



## Hypothyroidism in Women

**DONNA DUNN  
CARLA TURNER**

**T**hyroid disease is a major health issue in the United States. Approximately 20 million Americans have been diagnosed or are being treated for thyroid disease (American Thyroid Association, 2015). Hypothyroidism is the second most common type of endocrine disorder affecting women of reproductive age, but it can affect women across the lifespan. The thyroid maintains metabolism and vital body functions. It is located in the anterior neck just below the larynx and is composed of two lobes that straddle the trachea. Hypothyroidism occurs when the thyroid gland does not make enough thyroid hormone.

### About Hypothyroidism

In women, the risk of developing hypothyroidism increases with age and during pregnancy, the postpartum period, and menopause (Garber et al., 2012). Iodine deficiency is the most common cause of hypothyroidism worldwide (Vanderpump, 2011). The most common cause of hypothyroidism in the United States, Hashimoto's thyroiditis, results from damage to the thyroid gland caused by chronic inflammation initiated and sustained by one's own immune system (Zaletel & Gaberšček, 2011). This autoimmune

**Abstract** Hypothyroidism, a disease in which the thyroid gland does not make enough thyroid hormone, is the second most common endocrine disorder among women. Symptoms of hypothyroidism include fatigue, weight gain, alteration in cognition, infertility, and menstrual abnormalities. The most common cause of hypothyroidism in the United States is Hashimoto's thyroiditis. The American Thyroid Association recommends an initial screening for thyroid disease at age 35 years and every 5 years thereafter. Thyroid-stimulating hormone is highly sensitive to thyroid dysfunction and is used to evaluate thyroid disorders. Monotherapy with levothyroxine is the standard for treating hypothyroidism. Diagnosing hypothyroidism requires appropriate diagnostic tests to facilitate prompt diagnosis and treatment. <http://dx.doi.org/10.1016/j.nwh.2015.12.002>

**Keywords** hypothyroidism | levothyroxine | pregnancy | T3 | T4 | TSH



reaction results in the underproduction of thyroid hormone and is 5 to 10 times more likely to occur in women than men (Garber et al., 2012).

Medical treatments can also cause hypothyroidism. The treatment of certain thyroid conditions, such as thyroid cancer, goiter, and Graves' disease, may require surgical removal of a portion of the thyroid gland or a thyroidectomy. If enough of the gland is removed, the thyroid is unable to produce adequate thyroid

**In women, the risk of developing hypothyroidism increases with age and during pregnancy, the postpartum period, and menopause**

hormone, resulting in hypothyroidism. Additionally, some other thyroid conditions and cancers may require treatment with radioactive iodine or external radiation, which can damage the thyroid, usually resulting in overt hypothyroidism. Some medications can cause hypothyroidism by affecting the thyroid gland's production or release of hormones. Medications such as amiodarone, interferon, and lithium have

been identified as a cause of hypothyroidism (Barbesino, 2010).

### Pathophysiology

It is important to understand the function of the thyroid and the thyroid hormones—thyroid-stimulating hormone (TSH), triiodothyronine (T3), and thyroxine (T4). A normally functioning thyroid uses iodine from the diet to produce T4 and T3. The pituitary gland, about the size of a peanut and located at the base of the brain, produces TSH, which stimulates the thyroid gland to produce and release T3 and T4. Through a negative feedback loop, the pituitary produces TSH if T3 and T4 levels are low. The pituitary gland is regulated by the hypothalamus. The hypothalamus detects low levels of thyroid hormones and then responds by releasing thyrotropin-releasing hormone, which stimulates the pituitary gland to produce and release TSH to facilitate the thyroid gland to produce and release T3 and T4. This interaction continues in an effort to normalize blood levels of thyroid hormones. However, during primary hypothyroidism, disruption in the feedback loop is caused by the thyroid gland's diminished secretion of hormones. Secondary hypothyroidism produces

Box 1.

### Symptoms, Assessment, and Diagnostic Findings

Symptoms	Assessment Findings	Diagnostic Findings
Depression	Dry, coarse skin	Hyponatremia
Fatigue	Reduced body and scalp hair	Macrocytic anemia
Weight gain	Dull facial expression	Decreased memory
Constipation	Bradycardia	Hyperprolactinemia
Muscle cramps, arthralgias	Goiter	Elevated creatine kinase level
Menorrhagia	Macroglossia	Pituitary gland enlargement
Infertility	Ascites	Delayed bone age
Sexual dysfunction	Galactorrhea	Hypercholesterolemia
Cold intolerance	Slow relaxation of tendon reflexes	
Carpal tunnel syndrome	Nonpitting edema of lower extremities	
Sleep disorders	Hoarseness	

Sources: Gaitonde, Rowley, and Sweeney (2012); Orlander (2015).

Donna Dunn, PhD, CNM, FNP-BC, is an assistant professor; Carla Turner, DNP, ACNP-BC, is an instructor; both authors are at the School of Nursing, University of Alabama at Birmingham in Birmingham, AL. The authors report no conflicts of interest or relevant financial relationships. Address correspondence to: DonnaDunn@uab.edu.

Download English Version:

<https://daneshyari.com/en/article/2634266>

Download Persian Version:

<https://daneshyari.com/article/2634266>

[Daneshyari.com](https://daneshyari.com)