

# Detecting and Treating Hyperthyroidism Before, During, and After Pregnancy

## A PATIENT'S GUIDE

Thyroid dysfunction—changes in how well your thyroid gland works—can start during or after pregnancy in women who never had thyroid problems before. This occurs because pregnancy causes major changes in the levels of hormones made in the thyroid gland.

When the thyroid makes too much of the thyroid hormones T3 and T4, it is called overactive thyroid or hyperthyroidism. This problem also causes very low levels of thyroid stimulating hormone (TSH), a hormone that tells the thyroid to make T3 and T4. This is because too much T3 and T4 in the body causes TSH production to shut down. An overactive thyroid greatly increases metabolism (how your body uses energy). It most often affects women ages 20 to 40, in their childbearing years.

Fortunately, hyperthyroidism during pregnancy is not common. However, the symptoms may be overlooked because some can mimic the hormonal changes a woman has in a normal pregnancy: for instance, feeling too warm, tired, or anxious. If left untreated, maternal hyperthyroidism poses a risk for both mother and baby. Pregnant women with uncontrolled hyperthyroidism can develop high blood pressure. There is also an increased risk of miscarriage, premature birth, and having a baby with a low birth weight.

This guide for patients comes from The Endocrine Society's 2012 practice guidelines for physicians about the detection and treatment of thyroid dysfunction during and after pregnancy.

### What causes maternal hyperthyroidism?

A common cause of overactive thyroid in pregnant women is Graves' disease. This disease occurs when your immune system becomes overactive and forms antibodies (immune proteins) that attack the thyroid. This causes the gland to enlarge and make too much thyroid hormone. Most women with Graves' disease find out they have it and get treatment before they become pregnant.

Women with severe nausea and vomiting or those expecting twins may develop temporary hyperthyroidism. Called transient gestational thyrotoxicosis, this hyperthyroidism is due to high levels of a pregnancy hormone called human chorionic gonadotropin or hCG.

Because it resolves by week 14 to 18 of pregnancy, women do not need antithyroid drugs to treat this condition.

Sometimes, hyperthyroidism starts during pregnancy because of nodules (small lumps) in the thyroid. These nodules make too much thyroid hormone.



The thyroid also can become overactive after childbirth. In the first year after giving birth, about 7 percent of women get postpartum thyroiditis (inflammation of the thyroid). This problem starts with hyperthyroidism. Most often, it clears up without treatment in a few weeks or months. But sometimes the inflammation leads to hypothyroidism, the opposite condition in which the thyroid gland doesn't make enough thyroid hormone. In most cases, this hypothyroidism goes away on its own.

### What are the symptoms of maternal hyperthyroidism?

Symptoms of hyperthyroidism include

- Feeling too hot when others are comfortable
- Rapid heartbeat
- Trembling hands
- Weight loss even though you eat enough
- Tiredness and/or trouble sleeping
- Feeling irritable and anxious

### How is hyperthyroidism found?

Most often, women find out they are hyperthyroid before they become pregnant. To detect hyperthyroidism, your doctor does a physical exam and orders blood tests to measure your thyroid hormone levels. Low TSH levels plus high levels of T4 (also called thyroxine) indicate hyperthyroidism.

Another test for hyperthyroidism is the radioactive iodine uptake test. Pregnant and breastfeeding women should not have this test, so tell your doctor if you are expecting or nursing. (This test measures how much iodine your thyroid absorbs. The thyroid uses iodine to make thyroid hormone.)

It is important to find out the cause of your overactive thyroid so your doctor knows if you need treatment or not.

## What is the treatment for maternal hyperthyroidism?

**During pregnancy.** The preferred treatment for pregnant women with hyperthyroidism due to Graves' disease is antithyroid medication. These drugs prevent the thyroid from making too much thyroid hormone. Temporary (gestational) hyperthyroidism does not need this treatment.

Pregnant women with Graves' hyperthyroidism or thyroid nodules should start antithyroid drug treatment or, if already taking this medication, see their doctor about the dose. Hyperthyroidism due to Graves' disease most often improves as pregnancy advances but may worsen during the first six months after birth. Therefore, your doctor may need to change your dose of antithyroid medicine both during and after pregnancy.

In the first trimester of pregnancy, the preferred drug to treat hyperthyroidism is propylthiouracil (PTU). Another antithyroid drug, methimazole, may cause birth defects if taken during early in pregnancy. Women may need to take methimazole in the first three months of pregnancy if they cannot tolerate PTU.

After the first trimester, experts recommend switching from PTU to methimazole. This is because in rare cases PTU can cause severe liver injury. Both drugs are equally effective. Talk to your doctor about the benefits and risks of these medicines, and which is the best choice for you.

Antithyroid medication can treat most cases of Graves' disease in pregnancy. Rarely, some women may need surgery to remove part of the thyroid. The best time for this surgery during pregnancy is the second trimester (months 4 through 6).

Women who are or may be pregnant should not receive treatment with radioactive iodine. This radioactive drug usually destroys the patient's thyroid gland to stop it from being overactive, and also can harm the unborn baby's thyroid.

**While breastfeeding.** Women who are breastfeeding should not get radioactive iodine treatment. They may continue antithyroid drug therapy if they take their medicine as prescribed.

## Will your baby need special care?

Most people with Graves' disease have measurable antibodies in their blood known as thyroid stimulating immunoglobulins. In pregnant women with Graves' disease, these antibodies can pass across the placenta to the baby. Though it does not occur often, this can cause thyroid disease and other medical problems for the newborn. All newborns of mothers with Graves' disease who are positive for these antibodies should be checked for signs of thyroid problems and treated if necessary.



## What can you do to help have a healthy baby?

You can help ensure both your baby's health and your own health. Work with your pregnancy care provider and your endocrinologist, a specialist who treats hormone-related conditions, to receive proper medical care before, during, and after pregnancy. Take your medication as prescribed.

Your doctor can advise you on pregnancy planning. If you have active Graves' disease, delay pregnancy until your disease is well controlled. Also, if you had radioactive iodine treatment, wait 6 to 12 months before trying to become pregnant.

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Note to health care professionals: This patient guide is based on, and is intended to be used in conjunction with, the Endocrine Society's clinical practice guidelines (available at [www.endocrine.org/guidelines/index.cfm](http://www.endocrine.org/guidelines/index.cfm)).