothyroidism can prevent the release of the egg from the ovary (ovulation). Typically, for individuals who have periods (menstruate) each month, an egg is released from the ovary each month. However, hypothyroidism may cause the release of an egg less frequently or not at all.

Hypothyroidism can also interfere with the development of an embryo (fertilized egg). This increases the risk of miscarriage.

Also, if you are pregnant and your hypothyroidism is not treated, your baby may be born prematurely (before the predicted due date), weigh less than normal, and have lowered mental capacity. People with hypothyroidism who become pregnant may also be at increased risk for preeclampsia, a disorder of high blood pressure in pregnancy. If hypothyroid or otherwise indicated, it is very important for patients to have their thyroid hormones checked and receive appropriate treatment if they wish to have a baby or are already pregnant.

How is hypothyroidism treated?

The most commonly used medication to treat hypothyroidism is levothyroxine, a synthetic form of thyroid hormone. Levothyroxine is a tablet that is usually taken once a day. Once you start taking levothyroxine, your doctor may recommend checking your hormone levels in 4-6 weeks (about 1 and a half months) to ensure you take the right dose.

Do I need to continue to monitor my thyroid levels?

It is important to have blood levels checked regularly, even after the correct dose is found. Hypothyroidism is often a lifelong and progressive disease, and your medication dosage may need periodic adjustment.

Frequent monitoring is important; if the dose of thyroid replacement hormone is too high, women may develop treatment-induced hyperthyroidism. This could cause heart palpitations, nervousness, and osteoporosis (bone loss and bone thinning).

If you become pregnant, your doctor will need to monitor your blood every trimester as your levothyroxine dose needs may change due to pregnancy.

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