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...menstrual cycle may have a tumor in the pituitary gland without knowing it.



Multidisciplinary Pituitary & Skull Base Tumor Center

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People with pituitary tumors generally have a good prognosis, but even the most benign forms can regrow after treatment and become problematic. In rare cases, pituitary tumors can become cancerous.

The [treatment](#) recommended by your doctor largely depends on the [symptoms](#) you are having, if any. Symptoms are usually associated with the size and location of the tumor. Or symptoms may arise when a tumor secretes a hormone, resulting in a hormone imbalance in the body.

[Surgery](#) is the primary treatment recommended for most pituitary tumors. For many people, that's the only treatment needed. Others, particularly those with [prolactinomas](#), may need medications or [radiation therapy](#).

Learning as much as you can about your diagnosis can help you feel better prepared to speak with doctors about your possible treatment options and care. This guide is a good place to begin. Take your time.

## About the Pituitary Gland and its Anatomy

VIDEO | 01:36

### About Your Transsphenoidal Surgery

Learn about transsphenoidal surgery at MSK in this short animation.

[Video Details](#) →

The pituitary gland is a pea-size structure located in the sella, a space in the center of the brain, just below the hypothalamus and behind the nose, close to the optic nerves. It is made up of two lobes, an anterior lobe called the adenohypophysis and a posterior lobe called neurohypophysis, respectively. The area where two lobes meet is called Rathke's pouch.

### What does the Pituitary Gland Do?

The pituitary gland plays an important role in the functioning of the endocrine system, the group of glands that produces and releases hormones in the body.

Doctors often refer to the pituitary gland as the master gland because, along with the hypothalamus, it controls the release of hormones from the other endocrine glands, such as the thyroid and the adrenal glands.

## Types of Pituitary Gland Tumors

Most pituitary gland tumors are classified as [pituitary adenomas](#). "Adenoma" refers to a benign tumor that begins in glandular tissue. Sometimes adenomas can continue to grow very rapidly even while being treated—these are known as [aggressive pituitary tumors](#). Pituitary adenomas can become cancerous (called pituitary carcinomas), but these cases are extremely rare.

With the exception of nonfunctioning adenomas, pituitary gland adenomas are classified by the type of hormone they secrete.

[ACTH-Secreting Adenomas](#) These pituitary tumors make a hormone called adrenocorticotropic hormone (ACTH). When the body makes too much ACTH, it results in excess cortisol production from the adrenal glands and causes a disorder known as Cushing's disease.

[Growth Hormone–Secreting Adenomas](#) Growth hormone–secreting adenomas can cause a disorder known as acromegaly in adults. In children, the condition is known as gigantism.

[Prolactin-Secreting Adenomas](#) The most common type of pituitary tumor, prolactin-secreting adenomas, also known as prolactinomas, can usually be treated with certain medications.

[TSH-Secreting Pituitary Adenomas](#) These pituitary tumors produce excess thyroid-stimulating hormone, causing the thyroid gland to

become overactive.

#### Gonadotropin-Secreting Adenomas

Tumors in the pituitary gland that secrete reproductive hormones such as follicle-stimulating hormone (FSH) and luteinizing hormone (LH), called gonadotropin-secreting adenomas, are extremely rare. The primary treatment for these tumors is transsphenoidal surgery. Radiation may also be used as the sole treatment if the tumor cannot be removed surgically, or if the tumor regrows after surgery.

[Nonfunctioning Pituitary Adenomas](#) These pituitary tumors do not produce hormones, but they can inhibit the secretion of pituitary hormones from the normal gland, resulting in hypopituitarism, or hormone deficiency.

Other pituitary conditions usually associated with pituitary tumors include [craniopharyngiomas](#), which are benign brain tumors found in or around the pituitary gland, and [Rathke's cleft cyst](#), which is a fluid-filled sac that occurs in the parts of the pituitary gland.

## Pituitary Tumor Risk Factors and Potential Causes

Certain rare inherited genetic conditions can increase a person's chance of developing a pituitary tumor. These conditions include:

multiple endocrine neoplasia (MEN) types 1 or 4: a syndrome that causes tumors to form in the endocrine glands, including the pituitary gland

McCune Albright syndrome: a rare condition that affects the bones, the skin, and the endocrine glands

Carney complex: a rare disorder that causes skin spots and tumors of the skin, nervous system, and heart.



Brain Tumor Remote Second Opinions from Neurosurgeons at MSK

Learn how to get a remote second opinion about your brain cancer or benign tumor diagnosis from MSK neurosurgeons.

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Monday through Friday, 9 a.m. to 5 p.m. (Eastern time)

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