

Insulin-like Growth Factor Deficiency

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M a j o r A s p e c t s o f G r o w t h I n C h i l d r e n

The MAGIC Foundation is a national non-profit organization created to provide support services for the families of children afflicted with a wide variety of chronic and/or critical disorders, syndromes and diseases that affect a child's growth. Some of the diagnoses are quite common while others are very rare.

MAGIC

Continues and develops through membership fees, corporate sponsorship, private donations and fundraising.

Insulin-like Growth Factor Deficiency



The MAGIC Foundation®
For Children's Growth

Not an illusion or magical, but the
caring for children and their families

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Dedicated to the growth and overall
development of children

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Insulin-like Growth Factor Deficiency

IGFD



A child's growth is one of the best indications of good health. Physicians frequently track a child's growth to see that he or she is developing with a normal growth pattern. The normal growth

curve falls between the 3rd and the 97th percentile of all children. However, children who are shorter than 97.5 percent of their peers of the same age and sex can be described as having short stature.

There are many reasons that can lead to a child having short stature, including poor nutrition, family history and constitutional growth delay, where growth is experienced later than his or her peers. Underlying medical conditions such as chromosomal defects, kidney, lung, heart or gastrointestinal disease can also cause growth failure.

These short stature children may also have low levels of hormones that are associated with normal growth. For example, having low levels of pituitary growth hormone causes growth failure. This hormonal deficiency in growth hormone can lead to low levels of insulin-like growth factor-1, or IGF-1, a hormone made primarily in the liver that determines much of the growth-promoting effects of growth hormone.

Some children, however, experience poor growth despite possessing normal or even higher amounts of growth hormone. Because the underlying cause of this short stature is not understood, such children are sometimes given a diagnosis of idiopathic short stature or ISS. However, some ISS children have been found to have low levels of IGF-1 despite having normal to high growth hormone. These children are now described as having a newly identified endocrine condition called Primary Insulin-like Growth Factor Deficiency, or Primary IGFD, a term that describes lower levels of IGF-1, that directly explains the poor growth.

The diagnosis of Primary IGFD is made by identifying a growth or short stature problem by ruling out other underlying diseases or causes of poor growth and eliminating the possibility of growth hormone

Primary IGFD can now be treated with hormone products recently approved by the Food and Drug Administration that have proven effective in this new diagnosis

When all of these conditions are met, a doctor may diagnose the condition as Primary IGFD. Primary IGFD may be divided into moderate and severe forms based on how low the IGF-1 levels are relative to other children of the same age as well as the degree of short stature.

Primary IGFD can now be treated with hormone products recently approved by the Food and Drug Administration that have proven effective in this new diagnosis, safely leading to improvements in children's growth and in adult stature.

Doctors can perform additional tests including treatment trials to determine which treatment is best for any particular child.

For more information or to network with other families of children with IGFD, contact MAGIC.

