

Potturi Ragha Sai Mahima Latha
THYROID HEALTH AND WOMEN'S WELL-BEING

Tutor: senior Lecturer Aliakseyeva A.S.

*Department of Outpatient Therapy with Advanced Training Course and Retraining
Belarusian State Medical University, Minsk*

The thyroid gland is a part of our endocrine system. It is a small, butterfly-shaped gland located at the front of a neck under skin. The thyroid gland releases four hormones: triiodothyronine (T3), tetraiodothyronine or thyroxine (T4), reverse triiodothyronine (RT3) and calcitonin. Thyroxine is the primary hormone secreted by thyroid gland and it is converted into triiodothyronine by a process called deiodination. Triiodothyronine is produced in lesser amounts than T4 but it has a much greater effect on our metabolism than T4. Reverse triiodothyronine is produced in little amounts and has reverse effects of T3. Calcitonin is produced by C-cells and it is involved in calcium and bone metabolism. The thyroid hormones are released in a negative feedback mechanism. The hypothalamus releases thyrotropin-releasing hormone (TRH) into hypothalamic-hypophyseal portal system triggering the anterior pituitary to release thyroid stimulating hormone (TSH) which in turn stimulates the production of T3 and T4. Excess amount of T3 and T4 inhibits the secretion of TRH and TSH. The hormones secreted by the thyroid gland by plays a vital role in overall health of a woman by secreting hormones that regulates many functions of the body, including metabolism, puberty and menstruation, reproduction, pregnancy, postpartum recovery, and menopause. Therefore, a slight disturbance in the levels of thyroid hormones can have a significant impact on the quality of life of a woman. When the gland does not produce enough thyroid hormones it is called hypothyroidism and when the gland produces excess of thyroid hormones it is called hyperthyroidism. Both of these conditions cause an imbalance in hormone levels which effects overall health of a woman particularly reproductive health and may be the leading factor to cause infertility.

The aim is to study the impact of thyroid health on women's well-being and increase awareness about thyroid gland and thyroid associated disorders among women.

This review article synthesizes current research on the impact of thyroid health on women's well-being through a comprehensive literature search in databases such as PubMed, Cochrane Library, and Scopus.

Iodine nutrition is a key determinant of thyroid disease risk. However other factors such as age, individual's habits, genes and etc., can also lead to various thyroid gland disorders. Apart from the above mentioned many drugs such as lithium which is used to treat psychological disorders and amiodarone which is a common cardiovascular drug used to treat arrhythmia can increase the risk of developing hypothyroidism. In Belarus the impact of Chernobyl disaster has increased the number of cases with thyroid cancer eventually leading to hypothyroidism. Not to forget, stress which is a biggest concern in today's generation also has a negative impact on thyroid hormones production.

Thyroid disorders particularly affect the woman's reproductive health such as menstruation problems like having early or late periods, amenorrhea, early menopause, problems in conceiving and pregnancy as having thyroid problems are known to prevent ovulation and low amounts of thyroid hormones can cause pre-eclampsia, stillbirth, preterm birth, and even miscarriage. Having low levels of thyroid hormones in the first trimester of pregnancy can cause low IQ and problems with normal development of the child. Apart from reproductive symptoms thyroid disorders have known to cause unusual weight changes, hair loss, decreased tolerance to hot and cold climates, depression or anxiety, rapid or slow pulse, mood swings, brain fog, osteoporosis.

Women are five to eight times more likely than men to have thyroid problems. One woman in eight will develop a thyroid disorder during her lifetime making it an important topic for discussion.