

Tikrit University

College of Nursing

Clinical Nursing Sciences



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Child Health Nursing



Growth hormone deficiency

by:

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Growth hormone deficiency (Pituitary gland)

1. Hypofunction (**low GH**) during childhood= **short stature**
2. Hyperfunction (**high GH**) during childhood= **gigantism**
3. Hyperfunction (**high GH**) during adulthood= **acromegaly**
4. Idiopathic hypopituitarism usually related to GH deficiency, which inhibits somatic growth in all cells of body.
5. Boys outnumber girls three to one
6. Most children with hypopituitarism are normal at birth, then progressively deviate from the normal growth rate.
7. The chief complaint is often short stature.

Clinical Manifestations

Children with GH deficiency often grow normally during the first year and then follow a slowed growth curve that is below the 3rd percentile.

Early signs include hypoglycemia, micropenis

Height may be stunted more than weight, these children can become overweight or even obese.

Their well-nourished appearance (differentiation from other disorders such as failure to thrive).

Skeletal proportions are normal for the age, but these children appear younger than their chronologic age.

Bone age is delayed but is closely related to height age.

underdeveloped jaw, teeth overcrowded and malpositioned.

normal intelligence, emotional problems are common.

If low weight + short stature (malnutrition or systemic illness)

Overweight + short stature (endocrine disease)

1. Cushing syndrome,
2. Hypothyroidism,
3. GH deficiency

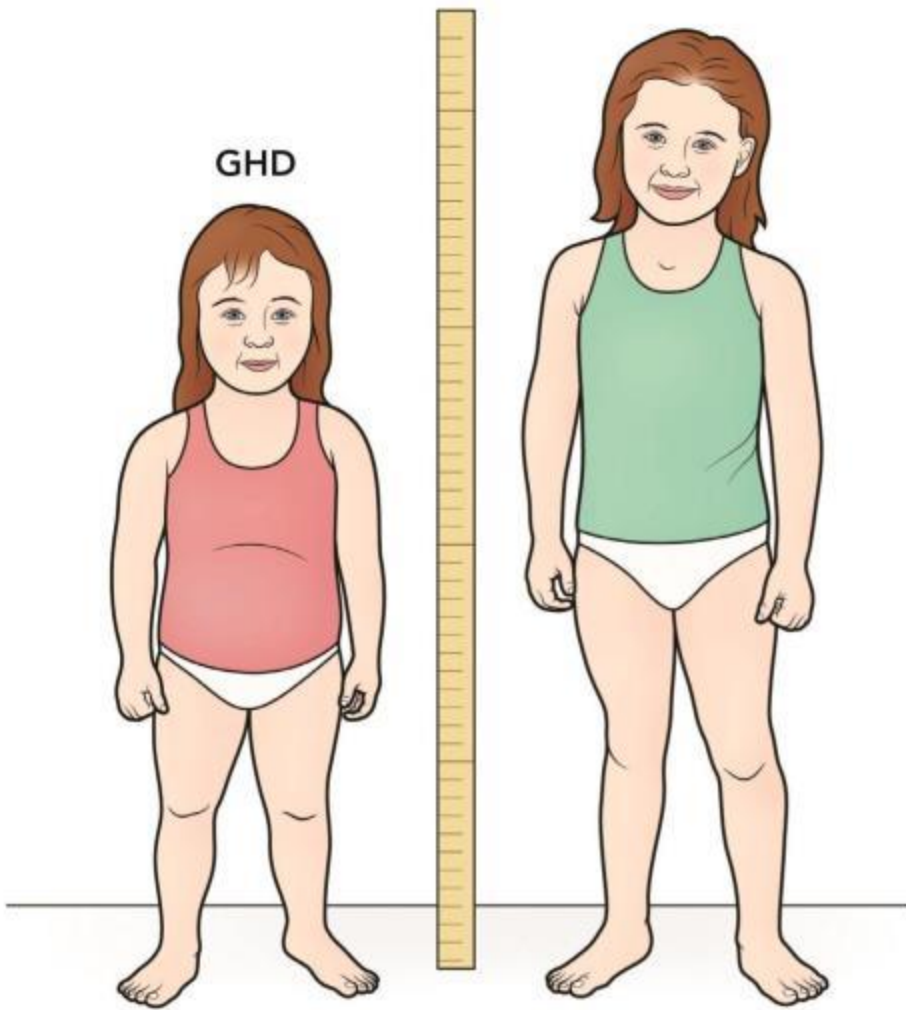
Investigation:

1. Growth hormone stimulation test
2. Serum thyroxin (T3+T4+TSH)
3. bone age
4. (ITT) (IGF1) decreased in short stature

Treatment of GH deficiency

GH 24 units /square meter/week divided in to daily bedtime SC injection

Other causes of short stature may benefit from GH



GHD

Children of the same age



Growth charts are used to compare a child's height and weight to a standard range

 ADAM.



GH STIMULATION TEST

- done to find out if pituitary gland is releasing GH in right amounts.
- Medicines will be used to stimulate pituitary gland to release GH :
 - Clonidine
 - Cortrosyn
 - Glucagon