

PITUITARY GLAND

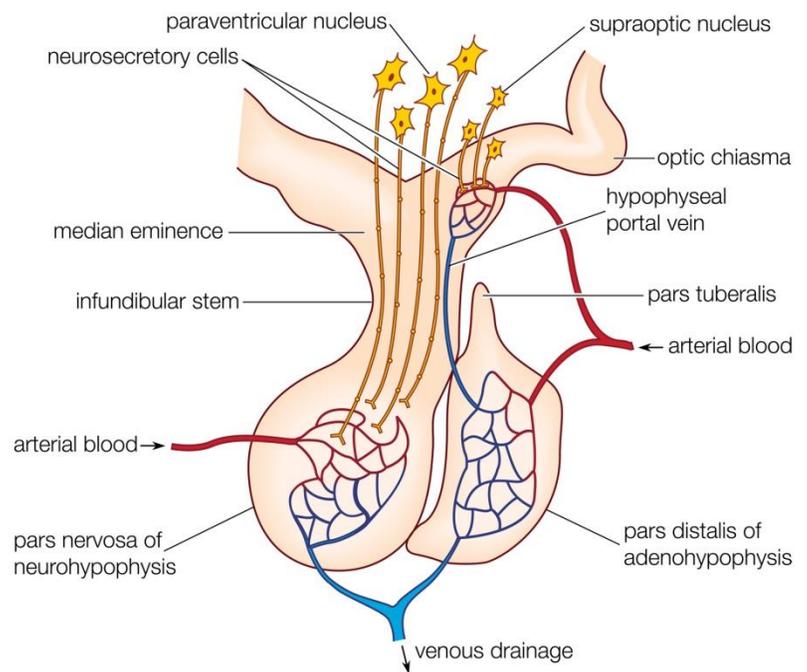
INTRODUCTION

The pituitary gland is a small pea-sized gland that plays a major role in regulating vital body functions and general wellbeing. It is referred to as the body's 'master gland' because it controls the activity of most other hormone-secreting glands.

The pituitary gland is a small gland that sits in the *sella turcica* ('Turkish saddle'), a bony hollow in the base of the skull, underneath the brain and behind the bridge of the nose. The pituitary gland has two main parts, the anterior pituitary gland and the posterior pituitary gland. The gland is attached to a part of the brain (the hypothalamus) that controls its activity. The anterior pituitary gland is connected to the brain by short blood vessels. The posterior pituitary gland is actually part of the brain and it secretes hormones directly into the bloodstream under the command of the brain.

ANATOMY

The pituitary gland is small and oval-shaped. It's located behind your nose, near the underside of your brain. It's attached to the hypothalamus by a stalklike structure. The hypothalamus is a small area of your brain. It's very important in controlling the balance of your bodily functions. It controls the release of hormones from



the pituitary gland.

The pituitary gland can be divided into two different parts: the anterior and posterior lobes.

Anterior lobe

The anterior lobe of your pituitary gland is made up of several different types of cells that produce and release different types of hormones, including:

- Growth hormone.- Growth hormone regulates growth and physical development. It can stimulate growth in almost all of your tissues. Its primary targets are bones and muscles.
- Thyroid-stimulating hormone. This hormone activates your thyroid to release thyroid hormones. Your thyroid gland and the hormones it produces are crucial for metabolism.
- Adrenocorticotrophic hormone- This hormone stimulates your adrenal glands to produce cortisol and other hormones.
- Follicle-stimulating hormone.-Follicle-stimulating hormone is involved with estrogen secretion and the growth of egg cells in women. It's also important for sperm cell production in men.
- Luteinizing hormone- Luteinizing hormone is involved in the production of estrogen in women and testosterone in men.
- Prolactin- Prolactin helps women who are breastfeeding produce milk.
- Endorphins- Endorphins have pain-relieving properties and are thought to be connected to the "pleasure centers" of the brain.
- Enkephalins- Enkephalins are closely related to endorphins and have similar pain-relieving effects.
- Beta-melanocyte-stimulating hormone. This hormone helps to stimulate increased pigmentation of your skin in response to exposure to ultraviolet radiation.

Posterior lobe

The posterior lobe of the pituitary gland also secretes hormones. These hormones are usually produced in your hypothalamus and stored in the posterior lobe until they're released.

Hormones stored in the posterior lobe include:

- Vasopressin.-This is also called antidiuretic hormone. It helps your body conserve water and prevent dehydration.
- Oxytocin- This hormone stimulates the release of breast milk. It also stimulates contractions of the uterus during labor.