

The Hormone Foundation's

Patient Guide to the Management of Maternal Hypothyroidism Before, During, and After Pregnancy

Why were the guidelines written?

This patient guide is based on clinical guidelines written to help physicians who are evaluating and treating various types of thyroid dysfunction in women before, during, and after their pregnancy (postpartum). Pregnancy, even in women with no thyroid abnormalities, causes major changes in thyroid hormone levels. It is because of the complexities that occur with the thyroid during pregnancy, and the fact that thyroid disease in the mother can affect the course of the pregnancy and the developing fetus, that management of thyroid diseases during pregnancy requires special considerations. Furthermore, it is important for all women to know that thyroid dysfunction occurs in the first year postpartum in approximately 7% of all women, despite the fact that these women have had no known thyroid disease prior to pregnancy.

This particular guide summarizes information about the best way to diagnose and manage maternal *hypothyroidism*, a condition in which the mother has too little thyroid hormone. This guide also discusses the changes that may occur in the mother's thyroid during the first year postpartum. It is the mother's thyroid hormone that supplies all of the fetus' needs during the first one-third of pregnancy. Therefore, if you are a pregnant woman with too little thyroid hormone, your baby may also be hypothyroid during a critical time when the brain is developing. This may have a negative effect on mental development of the infant. In addition, hypothyroidism is associated with an increased risk of miscarriage or pre-term delivery (delivery three or more weeks prior to term).

How were the guidelines developed?

The clinical guidelines were developed after an extensive review of the best clinical studies about thyroid dysfunction in pregnant and postpartum women, and the effects of treatment on the mother and baby. An international expert panel of The Endocrine Society examined evidence from studies that had been published in "peer-reviewed" medical journals (that is, the studies were carefully evaluated by the journal's scientists and editors). The panel's "recommendations" and "suggestions" were reviewed and approved by several committees and,

finally, by the general membership of The Endocrine Society. No funding for the guidelines came from any pharmaceutical company.



Pregnancy causes major changes in thyroid hormone levels. Before becoming pregnant, consult with your doctor about your thyroid health.

Who is at higher risk of hypothyroidism during pregnancy?

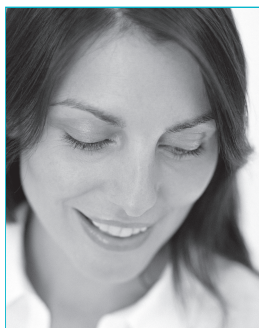
Worldwide, the most important cause of maternal thyroid deficiency is not enough iodine in the diet. For women in the United States iodine deficiency is not a problem. However, as the need for iodine increases during pregnancy and breast-feeding, it is important that all pregnant and breast-feeding women take vitamins that contain iodine. Among women who have an adequate intake of iodine, the main cause of hypothyroidism during pregnancy is an autoimmune thyroid disease known as *Hashimoto's thyroiditis*. Autoimmune thyroid disease is caused by a woman's own immune system attacking and destroying the thyroid. The presence of thyroid antibodies (which can be detected by a simple blood test) indicates that an individual has autoimmune thyroid disease. Other causes of hypothyroidism include prior treatment for hyperthyroidism and surgery for thyroid tumors.



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What special considerations apply to the diagnosis and management of hypothyroidism during and after pregnancy?

Because of the harmful effects hypothyroidism can have on the course of pregnancy, it is best that you know whether you have this condition *before* becoming pregnant. Women with a family history of thyroid disease or any autoimmune disease are at increased risk for hypothyroidism. Typical symptoms of hypothyroidism include weight gain, feeling colder than usual, dry skin and hair, and reduced energy levels. Any signs or symptoms of hypothyroidism should alert your physician to measure your TSH level (or thyroid stimulating hormone, which stimulates your thyroid to produce thyroid hormone). However, it is possible to have low thyroid hormone levels but no symptoms. If this is the case, then diagnosis may not be made until after pregnancy begins. Because hypothyroidism is a potentially reversible cause of depression, women with postpartum depression should be tested for hypothyroidism and appropriately treated.



To ensure your health and the health of your baby, take your recommended medication as prescribed, keep regular appointments with your doctor, and adopt a healthy lifestyle.

Postpartum thyroiditis (PPT) is a thyroid inflammation that occurs in 7% of all women during the first year postpartum. PPT has different phases, the first of which is the hyperthyroid phase. Frequently, the hyperthyroid phase of PPT clears up without treatment after a period of a few weeks or months and thyroid function returns to normal. However, in many women the hyperthyroid phase of PPT damages their thyroid gland and a hypothyroid phase of the disease follows. Women in the hypothyroid phase often have symptoms of weight gain, dry skin, and tiredness and require treatment. Approximately 30% of women who have had PPT will develop permanent hypothyroidism within the next 10 years. Annual evaluation of thyroid hormone levels is, therefore, recommended.

What is the recommended treatment for hypothyroidism?

A woman beginning her prenatal care should have her thyroid function evaluated if she has:

- a) symptoms consistent with hypothyroidism
- b) a history of hyperthyroid or hypothyroid disease
- c) a history of postpartum thyroiditis

- d) a history of previous thyroid surgery
- e) a family history of thyroid disease
- f) a goiter (an enlarged thyroid gland)
- g) the known presence of thyroid antibodies, type 1 diabetes or other autoimmune diseases
- h) a history of head or neck irradiation
- i) a prior miscarriage
- j) a history of preterm delivery

It is important that a woman have normal thyroid hormone levels before and during pregnancy. In a woman already diagnosed with hypothyroidism and being treated with *thyroxine*, thyroid hormone levels should be checked before attempting to conceive. This may alert her physician that an increase in the dose of thyroxine is needed even before she becomes pregnant. If a woman is diagnosed with hypothyroidism just before she wants to conceive, she should begin treatment with thyroxine to achieve normal thyroid hormone levels prior to becoming pregnant. Once a woman becomes pregnant, the thyroxine dose often needs to be increased, possibly by as much as 30% to 50% in the first 4 to 8 weeks of pregnancy. It is important to contact your physician immediately after pregnancy is confirmed so that a blood test can be performed and the dose of thyroxine adjusted if needed. After delivery, most hypothyroid women need to decrease the thyroxine dosage they received during pregnancy.

What can you do to help your treatment process?

You and your doctor should be partners in your care. Before becoming pregnant, consult with your doctor about your thyroid status. It is important that you provide your doctor with a full description and history of your symptoms, however minor they may seem, as well as a thorough medical and family history. When a diagnosis of hypothyroidism is made, it is important to take your medication as instructed and prescribed. Keep regular appointments with your doctor and ask questions. You should tell your doctor about any side effects you are having.

During pregnancy and breast-feeding, you need to make sure you have the recommended daily intake of iodine (250 micrograms). You should also continue taking your thyroid hormone as prescribed during breast-feeding. Be sure to follow your health care provider's advice about your nutritional needs.

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This patient guide is the first of three guides based on the Society's clinical guidelines on the same topic. Part 2 will address maternal hyperthyroidism and part 3 will address thyroid nodules and thyroid cancer during pregnancy.

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