



THYROID AND PREGNANCY

Maternal hypothyroidism is associated with a higher risk of childhood asthma

BACKGROUND

Hypothyroidism is a condition where the thyroid does not produce enough thyroid hormone. Hypothyroidism in the mother can affect 2–5% of pregnancies. Thyroid hormone is important for growth and development of the baby during pregnancy. When hypothyroidism in pregnancy is not properly treated, there may be complications such as pregnancy loss, premature delivery, and decreased intelligence in the child. It is unclear if there is a link between hypothyroidism during pregnancy and the risk of asthma (a disease involving the airways in the lungs) in children. The goal of this study is to examine whether hypothyroidism during pregnancy affected the risk of developing childhood asthma.

THE FULL ARTICLE TITLE

Liu X et al Maternal hypothyroidism in the perinatal period and childhood asthma in the offspring. *Allergy* 2018; 73:932–939. Epub 2017 Dec 12. PMID: 29159833.

SUMMARY OF THE STUDY

This was a population-based study using data from national registries in Denmark. Data was used to estimate the risk of asthma among children born to mothers with hypothyroidism compared to children born to mothers

with no thyroid problems. A total of 595,669 children were included. Of those, 3,524 of the children were born to mothers with hypothyroidism diagnosed before delivery and 4,664 children were born to mothers with hypothyroidism diagnosed within 5 years after delivery. A total of 48,990 children had treatment for asthma. Children born to mothers with hypothyroidism who were taking thyroid hormone replacement during pregnancy had a 16% higher risk of asthma when compared to children with mothers who had no thyroid problems. If the mothers did not fill their thyroid hormone prescriptions, the risk increased to 37%. The risk was lowest (12%) in children born to mothers diagnosed with hypothyroidism after delivery.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Proper treatment of hypothyroidism in pregnancy is important and this study adds childhood asthma to the risk of children born to women with hypothyroidism. The data also suggests that the risk was highest in women who were not treated with thyroid hormone during pregnancy and ~2-fold greater than if women were treated. Screening for thyroid disease during pregnancy is controversial but this data suggests another possible reason to screen pregnant women for thyroid disease.

— Priya Mahajan, MD

ATA THYROID BROCHURE LINKS

Pregnancy and Thyroid Disease: <https://www.thyroid.org/thyroid-disease-pregnancy/>
Hypothyroidism (Underactive): <https://www.thyroid.org/hypothyroidism/>

ABBREVIATIONS & DEFINITIONS

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

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal.

