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## **Thyroid Disorders – Hypothyroidism**

### **Thyroid Overview**

The thyroid gland is located in the neck. It is an extremely important part of the endocrine system. It is responsible for many different functions in several systems in the body. Thyroid hormones:

- Promote basal metabolic function; regulate oxygen consumption and heat production
- Affect cardiovascular muscle contraction (heart and circulatory system)
- Stimulate bone resorption and bone formation
- Allow normal glucose metabolism, absorption, and storage
- Helps to make and breakdown essential fatty proteins that make up cholesterol components (lipoproteins)
- Affects the rate of metabolism of many hormones and medications
- Affects fetal development; secreted by the fetus beginning at 11 weeks gestation and facilitates normal fetal growth and development

If you have been told you have hypothyroidism, it means that you have an *underactive* thyroid. This is determined by a blood test that looks for the amount of TSH (thyroid stimulating hormone) and circulating thyroid hormones (T4). If your TSH was high, then that means your body is working overtime to stimulate the thyroid to work, and your circulating thyroid hormones (T4) may be low.

### **What are the symptoms of hypothyroidism?**

There are classic symptoms associated with an underactive thyroid, and they include:

- Fatigue
- Weight gain, or inability to lose weight
- Intolerance to cold temperatures/always feeling cold
- Hair loss
- Brittle, thin nails
- Chronically dry skin
- Hoarseness
- Puffiness in the face and hands
- Depression
- Irregular and heavy menstrual periods
- Constipation
- Numbness and tingling in the extremities
- Muscle aches
- Low heart rate

### **What causes hypothyroidism?**

Several things can cause hypothyroidism. Women are more likely to have thyroid problems than men, and this increases with age. There is a strong genetic link to thyroid disorders, as it is most commonly caused by genetic autoimmune dysfunction, and even the treatment for some diseases, especially head and neck cancers, can negatively affect the thyroid's normal function. Some drugs for bipolar depression, such as lithium, as well as some cardiac drugs, like amiodarone, can also cause hypothyroidism and require regular monitoring of TSH levels.

### **How is hypothyroidism treated?**

Replacement thyroid hormone medication, called levothyroxine, corrects most TSH levels and resolves symptoms. When you are first diagnosed with hypothyroidism, your healthcare provider will begin medication based on your TSH level, age and other risk factors. It is important to take only the dose that you are prescribed. Levothyroxine must be taken in the morning, on an empty stomach and at least one half hour before all medications and foods. Some patients find it helpful to keep their medication next to their alarm clock, and take it as soon as they wake up.

Blood tests will monitor your progress every 4 – 6 weeks until you are at a normalized TSH level and feel resolution of your symptoms. Frequent adjustments to your medication may be required during the first few months of treatment to find the ideal dose for your body.

Contact your healthcare provider if you develop a relapse of symptoms despite medication. Likewise, if you have any of the following signs or symptoms when taking your medication, contact your provider as your dose may need adjusting:

- Rapid heartbeat or palpitations
- Anxiety, irritability, nervousness
- Significant weight loss
- Dry eyes, blurry vision
- Shortness of breath or increased breathing rate
- Diarrhea or increased stooling during the day
- Loss of menstrual period
- Intolerance to heat/hot flashes
- Excessive sweating
- Insomnia

Failure to replace thyroid hormone can result in very serious health problems and lead to coma and death. Make sure all your care providers are aware of all of your medications and health problems, and discuss any concerns with your providers.

If you are hypothyroid and you are pregnant, your medication will need to be adjusted and most likely increased during the course of the pregnancy. Failure to appropriately replace thyroid hormone during pregnancy can result in mental retardation, low birth weight, preeclampsia, and loss of the pregnancy.