**The Endocrine System**

* Diseases
* **Disorders of the Pituitary Gland**

**DWARFISM:**

-A condition when a certain person grows up to 2 – 4 feet (when fully grown)

-This happens when the nervous system is disrupted, growth hormones are the ones damaged.

- The insulin from the pancreas and thyroxine from the thyroid gland is also deeply affected, and helps add to the risk of having this disorder.

-Sometimes, Dwarfism isnt caused by lack of growth hormones, instead, is caused from malnutrition in the kidney area.

-A person which suffers from a lack of any of the major growth hormones during childhood will regain some back until it is has the right amount (but will be smaller than suppose to be)

-This is usually the cause on why some people look much more younger or smaller than regular people, usually stops growing in their twenties above. (Has puberty late)

**GIGANTISM:**

-It is a condition when a person grows abnormally tall because something was affected in their pituitary gland. He can grow until 9 feet, even if his/her parent is way smaller than that. (The person is muscularly weak)

-This happens when the pituitary gland releases to much growth hormones during childhood, causing thickening of the plates of soft tissues near the end of the bones.

-The cartilage continues to grow through the years and absorbs new layers of the bone tissue.

-Treatment to Gigantism begins during childhood, involving radiation to decrease of the pituitary action.

-It is caused by a Pituitary tumor which has to be removed through surgery.

**ACROMEGALY:**

-An abnormal condition which is caused by overgrowth in the bones, face, feet, and hands (due to the excess growth hormones released by the pituitary gland in adulthood)

-A person grows taller when the long bones go through a certain structure called: “epiphyseal growth plate.”

-A growth plate is a thin disk of cartilage between the metaphysis and epiphysis. (helps a person grow)

-The growth plate normally stops when the person reaches adult height.

-But if the pituitary gland still releases growth hormones after reaching the adult height, can lead to Acromegaly, which can also come from a pituitary tumor.

* **Disorders of the Parathyroid Gland**

-When it is sick or damaged, there is abnormally increase in the amount of parathormone in the blood, which leads to a small amount of calcium

**TETANY:**

(severe calcium deficiancy)

-This is a very serious and dangerous disease involving chronic muscle spasm.

-Deficiency of parathormone results of decrease in the blood

calcium and increase of blood phosphorus.

-If left intended, it could leave the patient DEAD.

**OVERACTIVITY :**

-You can find this disorder when the patient is diagnose with parathyroid tumors or known as hyperplasma (increased growth) of the normal glands.

-This disorder increase blood calcium and decreases blood phosphorus.

-Because calcium is being drawn away from the bones, the bones unhardened, turning them soft.

-Calcium can also be carried to and deposited in the soft tissue of the body.

* **Disorders of the Thyroid Gland**

-The disorders listed below results in many physical, emotional, or mental problem

HYPERTHYROIDISM or OVERACTIVE THYROID.

-Results when there is an overproduction of thyroid hormones. To much of thyroid hormones can result into biological problems.

**Symptoms** **are:**

* Sweating
* Excessive nervousness
* Insomnia
* Diarrhea

-Hyperthyroidism is accompanied with bulging eyes called “graves disease”

-There are no certain ways on how to cure this certain disorder. One of the treatment is to surgically remove half of the thyroid gland.

-Drugs can also be use to decrease the thyroid productions. In some cases, radioactive form of iodine is used to destroy the gland

**HYPOTHYROIDISM or UNDERACTIVE THYROID**: (also can occur in infants as well as adults)

-Happens when there is a low production of thyroid hormones.

- This disorder affects the child physically and mentally.

**Symptoms are:**

* Dry Skin
* Hair becomes thin and brittle
* Slow speech
* Slow reflex's
* Poor memory
* Constipation
* Fatigue
* Low body temperature
* Mental and physical sluggishness
* Gain weight

-Hypothyroidism can cause retardation, can be detected in a new born child. If not treated fast, it can lead to physical and mental retardation or called “cretinism”.

**CRETINISM:**

-This is a form of dwarfism and mental retardation in infants. Babies which are diagnose with cretinism are called cretins.

-They are born with undeveloped brains and poorly formed skeletons.

-Cretinism results when the thyroid glands of newborn child’s fail to function during its development inside its mother. (this usually takes place during the 12th week of being pregnant)

**GOITER:**

-It is a condition when the thyroid gland enlarge or swells leaving a bump on his/her neck (mostly).

-Goiter develops when the thyroid gland is not active enough because it has reach its level of being active.

- When the thyroid gland is not active enough, the condition is called HYPOTHYROIDISM, while if it is overactive it is called HYPERTHYROIDISM.

-Iodine deficiency can also cause an enlargement of the thyroid gland.

-To prevent this problem, small amount of potassium or sodium iodide must be added to a table of salt. (pure iodine is poisonous, prevent from eating eat at all cause)

-You have a lot to choose from when treating goiters. Some prescribe iodized salt and food rich in iodine to iodine-deficient patient.

-But the best one is removing it through surgery.