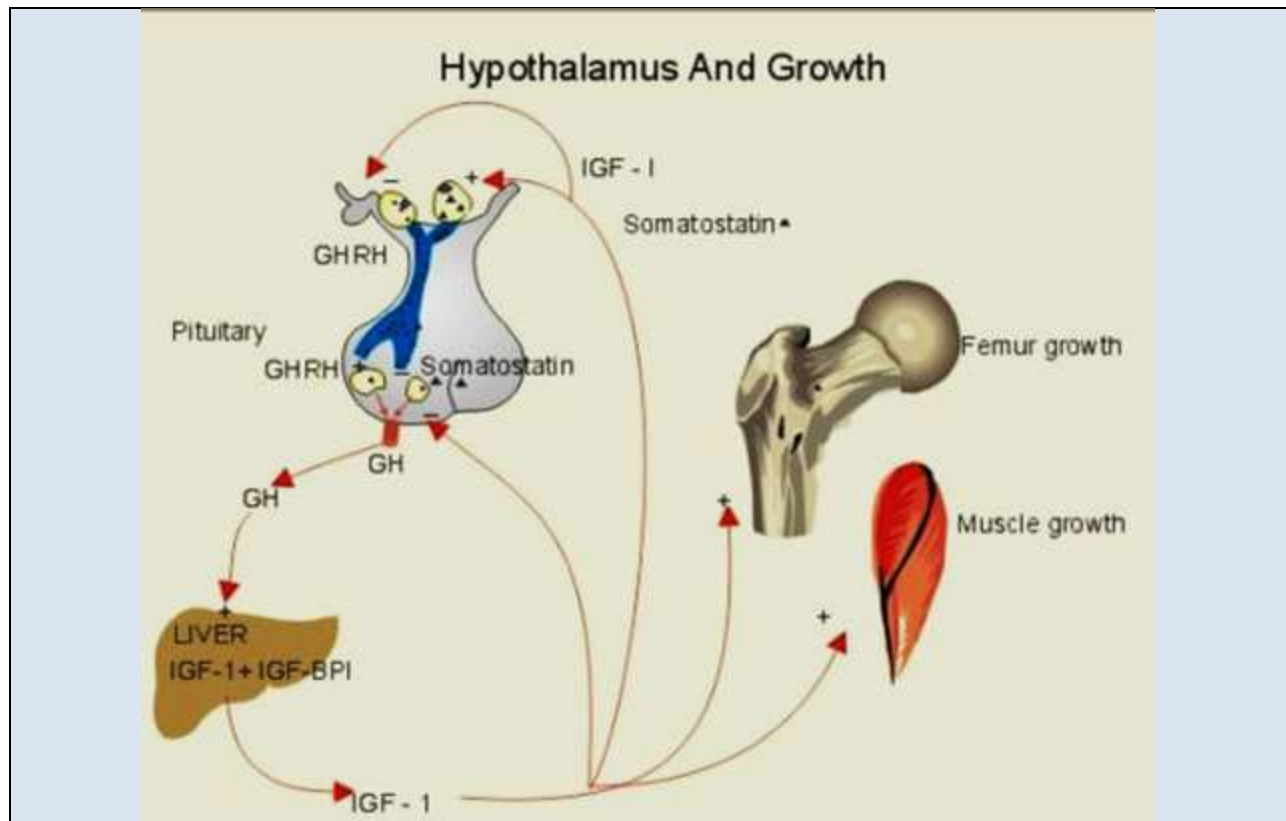


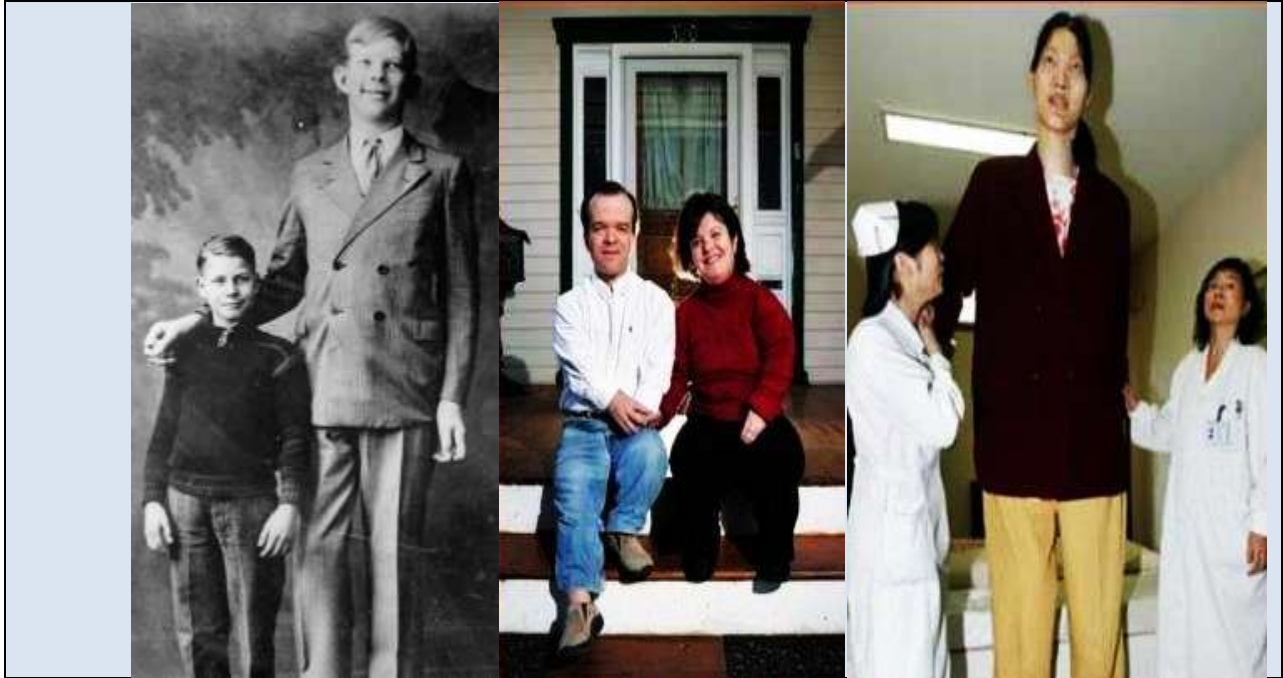
XXIII. Diseases of the Endocrines



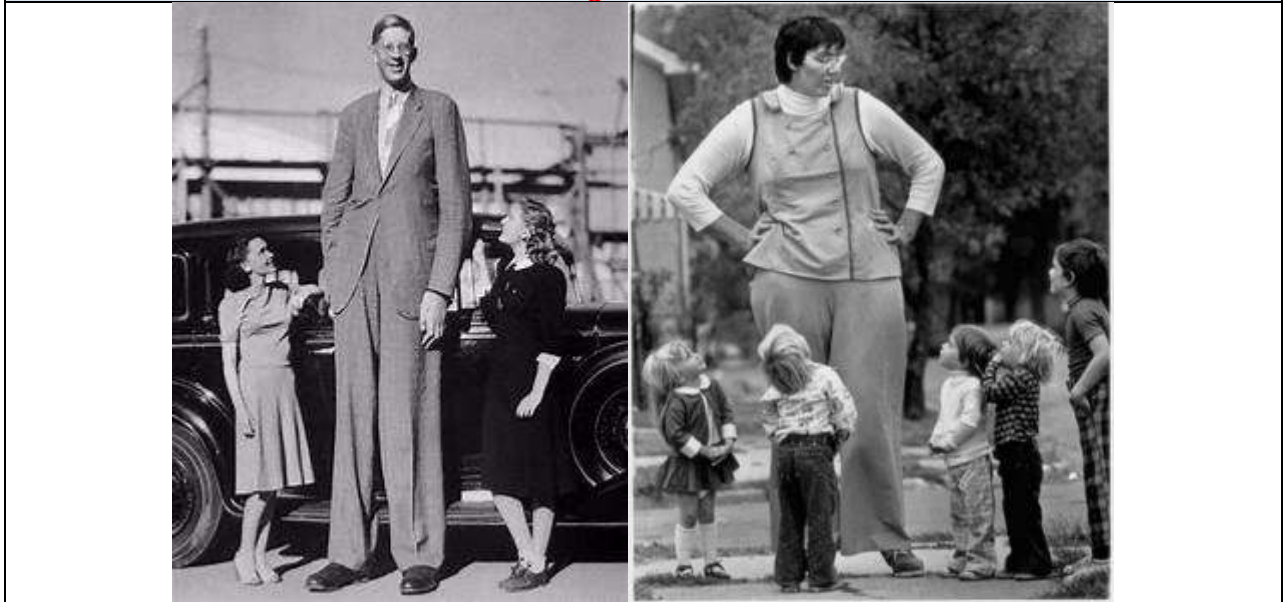
N.B. 5

Hyperpituitarism :

- A- If the growth-producing hormone is increased** (by acidophil adenoma or hyperplasia) →
1. **Gigantism** (before puberty and closure of epiphysis) or
 2. **Acromegaly** after complete ossification and after epiphyseal union).



Gigantism :



Gigantism :

1. Features:

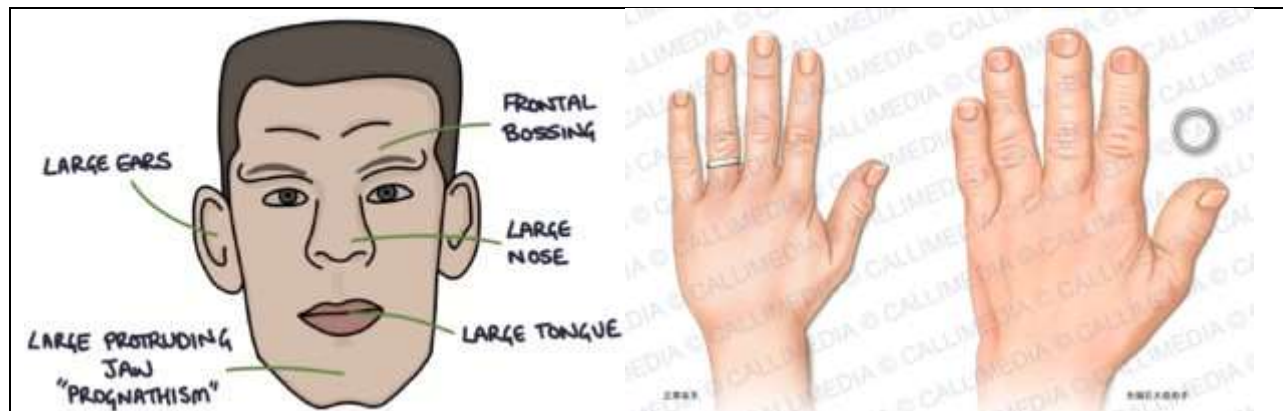
1. In children; and, may be precipitated by some infection or fever.
2. Excessive rapid growth of connective tissue and bone;
The marked elongation of bone is symmetrical:
 - Lower half of body is longer than upper half
 - Hands and feet are well-formed and too long
 - Shoulders are narrow.
2. Enormous air sinuses in skull.
3. Bony exostoses at insertion of muscles.
4. This is followed out by (or is associated with) hypofunction of the sexual capacity (due to pressure-atrophy on the basophil cells) :
 - Amenorrhea
 - Sexual impotence in male.
 - Diminished mental power and muscular strength.
5. Expanded Sella.
6. *Death may be due to diabetes mellitus (pituitary activity may inhibit insulin)*



Acromegaly.

Features:

1. *Adult age (20—40 years).*
2. The growth is in bulk especially of **extremities**.
3. Hypertrophy of skin and connective tissue (of lips, tongue, nose, hands and feet).
 - The organs become huge, clumsy and boggy.
 - The skin and subcutaneous tissue →thick and deeply furrowed → sweating and thick hair.



4. **General thickening of bone and its growth in bulk (not in length) :**

- Extremities and peripheral portions → short and flat bones.
- Lower jaw (mandible) → prognathous; teeth are widely-separated.
- Face and skull → large:
 - Scalp is corrugated
 - Supra-orbital ridges and frontal sinuses are bulging.

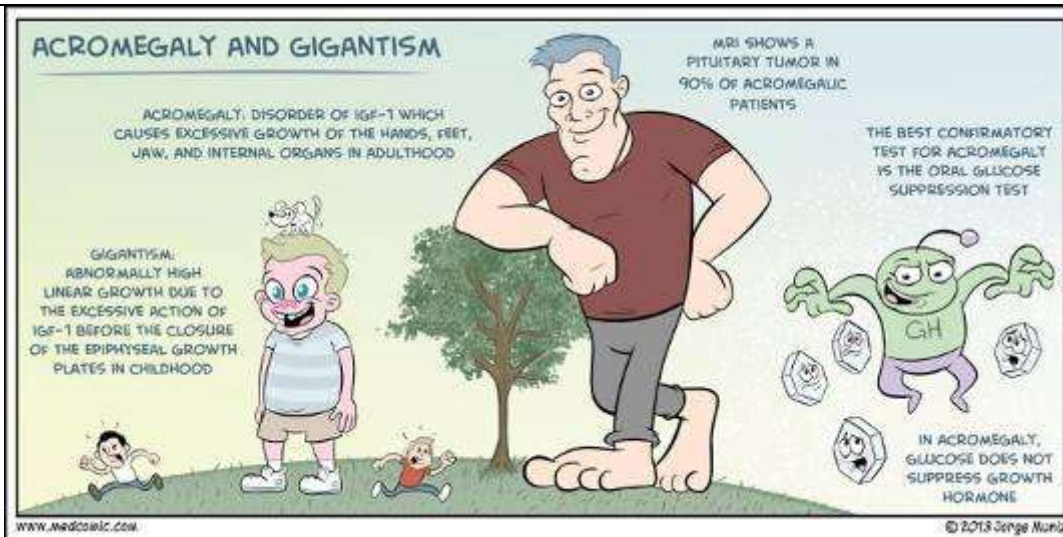


5. Kyphosis (overgrowth of vertebrae more than of ligaments).

6. Enlargement of viscera > heavy organs (heart and spleen) -- > *macrosplanchnia*.

7.

- **At first (during the active stage) there may be:**
 - (a) Enlarged thyroid, Parathyroids and adrenals.
 - (b) Raised basal metabolic rate.
 - (c) Increased sexual excitement.
- **Later on in advanced cases):**
 - (a) Hypopituitarism of basophil cells:
 - Impotence (male).
 - Amenorrhea (female) Depression of secondary sex characters → sterility.
 - (b) Symptoms related to posterior pituitary and hypothalamus:
 - Impaired carbohydrate metabolism → glycosuria.
 - Adiposity.
 - Somnolence.



3. Complications:

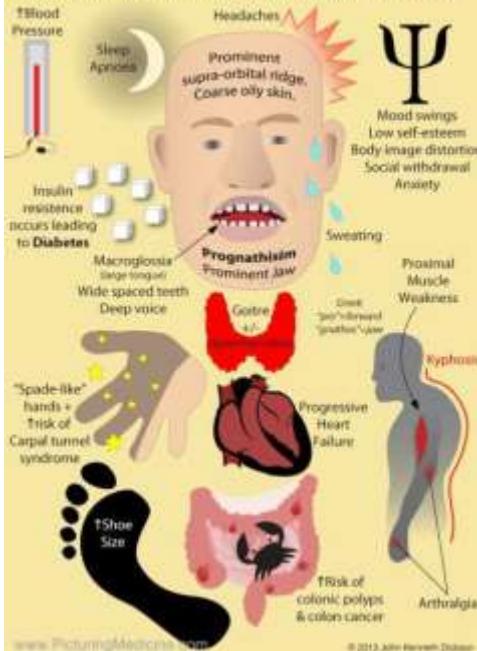
A- Local pressure symptoms particularly on the optic chiasma:

- Bitemporal field defects.
- **Panhypopituitarism** due to destruction of the remains of the pituitary.

B- If the gonadotropic hormone is increased > **Cushing's syndrome**.

Acromegaly

Caused by over-secretion of **growth hormone (GH)** from the **pituitary gland**. The condition is rare and tends to present between 30 and 50 years of age.



HYPERPITUITARY-ACROMEGALY

* **Diagnosis** - ↑ Serum Somatotropin (growth hormone)
 X-Rays, MRI
 Physical Exam
 Oral glucose challenge test - level does not ↓

* **Complications** - ↑ ICP & Enlarged Tumor
 ↑ Blood Sugar

* **Clinical Manifestations** -

- Enlarged Pituitary Gland
- Headache
- Visual Disturbances
- Slanting Forehead
- Coarse Facial Features
- Protruding Jaw
- ↑ BP, CHF
- Menstrual Changes
- Sleep Apnea
- Hypertrophy of Soft Tissue Such as Tongue, Skin and Visceral Organs
- Enlargement Of Small Bones In The Hands And Feet



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Andre the Giant
 (1946-1993)
 → Professional wrestler
 → Actor (The Princess Bride)
 → Suffered from acromegaly, which is a dysfunction of the pituitary gland, causing excessive largeness.





ADDISON'S DISEASE

