

Thyroid function during pregnancy and the postpartum period: what you need to know

Dr. Rocio Salas-Whalen, MD, New York Endocrinology

Pregnancy has a profound impact on the thyroid gland and its function. During pregnancy, the thyroid gland increases in size by 10% in iodine replete countries like the United States, but can increase by 20% to 40% in areas of iodine deficiency.

Production of the thyroid hormones, thyroxine (T4), and triiodothyronine (T3), increases by nearly 50%, in conjunction with a separate 50% increase in the daily iodine requirement. All of these factors influence thyroid function tests in the pregnant patient. The thyroid function tests of healthy pregnant women differ from those of healthy non-pregnant women.

These thyroid physiological changes happen seamlessly in healthy women, but thyroid dysfunction can occur in many pregnant women because of pathologic processes already present. For these reasons thyroid function is frequently assessed during the gestational period.

Up to 18% of all pregnant women are thyroid peroxidase antibody (TPOAb) or thyroglobulin antibody (TgAb) positive. Thyroid antibody positivity separately increases the risk of thyroid dysfunction following delivery and during the postpartum period, of which I will further discuss.

As mentioned, during pregnancy thyroid levels differ from the non-pregnant woman and within pregnancy itself as thyroid levels differ during each trimester. All this is a normal physiologic process of pregnancy and thyroid levels should normalize immediately following delivery.

Having a normal functioning thyroid gland is very important during the postpartum period. Thyroid function has an important impact on lactation and the wellbeing of the new mother. Regarding



lactation specifically, abnormal maternal thyroid hormone concentrations can impact milk letdown and the ability to successfully breastfeed.

Research strongly suggests that maternal hypothyroidism (underactive thyroid) can adversely affect lactation. The available data confirms that maternal hypothyroidism itself is not harmful to the breastfeeding infant per se, as long as adequate nutrition (milk) is provided. Maternal hyperthyroidism (overactive thyroid) may also have a negative impact in lactation.

A common postpartum thyroid dysfunction is Postpartum Thyroiditis (PPT). Postpartum thyroiditis is the occurrence of thyroid dysfunction in the first postpartum year in women who had a normal thyroid prior and during pregnancy. In its classical form, transient thyrotoxicosis (hyperthyroidism) is followed by transient hypothyroidism with a return to a euthyroid (normal) state by the end of the initial postpartum year.

The hyperthyroid or thyrotoxic phase of PPT typically occurs between 2 and 6 months postpartum. All episodes of thyrotoxicosis resolve spontaneously. The hypothyroid phase of PPT occurs from 3 to 12 months postpartum with 10-20% or cases resulting in permanent hypothyroidism. PTT is an autoimmune disorder associated with the presence of thyroid antibodies (TPO antibody and Thyroglobulin antibody). Women who are thyroid antibody positive in the first trimester have a higher risk of developing PTT, ranging from 33% to 50%. The occurrence of PTT reflects the rebound of the immune system in the postpartum period after the relative immune suppression of pregnancy.

PTT is a painless condition and most women are asymptomatic or mildly symptomatic during the thyrotoxic phase. Some symptoms include irritability, heat intolerance, fatigue and palpitations. The hypothyroid phase is more frequently symptomatic. Symptoms included cold intolerance, dry skin, fatigue and impaired concentration. If any of these symptoms are present patient should be evaluated by a physician, usually a simple blood test will confirm the diagnosis.

To conclude it is recommended that all patients seeking pregnancy, or that are newly pregnant, should undergo thyroid clinical evaluation if any of the following risk factors are identified:

- A history of hypothyroidism/hyperthyroidism or current symptoms/signs of thyroid dysfunction
- Known thyroid antibody positivity or presence of goiter (enlarged thyroid gland)

- History of head or neck radiation or prior thyroid surgery
- Age > 30 years
- Type 1 Diabetes or other autoimmune disorder including but not limited to lupus, celiac disease, rheumatoid arthritis.
- History of pregnancy loss, preterm delivery, or infertility
- Family history of autoimmune thyroid disease or thyroid dysfunction
- Severe obesity (BMI < 40)



Dr. Salas-Whalen is a double board-certified endocrinologist located on the Upper East Side of Manhattan. She is guided by the philosophy that every patient is different and requires personalized care and attention. Dr. Salas-Whalen believes in the power of patient knowledge in driving outcomes and promoting lifelong health. Her practice is based on achieving results through teamwork between physician and patient. <https://www.nyendocrinology.com/>