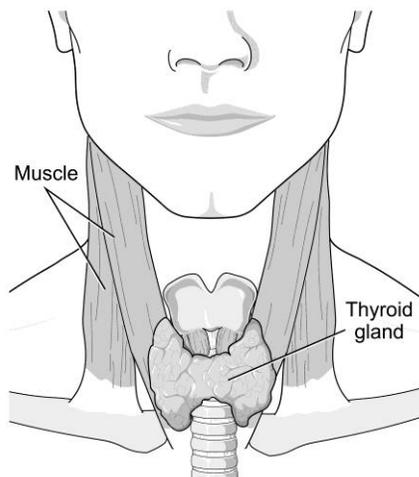


Congenital Hypothyroidism

What is the thyroid gland?

The thyroid is a butterfly-shaped gland in the front of the neck. The cells in a normal, healthy thyroid send out hormones, thyroxine (T4) and triiodothyronine (T3). The brain sends a message to the thyroid (thyroid stimulating hormone, TSH) that controls production of these two hormones. The thyroid sends them into the bloodstream. The blood carries these hormones everywhere in your child's body.



Thyroid hormones affect almost every tissue and organ system. They act on a number of organs to aid in growth, body and brain growth, and normal metabolism. The thyroid gland acts like the body's "gas pedal" because it affects the rates of growth, muscle contraction, metabolism, and protein building.

What is congenital hypothyroidism?

Newborn babies with an absent or an under-active thyroid gland have congenital (born with) hypothyroidism (too little thyroid hormone). Without treatment, these children would not grow or develop normally. Early diagnosis and treatment can prevent these problems. In most cases, the deficiency in thyroid hormone production will not go away and the child will require lifelong treatment.

How is congenital hypothyroidism diagnosed?

There are standard screening tests at birth. These tests detect almost all cases of congenital hypothyroidism. These tests measure one or two hormones, depending on the state where the baby is born.

- T4 is one of the thyroid hormones.
- Thyroid Stimulating Hormone (TSH) is produced by the pituitary gland in the brain. It tells the thyroid gland to make thyroid hormones. TSH is used as the newborn screen in Wisconsin.

Low levels of T4 and high levels of TSH suggest a diagnosis of congenital hypothyroidism. Although it is often not needed or recommended for many babies, doctors may occasionally decide to do a thyroid scan or an ultrasound exam. These tests look at the size and location of the thyroid or find out if it is missing altogether.

What are the causes of congenital hypothyroidism that are not inherited?

- Underdeveloped thyroid gland.
- Missing thyroid gland.
- Thyroid gland that developed in the wrong spot.
- Problems with the pituitary gland (most are not inherited, a few rarely are).
- Less commonly, the mother's thyroid disease or medicine taken during pregnancy can cause temporary congenital hypothyroidism

What are the causes of congenital hypothyroidism that can be inherited?

- Defects in steps of the process of making thyroid hormone.

What is the treatment?

Hypothyroidism is treated with a thyroid replacement pill. It is important for the baby to get this pill at the same time **every day**. Make it part of a routine that works for both the baby and the caregiver so it is not forgotten. In most cases, the child will always need to take this pill, even as an adult.

How does a baby take a pill?

Babies can take the pill crushed in these liquids: formula, breast milk, or water. The pill is crushed and given in a **small amount** (a few teaspoons) of any of the liquids listed above in several ways.

- A nipple detached from its bottle.
- A medicine dropper.
- An oral syringe.

It is critical not to use too much liquid. **Never put the medicine in a baby bottle. The baby might only drink part and not get enough medicine.** The nurse will teach parents and caregivers how to give the medicine.

It is very important that this pill be taken **every day**. A growing child will need different doses of thyroid hormone. As the child gets bigger, the doses will change. The doctor will do a blood test to make sure the dose is the right amount for the child's size. The doctor may make changes until the dose is just right. If you have any concerns about your child, call your doctor or nurse. Babies need thyroid hormone for their brains to develop so remember to give the medicine **every day**.

Pediatric Endocrinology: **(608) 263-6420**

After hours, this number is answered by the paging operator. Ask for the endocrinologist on call. Leave your name and phone number with the area code. The doctor will call you back.

If you live out of the area, call:
1-800-323-8942.

Reference

Congenital Hypothyroidism. Hormones and You. The Hormone Foundation. Editors: Brown, Rosalind S MD; LaFranchi, Stephen MD; Rose, Susan MD.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 4/2017. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7140