



Pituitary Tumors

WHAT IS THE PITUITARY GLAND?

The pituitary gland is about the size of a pea and is located at the base of the brain, behind the nose. The pituitary makes many different kinds of hormones. In turn, each hormone sends signals to other glands or organs in the body to do a specific job. For example, they affect growth, metabolism, bone health, production of sex hormones, and more.

DID YOU KNOW?

Because the pituitary affects so many functions of the body, it is called the "master gland."

WHAT ARE PITUITARY TUMORS?

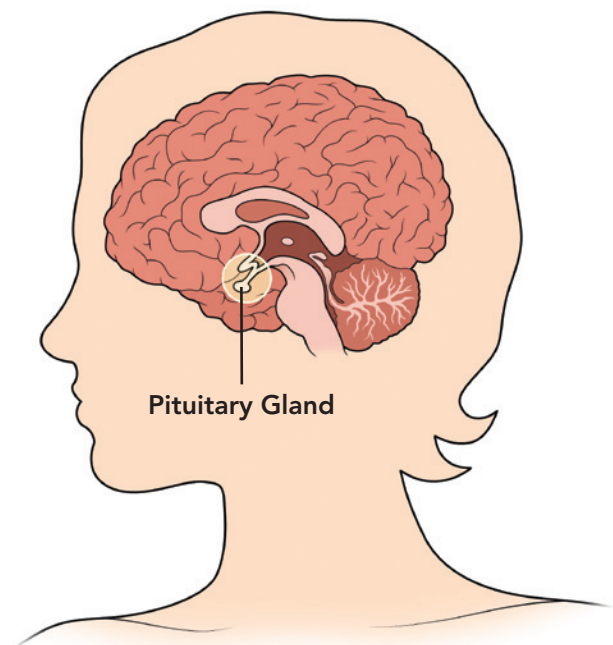
Pituitary tumors are small, abnormal growths in the pituitary gland. Such tumors are almost always benign (not cancerous), but can cause hormonal imbalances and interfere with the normal function of the pituitary gland.

There are two types of pituitary tumors: secretory (which make hormones) and non-secretory (which don't make hormones). Secretory tumors can cause various problems depending on the hormone that the tumor produces. Non-secretory tumors, if they become large, can cause problems by pressing against the pituitary gland or the brain. This pressure can interfere with normal pituitary function. Tumors less than 1 centimeter (cm) in size are called microadenomas, which rarely cause problems. Macroadenomas (1 cm or larger) are more likely to press on the pituitary or nearby structures.

WHAT ARE THE SYMPTOMS OF PITUITARY TUMORS?

Symptoms of pituitary tumors vary depending on whether they are caused by the tumor mass or hormonal changes (either too much or too little hormone). The symptoms also vary from person to person.

The list of possible symptoms is long. Symptoms of tumor mass pressure can include headaches and trouble seeing. Symptoms of low pituitary hormones include fatigue, dizziness, dry skin, irregular periods in women, and sexual dysfunction in men.



Other symptoms depend on the hormone that is affected. ACTH-producing tumors can cause Cushing's disease. Growth hormone-producing tumors can cause acromegaly. Prolactin-producing tumors can cause irregular or absent menstrual periods in women. They can also cause a woman's breasts to make milk, even if she's not pregnant. In men, these tumors can cause sexual dysfunction and breast enlargement. These conditions can have serious health risks.

HORMONES OF THE PITUITARY GLAND		
Hormone	Affects . . .	To (action)
Prolactin	Breasts	Produce milk for nursing a baby
Growth hormone (GH)	Many areas of the body	Control growth and metabolism
Adreno-corticotropic hormone (ACTH)	Adrenal gland	Produce cortisol, needed to handle stress and blood pressure
Thyroid-stimulating hormone (TSH)	Thyroid gland	Produce thyroid hormone, which helps regulate metabolism
Luteinizing hormone (LH) and follicle-stimulating hormone (FSH)	Ovaries and testes	Control reproduction

HOW ARE PITUITARY TUMORS DIAGNOSED?

After evaluating your symptoms, your doctor will order blood tests to measure hormone levels. Your doctor will also order an MRI (magnetic resonance imaging) scan to look at the pituitary and other structures around it. If a pituitary tumor is found, more blood tests will be done to find out what type of tumor it is. Your doctor needs to know the type of tumor to plan treatment. Testing may also be needed to see if the tumor is affecting your vision.

HOW ARE PITUITARY TUMORS TREATED?

Treatment depends on the type of tumor, how large it is, what your symptoms it is causing, and your age and overall health. Your doctor will work to find the best treatment option for you. Some types of tumors can be treated with medication alone or can be observed over time for any changes. Other types of tumors require surgery, or a combination of treatments, including radiation therapy.

If you think you might have a problem with your pituitary gland, you should see a specialist. An endocrinologist is an expert in hormone-related conditions who can diagnose and treat your condition.

Questions to ask your doctor

- What kind of tumor do I have?
- How will my tumor affect my health?
- What treatment do I need for it?
- What are the risks and benefits of each of my treatment options?
- Should I see an endocrinologist?

RESOURCES

- Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
- MedlinePlus (National Institutes of Health-NIH): www.nlm.nih.gov/medlineplus/pituitarytumors.html
- National Cancer Institute (NIH): www.cancer.gov/cancertopics/pdq/treatment/pituitary/patient
- Mayo Clinic: www.mayoclinic.com/health/pituitary-tumors/DS00533
- Pituitary Society: www.pituitarysociety.org/public

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.

