

Growth Hormone Deficiency



Knowledge
to grow by

Models throughout are used for illustrative purposes only.



What does it mean if the doctor says your child has short stature? It means your child is much shorter than average for his or her age group. There are many reasons for a child to be shorter than average.

In some cases, a child may be short simply because being short runs in the family. In other cases, a child is short because of a medical issue that affects growth.

If your child is shorter than average, he or she may be sent to an endocrinologist. This doctor is a specialist who is trained to diagnose and treat children with growth disorders. The endocrinologist will evaluate your child to find the cause of your child's slow or poor growth. If there is a medical condition, the doctor can suggest medicines that may help your child grow.

Growth hormone deficiency

What does it mean if the doctor says your child has growth hormone deficiency, or GHD? It means that your child's body does not make enough growth hormone. Growth hormone is needed for growth during childhood. Not enough growth hormone can cause poor growth in children.

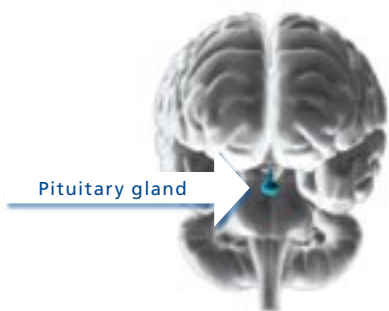
It is important to know that GHD is not life-threatening. Most children with GHD are otherwise healthy. They may show no signs of illness or other medical conditions. If growth hormone deficiency is the cause of your child's slow growth, there are medicines that may help.

About growth hormone

Hormones are key factors in a child's growth. Hormones are chemical messengers. They are made in glands and sent through the blood to other parts of the body. They deliver messages that tell the body to perform certain tasks.

One hormone that is important for a child's growth is growth hormone. It is made by the pituitary gland. The pituitary gland is a small organ in the body. It is the size of a pea and sits in the middle of the head at the bottom of the brain, just behind the nose.

The pituitary gland sends growth hormone into the body where it causes bone growth. Growth hormone helps the cells in a child's bones to grow and divide. Growth in the bones, especially the spine and the leg bones, makes a child taller.





What causes growth hormone deficiency?

There are many possible causes of growth hormone deficiency. In some cases, GHD results from a birth defect and may appear in infancy. In other cases GHD happens after birth, and may appear in later childhood. Sometimes GHD appears alone. Other times GHD happens along with other pituitary hormone deficiencies.

Diagnosing growth hormone deficiency

Before diagnosing your child with GHD, the doctor will check for other causes of poor growth. Your child will be given a physical exam. The doctor will review your child's medical and family history. He or she will also look at your child's pattern of growth and may run standard blood tests.

If your child shows no signs of other conditions, the doctor may test for GHD.

Growth hormone deficiency and growth charts

Doctors and nurses use growth charts to track a child's height and weight over time. They also use these charts to compare a child's height and weight with the statistical norm. This is the average height and weight of other children who are the same sex and age. Separate growth charts are used for girls and for boys.

In general, most children grow at least 2 to 2 1/2 inches every year between age 3 and puberty. Puberty usually starts between ages 9 and 13 in girls, and between ages 11 and 15 in boys. There is a special set of growth charts for children under 3 years of age (from birth to 36 months). A child with GHD tends to grow less than 2 inches per year.

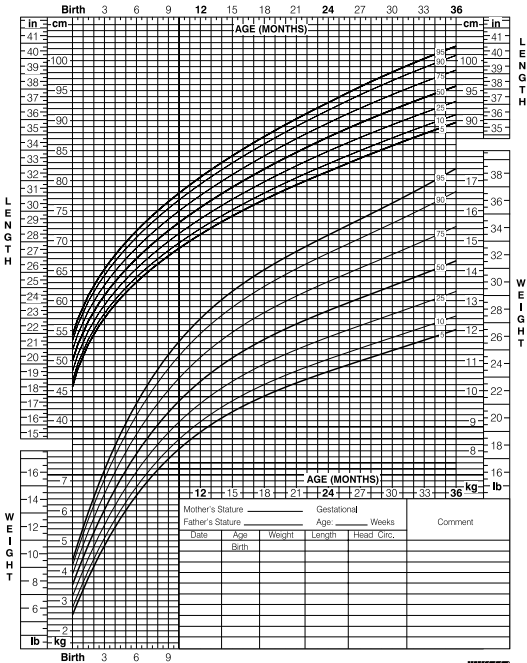
Each growth chart has lines, called percentile curves or percentiles. These lines represent the percentage of children at the same height or weight for that age group.

A percentile is a way to show ranking. For example, if a 10-year-old girl is in the 50th percentile for height, that means 50 percent of 10-year-old girls are taller and 50 percent are shorter than she is.

On the other hand, if a 2-year-old boy is in the 5th percentile for height, that means 95 percent of 2-year-old boys are taller and 5 percent are shorter than he is.

Birth to 36 months: Boys
Length-for-age and Weight-for-age percentiles

NAME _____
 RECORD # _____



Published May 30, 2000 (modified 4/20/01).
 SOURCE: Developed by the National Center for Health Statistics in collaboration with
 the National Center for Chronic Disease Prevention and Health Promotion (2000).
<http://www.cdc.gov/growthcharts>



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Growth chart for boys from birth to 36 months.

To record your child's growth, the doctor will draw a line connecting height measurements for your child at several points. This is called a growth curve. The growth curve for most children usually falls along one of the percentiles on the growth chart. The doctor will also draw similar lines for weight.

Children with growth hormone deficiency are shorter than other children who are the same age. Children with GHD may have a growth curve that is often below the 5th percentile for a long period of time.

Stimulation testing

Some doctors use a stimulation test, or stim test, to check for growth hormone deficiency. A stimulation test is a procedure used to measure the blood level of growth hormone produced by the pituitary gland in response to stimulation. The pituitary gland makes growth hormone. This test is performed to measure the body's ability to release the appropriate amount of growth hormone under controlled circumstances.

During the stimulation test, your child will usually receive two medicines to artificially stimulate the pituitary gland to produce human growth hormone. This test is typically used to identify growth hormone deficiency as a cause of poor growth.

Treatment

Treatment with growth hormone therapy may help children with growth hormone deficiency reach an adult height within their genetic potential. Treatment is done through daily injections of synthetic, or man-made, growth hormone. This is growth hormone produced in a lab and is identical to human growth hormone.

Response to treatment depends on the following factors:

- Age at the start of growth hormone treatment
- How long growth hormone treatment is given
- Growth hormone dose
- Compliance with treatment
- Heights of parents

Follow-up visits

After diagnosing your child with GHD, the doctor will likely ask for regular follow-up visits. He or she will monitor your child's growth to make sure the growth hormone treatment is working well. If needed, the doctor will adjust the dose of growth hormone to ensure the best results.




Support your child

The self-esteem of children with short stature has much to do with how they see their bodies. Children who feel good about themselves and who feel loved by their families may feel fine about their short stature.

Many children may face social challenges because of their height. Treatment with growth hormone therapy may help him or her grow to an average adult height.

Remind your child that a person's worth has nothing to do with height. But it has everything to do with who that person is.

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