



THYROID AND PREGNANCY

Maternal thyroid function during pregnancy may influence infant birth weight

BACKGROUND

Thyroid hormone is important for normal growth and development of the baby during pregnancy. The mother provides all the thyroid hormone for the baby during the 1st trimester. Even small changes in thyroid hormone levels in the mother within the normal range may affect the growth of the baby. While the essential role of thyroid hormone in brain development is clear, the effects of changes in thyroid hormone on growth are less clear. This study was done to better understand the relationships between women's thyroid hormone levels during pregnancy and their babies' size and weight at birth.

THE FULL ARTICLE TITLE

Medici M et al. Maternal thyroid hormone parameters during early pregnancy and birth weight: the Generation R Study. *J Clin Endocrinol Metab* 2013;98:59-66. Epub November 12, 2012; doi: 10.1210/jc.2012-2420.

SUMMARY OF THE STUDY

This was a study of over 4,400 pregnant women and their infants in Rotterdam, Netherlands from 2002-2006. Using medical records, the researchers studied thyroid function tests (which had been done in all the mothers and in over 2,700 of the infants) as well as the birth

weights of the infants. Mothers who had free T₄ levels at the high end of the normal range were more likely to have smaller babies with a lower birth weight.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The main finding of the study, that pregnant women with higher thyroid hormone levels had smaller babies, is surprising. The results may be influenced by many factors, including changes in thyroid hormone levels during pregnancy in women with normal thyroid glands. More research is needed to better understand this. For now, the study does not provide strong enough evidence to suggest that pregnant women with thyroid dysfunction should be managed differently than current standards.

— Angela M. Leung, MD, MSc

ATA THYROID BROCHURE LINKS

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

Thyroid Function Tests: <http://www.thyroid.org/blood-test-for-thyroid>

Thyroid and Weight: <http://www.thyroid.org/weight-loss-and-thyroid>

ABBREVIATIONS & DEFINITIONS

Thyroxine (T₄): the major hormone produced by the thyroid gland. T₄ gets converted to the active hormone T₃ in various tissues in the body.

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.