

* This TelAbility Handout discusses the definition, causes, symptoms, and treatments of hypothyroidism *

WHAT IS HYPOTHYROIDISM?

Hypothyroidism occurs when there is not enough production of thyroid hormones.

The thyroid gland, located in the front of the neck, produces and releases thyroid hormones. These hormones help control the body's metabolism.

The secretion of these hormones into the body is directed by the pituitary gland and the hypothalamus (a part of the brain). Hypothyroidism can occur because of problems with the thyroid gland, or with the signals to the thyroid from the pituitary gland or hypothalamus.

In hypothyroidism, the thyroid gland in the neck may be small or large (called a goiter), depending upon the cause of the low levels of thyroid hormone.

WHAT CAUSES HYPOTHYROIDISM?

Causes of childhood hypothyroidism include congenital hypothyroidism (see below), brain injury, surgical removal of the thyroid gland, radiation therapy, or inflammation of the thyroid.

Hypothyroidism is also more commonly found in Down syndrome, occurring at birth or happening later on in life. Children with Down syndrome should have thyroid testing done each year to see if thyroid supplementation is necessary.

WHAT IS CONGENITAL HYPOTHYROIDISM?

Congenital hypothyroidism is present at birth and is one of the preventable causes of mental retardation if diagnosed within the first 3 months of life. Major complications can be prevented if it is diagnosed early and the child is started on thyroid hormone replacement therapy. While diagnosis is difficult because signs and symptoms are not apparent at birth and appear gradually, hospitals across the country perform routine newborn screening tests to detect hypothyroidism as early as possible.

(continued)

HOW CAN YOU TELL WHEN A CHILD HAS HYPOTHYROIDISM?

Hypothyroidism may cause a variety of symptoms and may affect all body functions. Some of the more common symptoms seen in children with hypothyroidism include:

- Developmental delay
- Growth delay
- Excessive weight gain
- Mental retardation
- Dry skin
- Difficulty tolerating cold temperatures
- Constipation
- Obstructive sleep apnea

HOW CAN YOU TREAT HYPOTHYROIDISM?

Hypothyroidism is treated by giving the body the extra thyroid hormone that it can't make on its own. A medicine called Levothyroxine is given and the lowest dose effective in relieving symptoms and normalizing the thyroid hormone levels in the body is used. Life-long therapy is needed. Medication must be continued even when symptoms improve. Thyroid hormone levels should be monitored yearly after a stable dose of medication is determined as children may need more Levothyroxine as they grow.

WHAT HAPPENS IF YOU TAKE TOO MUCH MEDICINE?

After starting on the thyroid hormone replacement, it's important to not only make sure that symptoms of hypothyroidism have improved or gone away, but also to watch out for any symptoms of too much thyroid activity such as restlessness, sudden weight loss, and/or sweating.

AUTHOR: Joshua Alexander, MD pdrehab@med.unc.edu
LAST UPDATED: May 31, 2004

REFERENCES:

Medline Plus <http://www.nlm.nih.gov/medlineplus/ency/article/000353.htm>