CLINICAL **THYROIDOLOGY** FOR THE **PUBLIC**

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THYROID AND PREGNANCY

Thyroid-related changes during pregnancy

BACKGROUND

Pregnancy is a dynamic period that is often associated with changes in thyroid hormone levels and an increase in the size of thyroid gland. After delivery, the normal thyroid returns to its' pre-pregnancy size after a few months. The cause of this increase in the thyroid are growth factors that are increased in pregnancy, like the hormone calcitonin. These growth factors are thought to also stimulate thyroid nodule growth so that they may enlarge during pregnancy, thus potentially increasing the concern of thyroid cancer and prompt additional testing. The American Thyroid Association guidelines for the management of thyroid disease in pregnancy and after delivery caution that pregnant women with a history of thyroid cancer should be carefully monitored. This study was done on pregnant women in Italy. The researchers followed the patient's thyroid blood tests, thyroid gland size and thyroid nodule size using ultrasound from the beginning of pregnancy until six months after delivery.

THE FULL ARTICLE TITLE

Vannucchi G et al Thyroid volume and serum calcitonin changes during pregnancy. J Endocrinol Invest. 2017 Feb 22. doi: 10.1007/s40618-017-0622-1. [Epub ahead of print]

SUMMARY OF THE STUDY

This was a study of 155 women in Italy who were studied from early pregnancy until six months after delivery. Throughout pregnancy, about 5% of women had increased blood TSH levels, compared to the normal levels at the beginning of pregnancy. The size of the thyroid gland was related to weight gain in pregnancy. Although the thyroid glands became larger, particularly in late pregnancy, the sizes of any preexisting thyroid nodules remained unchanged. Overall, thyroid gland sizes returned to normal six months after delivery.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study provides reassuring data that thyroid nodules do not significantly grow during pregnancy. This suggests that it is unlikely that there is any increased risk of thyroid cancer development or growth resulting from pregnancy. Since thyroid cancer is often diagnosed in women of childbearing age, further studies are needed to help clarify whether there is a true relationship between pregnancy and thyroid cancer.

— Angela M. Leung, MD, MSc

ATA THYROID BROCHURE LINKS

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

Thyroid Nodules: http://www.thyroid.org/thyroid-nodules/

ABBREVIATIONS & DEFINITIONS

Thyroid nodule: An abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (benign), ~5% are cancerous.

Thyroid ultrasound: A common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

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.