## **NAME: MICHEAL CHISOM IMMACULATE**

**DEPARTMENT: PHARMACOLOGY**

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## **What is the pituitary gland?**

The pituitary gland is a part of your endocrine system. The pituitary gland sits on the under portion of the brain. It is often referred as the master gland and makes a variety of hormones that are important in controlling hormonal systems through the body. The pituitary gland controls the thyroid gland, adrenocorticotropic gland, the reproductive hormones as well as prolactin. It is a very important gland for the sustainability of life.

## **Pituitary gland condition symptoms in children**

In children with hypopituitarism from birth (congenital hypopituitarism), the anterior pituitary may be small and the posterior pituitary placed in an abnormal position.

Such children often have several **hormone deficiencies** including growth hormone deficiency.

In some children, the optic nerves are thin (Optic Nerve Hypoplasia) and accompanied by the absence of a midline curtain-like structure, the septum pellucidum.

The combination of these problems may be associated with hypopituitarism, a condition called Septo Optic Dysplasia.

In this condition, there may be problems with fluid balance hormones. This is called [Diabetes Insipidus](https://www.pituitary.org.uk/information/pituitary-conditions/diabetes-insipidus/), or water diabetes.

#### Brain tumours

#### In some, hypopituitarism can also be due to brain tumours or head injury. The commonest brain tumour in children causing hypopituitarism is a Craniopharyngioma.

This tumour starts from the hypothalamus, the part of the brain above the pituitary gland. The tumour can press on the optic nerves and cause loss of vision.

In most children with hypopituitarism, **growth** is slow due to growth hormone deficiency.

Rarely, the pituitary gland can be large due to a tumour within the gland. Such a tumour may produce excess ACTH and cause a condition called Cushing's disease, in which the child becomes overweight. In others, prolactin may be in excess, with milk secretion from the nipples.

#### Some symptoms in children can include:

* Poor growth
* Loss of vision
* Excessive drinking
* Excessive frequency of passing urine
* Tiredness
* Overweight
* Late puberty
* Early puberty
* Milk secretion

## **Pituitary gland conditions**

## Several conditions can affect your pituitary gland. Most are caused by a tumor in or around the pituitary gland. This can impact the release of hormones.

**Examples of pituitary gland disorders include:**

* **Pituitary tumors:** Pituitary tumors are usually noncancerous. However, they often interfere with the release of hormones. They can also press against other areas of your brain, leading to vision problems or headaches.
* **Hypopituitarism:** This condition causes your pituitary gland to produce [very little](https://www.healthline.com/health/hypopituitarism) or none of one or more of its hormones. This can affect things like growth or reproductive system function.
* **Acromegaly:** In this condition, your pituitary gland produces [too much](https://www.healthline.com/health/acromegaly) growth hormone. This can lead to excessive growth, especially of your hands and feet. It’s often associated with pituitary tumors.
* **Diabetes insipidus:** This can be caused by a problem with the release of vasopressin. It’s usually due to a head injury, surgery, or a tumor. As a result, people with [this condition](https://www.healthline.com/health/type-2-diabetes/diabetes-insipidus) pass large amounts of heavily diluted urine. They may also feel like they need to drink a lot of water or other fluids.
* **Cushing’s disease:** The pituitary gland releases too much adrenocorticotropic hormone in people with [this condition](https://www.healthline.com/health/cushings-disease). This can lead to easy bruising, high blood pressure, weakness, and weight gain. It’s often caused by a tumor near or in the pituitary gland.
* **Hyperprolactinemia:** In this condition, your blood contains an unusually high amount of prolactin. This can lead to infertility and a decreased sex drive.
* **Traumatic brain injury:** This involves a sudden blow to your brain. Depending on the injury, it can sometimes damage your pituitary gland and cause problems with memory, communication, or behavior.

The following list shows many of the symptoms associated with pituitary conditions.

* Headaches
* Vision problems
* Unexplained weight gain
* Loss of libido
* Feeling dizzy and nauseous
* Pale complexion
* Muscle wasting
* Coarsening of facial features
* Enlarged hands and feet
* Excessive sweating and oily skin
* Moon face (with reddened skin on face)
* Carpal Tunnel Syndrome

**Other pituitary conditions**

#### Multiple Endocrine Neoplasia (MEN)

MEN syndromes are inherited disorders (passed down in families).

The disorder causes more than one gland in the body’s endocrine system to develop growths. The affected glands may then produce abnormally increased amounts of hormones which in turn cause a variety of different symptoms.

Diagnosis is made when a patient has two or more growths common to MEN, or a patient has only one growth, but there is a family history of MEN.

#### Lymphocytic Hypophysitis

Another cause of hypopituitarism that may be associated with pregnancy is lymphocytic hypophysitis.

This is due to inflammation in the pituitary caused by immune cells. The reasons why this occurs is not understood.

With modern obstetric practice the occurrence of hypopituitarism after childbirth, though uncommon, is more frequently due to this condition than Sheehan’s syndrome.

[**Drugs Affecting the Pituitary Gland**](https://image.slideserve.com/400871/drugs-affecting-the-pituitary-gland-l.jpg)

• Anterior Pituitary Gland

Conditions treated are those of abnormal growth, specifically:

\* Dwarfism

\* Acromegaly

\* Gigantism

[**Anterior Pituitary Drugs**](https://image.slideserve.com/400871/anterior-pituitary-drugs-l.jpg)

**Dwarfism**

• Somatrem (protropin)

• Somatropin (hymatrope)

• Both are similar to endogenous growth hormone

• Side effects include:

\* Pain

\* Redness at injection site

[**Anterior Pituitary Drugs**](https://image.slideserve.com/400871/anterior-pituitary-drugs4-l.jpg)

**Acromegaly & Gigantism**

Treatment of choice is surgical removal of the tumor

• Octreotide (sandostatin)

\* Synthetic drug similar to somatostatin.

\* Inhibits the release of growth hormone

\* Side effects include: bradycardia, diarrhea and stomach distress

[**Posterior Pituitary Drugs**](https://image.slideserve.com/400871/posterior-pituitary-drugs-l.jpg)

• Two posterior hormones are oxytocin and antidiuretic hormone.

• Antidiuretic analogues are used to treat diabetes insipidus, nocturnal enuresis (bedwetting). • ADH can cause vasoconstriction and increased BP.

• Other names: Vasopressin (pitressin), desmopressin (stimate), lypressin (diapid)