

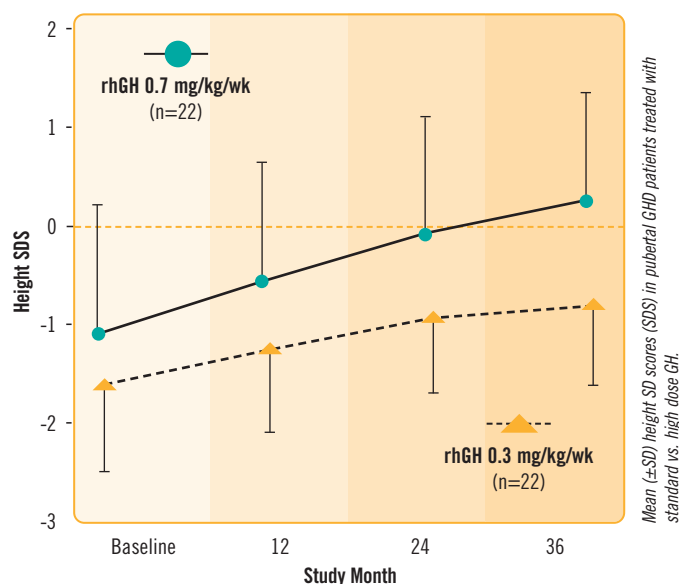
Increasing the dose when it matters

Treating GH deficiency during puberty

The suggested dose of Nutropin AQ or Nutropin for pubertal patients who are lagging behind in growth is up to 0.7 g/kg/wk.

Remaining alert to the timing and duration of puberty and increasing the dose during this finite window of time are proving to be successful strategies for increasing final height in GH-deficient patients.¹

Three-year Mean Height SD Scores of GH-treated Patients¹



Of GHD patients receiving therapy for 36 months, those in the high-dose group (0.7 mg/kg/wk) had a significantly greater mean change in height SD score vs. the standard-dose group (0.3 mg/kg/wk), 1.4 ± 0.8 vs. 0.9 ± 0.7 , respectively. Patients treated with 0.7 mg/kg/wk were more likely to have elevated IGF-I levels. The clinical significance of this is unknown.

Adapted from Maurus et al.

Indications

Pediatric Patients

Nutropin AQ® [somatropin (rDNA origin) injection] and Nutropin® [somatropin (rDNA origin) for injection] are indicated for the long-term treatment of growth failure due to a lack of adequate endogenous GH secretion.

Important Safety Information

Contraindications

GH therapy should not be initiated to treat patients with acute critical illness due to complications following open heart or abdominal surgery, multiple accidental trauma, or to patients having acute respiratory failure.

Nutropin AQ and Nutropin for injection should not be used for growth promotion in pediatric patients with closed epiphyses.

Nutropin AQ and Nutropin should not be used in patients with active neoplasia. GH therapy should be discontinued if evidence of neoplasia develops.

GH is contraindicated in patients with Prader-Willi syndrome who are severely obese or have severe respiratory impairment (see **WARNINGS** in full prescribing information). Unless patients with Prader-Willi syndrome also have a diagnosis of GH deficiency, Nutropin AQ and Nutropin are not indicated for the long-term treatment of pediatric patients who have growth failure due to genetically confirmed Prader-Willi syndrome.

Precautions

Nutropin AQ and Nutropin should be prescribed by physicians experienced in the diagnosis and management of patients with GH deficiency. Because GH may reduce insulin sensitivity, patients should be monitored for signs of glucose intolerance.

For more information, visit us at Nutropin.com or call **1-866-NUTROPIN (1-866-688-7674)**.







Please see accompanying full prescribing information for Nutropin AQ and Nutropin for additional safety considerations.

Genentech

Nutropin AQ Pen® 10
for use with **Nutropin AQ Pen 10 mg Cartridge**
[somatropin (rDNA origin) injection]











Nutropin AQ®
[somatropin (rDNA origin) injection]
Nutropin®
[somatropin (rDNA origin) for injection]

BOYS

	Testicular Size ²	Pubic Hair
STAGE 1	Length: <2.5 cm Volume: 1,2,3 mL	None 
STAGE 2	Length: >2.5–3.3 cm Volume: >3,4,5,6,8 mL	Sparse growth at base of penis 
STAGE 3	Length: >3.3–4.0 cm Volume: >10,12,15 mL	Darker, coarser, curly hair over junction of pubes 
STAGE 4	Length: >4.0–4.5 cm Volume: >15,20 mL	• Adult pattern • No spread to medial surface of thigh 
STAGE 5	Length: >4.5 cm Volume: >25 mL	• Adult in quantity and type, but in inverse triangle • Spread to medial thighs, but not to linea alba 
STAGE 6		• Adult pattern with extension to linea alba and lower abdomen 

Orchidometer — To quantify a boy's genital development, clinicians use an orchidometer to measure the volume of the testes. To use this device, the physician first palpates the testes, then locates the bead on the orchidometer that corresponds in size.

GIRLS

Breasts	Pubic Hair	
<ul style="list-style-type: none"> • No palpable glandular tissue • Areola not pigmented • Breast does not project from wall 	None 	STAGE 1
<ul style="list-style-type: none"> • Glandular tissue palpable, continuous to diameter of areola • Nipple and breast project as single mound 	Occasional wispy strands along labia 	STAGE 2
<ul style="list-style-type: none"> • Glandular tissue beyond areola • Nipples are enlarged and becoming pigmented • Contours of breast and areola in single plane 	Darker and coarser hairs extending superiorly over pubis 	STAGE 3
<ul style="list-style-type: none"> • Further enlargement of breast • Increased areola pigmentation • Areola and nipple form second mound on breast 	Dark, coarse, curly hair covering mons pubis in adult pattern, but not extending to thighs 	STAGE 4
Areola and nipple no longer project from breast 	Same as stage 4, but extends to thighs 	STAGE 5

References:

1. Mauras N, Attie KM, Reiter EO, Saenger P, Baptista J, and the Genentech, Inc., Cooperative Study Group. High dose recombinant human growth hormone (GH) treatment of GH-deficient patients in puberty increases near-final height: a randomized, multicenter trial. *J Clin Endocrinol Metab.* 2000;85(10):3653-3660.
2. Lee P. Puberty and its disorders. In: Lifshitz F, ed. *Pediatric Endocrinology Fourth Edition Revised and Expanded.* New York, NY:Marcel-Dekker. 2003:211-238.

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