



## THYROID AND PREGNANCY

### Postpartum thyroid function in women with subclinical hypothyroidism during pregnancy

#### BACKGROUND

Thyroid hormone is essential for normal development of the baby during pregnancy. Key to the baby getting enough thyroid hormone is the level of thyroid hormones in the mother. Thus, the thyroid status of the mother during pregnancy is very important and continues to be the subject of numerous research studies. It is very important to maintain normal thyroid hormone levels in the mother during pregnancy for the best pregnancy outcomes. During pregnancy, the thyroid needs to increase the production of thyroid hormone due to hormonal changes in the thyroid hormone binding proteins. If the thyroid has decreased reserve for any reason, the mother may develop mild/subclinical hypothyroidism during the pregnancy. In some, but not all, of these women, thyroid function returns to normal after delivery. This study examined the changes in thyroid function after pregnancy in women who developed subclinical hypothyroidism during pregnancy. They sought to determine the risk of long term hypothyroidism after pregnancy in these women.

#### THE FULL ARTICLE TITLE

Li N et al. Postpartum follow-up of patients with subclinical hypothyroidism during pregnancy. *Thyroid*. 2020. ePub: June 5, 2020. DOI: 10.1089/thy.2019.0714. PMID 32375594

#### SUMMARY OF THE STUDY

A total of 393 women who developed subclinical hypothyroidism during pregnancy, defined as TSH > 4 mIU/mL and normal free T<sub>4</sub>, were recruited to participate the study. They were all treated with thyroid hormone during pregnancy, but all stopped taking the medication after delivery. Thyroid function and thyroid peroxidase

(TPO) antibody levels were measured 6 weeks after delivery and then periodically thereafter. At the 6 week postpartum visit, 248 women (63.1%) had normal thyroid function, 134 (34.1%) were hypothyroid (all by 1 had subclinical hypothyroidism) and 11 (2.8%) were hyperthyroid. A total of 216 women were followed for more than 6 months after delivery. Of the 131 women who had normal thyroid function at the 6 week postpartum visit and had more than 6 months follow up, 37 women (28.2%) went on to develop hypothyroidism. At the last follow up evaluation (average follow up 11 months after delivery), 132 women (61.1%) had normal thyroid function, 84 (38.9%) were hypothyroid and none were hyperthyroid. Women diagnosed with subclinical hypothyroidism earlier in their pregnancy and those with positive TPO antibodies were more likely to develop persistent hypothyroidism after delivery.

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

Women with subclinical hypothyroidism during pregnancy are at increased risk of developing persistent long-term hypothyroidism. They are more likely to develop long term hypothyroidism if they also have positive TPO antibodies or developed thyroid problems early during pregnancy. Consequently, it is recommended that women with subclinical hypothyroidism be monitored postpartum for the development of persistent hypothyroidism. Although duration or timing of monitoring for hypothyroidism postpartum remains unclear, women should at least be educated about potential signs and symptoms of thyroid problems that could signify the need for repeat evaluation.

— Whitney W. Woodmansee MD





## THYROID AND PREGNANCY, continued

### ATA THYROID BROCHURE LINKS

Thyroid Disease in Pregnancy: <https://www.thyroid.org/thyroid-disease-pregnancy/>

Hypothyroidism (Underactive): <https://www.thyroid.org/hypothyroidism/>

Postpartum Thyroiditis: <https://www.thyroid.org/postpartum-thyroiditis/>

Thyroid Function Tests: <https://www.thyroid.org/thyroid-function-tests/>

### ABBREVIATIONS & DEFINITIONS

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

**Subclinical Hypothyroidism:** a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

**TPO antibodies:** these are antibodies that attack the thyroid instead of bacteria and viruses, they are a marker for autoimmune thyroid disease, which is the main underlying cause for hypothyroidism and hyperthyroidism in the United States.

**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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