# Hyperthyroidism in Pregnancy FAQ



## WHAT IS THE THYROID GLAND?

The thyroid gland located in the neck produces thyroid hormones which help the body use energy, stay warm and keep the brain, heart, muscles, and other organs working normally.

## 1 OVERVIEW

### What are the normal changes in thyroid function associated with pregnancy?

While usually normal, the TSH may be slightly low in the first trimester and then returns to normal for the rest of pregnancy. Increased total T4 is often seen but "Free" (or active) hormone remains normal. The thyroid gland can increase in size during pregnancy. In the United States, which is relatively iodine-sufficient, the thyroid often increases only 10-15%. However, sometimes a significant goiter may develop.

### What is the interaction between thyroid function of the mother and the baby?

By mid-pregnancy, the baby's thyroid begins to produce thyroid hormone on its own, but the baby remains dependent on the mother for iodine. The ATA recommends that US women who are planning pregnancy, pregnant, or breastfeeding should take a supplement for adequate amounts of iodine.

## 2 HYPERTHYROIDISM

### What are the most common causes of hyperthyroidism during pregnancy?

The most common cause of hyperthyroidism in women of childbearing age is Graves' disease (see *Graves' Disease brochure*) and occurs in 0.2% of pregnant patients. High hCG levels can cause transient hyperthyroidism in early pregnancy. The correct diagnosis is based on a careful review of history, physical exam and laboratory testing.

### What are the risks of Graves' Disease/hyperthyroidism to the mother and baby?

In addition to symptoms of hyperthyroidism, inadequately treated maternal hyperthyroidism can result in early labor and pre-eclampsia. Uncontrolled maternal hyperthyroidism has been associated with fetal tachycardia (fast heart rate), small for gestational age babies, prematurity, stillbirths and congenital malformations (birth defects). Fetal hyperthyroidism can also occur due to the same thyroid stimulating immunoglobulins (TSI) that cause Graves' disease in the mother even if she is not hyperthyroid. Measuring TSI in the mother with Graves' disease is recommended in early pregnancy and, if initially elevated, again around weeks 18-22. It is very important to tell your doctor if you have been treated for Graves' Disease in the past.

Anti-thyroid drug therapy (ATD), either methimazole (Tapazole) or propylthiouracil (PTU), are used to treat hyperthyroidism (see *Hyperthyroidism brochure*). Use of either drug in the first trimester of pregnancy has been associated with birth defects, although the defects associated with PTU are less frequent and less severe. When ATD are required, PTU is preferred until week 16 of pregnancy.

### What are the treatment options for a pregnant woman with Graves' Disease/hyperthyroidism?

Mild hyperthyroidism often is monitored closely without therapy as long as both the mother and the baby are doing well. When therapy is necessary, anti-thyroid medications are the treatment of choice (*see above*). Therapy should be closely monitored by thyroid testing during pregnancy. Radioiodine is contraindicated during pregnancy since it is taken up by the baby's thyroid gland.

### Can the mother with Graves' disease, who is being treated with anti-thyroid drugs, breastfeed her infant?

Yes. Although very small quantities of both PTU and methimazole are transferred into breast milk, total daily doses of up to 20mg methimazole or 450mg PTU are considered safe and monitoring of the breastfed infants' thyroid status is not required.

### FURTHER READING

Further details on this and other thyroid-related topics are available in the patient information section on the American Thyroid Association® website at *www.thyroid.org*.

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