



## HYPOTHYROIDISM AND PREGNANCY

### Evaluation and treatment of hypothyroidism in pregnancy does not always follow international guidelines

#### BACKGROUND

Guidelines for testing and treatment of pregnant women with hypothyroidism have been developed by two American endocrinology associations and have been accepted and are consistent with guidelines from many other countries. These guidelines recommend treatment with levothyroxine (L-T<sub>4</sub>) to maintain TSH levels less than 2.5 in the first trimester and to less than 3.0 in the second and third trimesters. Some guidelines recommend an automatic increase in the L-T<sub>4</sub> dose during the first few weeks of a diagnosed pregnancy for hypothyroid women already treated prior to pregnancy even before tests have been performed. The guidelines also recommend close follow-up and retesting once inadequate treatment has been recognized. Hypothyroidism in the mother is associated with complications in both the mother and the baby. It is assumed that appropriate treatment of the mother as early as possible in pregnancy can reduce these risks and poor outcomes. This study was done to investigate whether Sweden, a country with a national health care system, but with strong regional control of health care decisions, conforms to these internationally recognized guidelines for management of hypothyroidism and pregnancy.

#### THE FULL ARTICLE TITLE:

Granfors, M et al Thyroid testing and management of hypothyroidism during pregnancy: a population-based study. *J Clin Endocrinology Metab* 2013;98:2687-92.

#### SUMMARY OF THE STUDY

There are 41 districts in Sweden which control their own health care policies. They develop their own guidelines for testing and treatment of hypothyroidism during pregnancy. A total of 5254 pregnant women were studied in these districts who delivered between 2009-2011. The guidelines of each of the districts were analyzed for consistency with the international guidelines for testing, early treatment and follow-up. The results indicated wide

variations in reasons to test pregnant women in early pregnancy for hypothyroidism, which tests to perform and frequency of follow-up when hypothyroidism was discovered. None of the guidelines contained recommendations for women treated for hypothyroidism prior to pregnancy to immediately increase the dose of L-T<sub>4</sub> once pregnancy was diagnosed and before initial testing. This accounts for the high frequency (50%) of women who were treated for hypothyroidism prior to pregnancy demonstrating inadequate therapy judged by TSH levels greater than 2.5 upon initial testing when pregnant.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The conclusion of this study is that even in a country with a national health care system, allowing regional control to determine and implement treatment guidelines for maternal hypothyroidism will not ensure uniform testing and treatment conforming to international standards. Whether this deficient care is due to the nature of the national health care system, the regional independence in decisions or the performance of the health care providers cannot be determined from this study. This study is important for patients because it emphasizes the need for patients to be proactive in their health care decisions, no matter what kind of system in which they receive their health care, either public or private.

— Jerrold M Stock, MD

#### ATA THYROID BROCHURE LINKS

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

Thyroid and Pregnancy: <http://www.thyroid.org/thyroid-disease-and-pregnancy>

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## **HYPOTHYROIDISM AND PREGNANCY, continued**

### **ABBREVIATIONS & DEFINITIONS**

**Hypothyroidism:** a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

**Levothyroxine (L-T<sub>4</sub>):** the major hormone produced by the thyroid gland and available in pill form as Levoxyl™, Synthroid™, Levothroid™ and generic preparations.

**Thyroid hormone therapy:** patients with hypothyroidism are most often treated with Levothyroxine in order

to return their thyroid hormone levels to normal. Replacement therapy means the goal is a TSH in the normal range and is the usual therapy. Suppressive therapy means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

**TSH: thyroid stimulating hormone** – produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

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