

GROWTH HORMONE DEFICIENCY

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The somatotroph cells of the anterior pituitary gland produce growth hormone. releasing hormone and is inhibited by somatostatin, both of which are produced by the hypothalamus. This problem may happen if the person does not produce enough growth hormone. Most of the time, the cause of growth hormone deficiency is unknown. It may be present at birth (congenital) or develop as the result of an injury or medical condition. Severe brain injury may also cause growth hormone deficiency.

Children with physical defects of the face and skull, such as cleft lip or cleft palate, may have poorly developed pituitary glands and decreased growth hormone level. The child's growth may range from flat (no growth) to very shallow (minimal growth). Although it is uncommon, growth hormone deficiency may also be diagnosed in adults. Possible causes include: tumors involving the pituitary gland or hypothalamus in the brain, severe head injury.

Children with growth hormone deficiency have a slow or flat rate of growth, usually less than 2 inches per year. The slow growth may not appear until a child is 2 or 3 years old. The child will be much shorter than most or all children of the same age.

Children with growth hormone deficiency still have normal body proportions, as well as normal intelligence. A physical examination - including weight, height, and body proportions -- will show signs of slowed growth rate. The child will not follow the normal growth curves. Hand x-ray (usually the left hand) can determine bone age. Normally, the size and shape of bones change as a person grows. These changes can be seen on an x-ray and usually follow a pattern as a child grows older.

Testing for growth deficiency requires more than a simple blood test. Testing is usually done after your child's pediatrician has explored other causes of poor growth.

Growth hormone causes the body to make insulin-like growth factor and insulin-like growth factor binding protein 3 Tests can measure these growth factors.

Magnetic resonance imaging (MRI) of the head can show the hypothalamus and pituitary glands.

Tests to measure other hormones levels (lack of growth hormone may not be the only problem) may be done. Treatment involves growth hormone injections given at home. Patients often receive a growth hormone injection once a day. Side effect: headache, fluid retention, muscle and joint aches.