

The Hormone Foundation's Patient Guide to Pituitary Incidentaloma Assessment and Treatment

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The *pituitary* is an important gland near the base of the brain that makes different types of hormones, which in turn control many functions of the body. A *pituitary incidentaloma* is a tumor or other lesion (an area of abnormal tissue) on or near the pituitary gland. It is found when a person has an imaging test for an unrelated reason. Doctors call this an “incidental” finding, meaning by chance—thus, the name *incidentaloma*.

This surprise finding is more common than you might think. In studies of adults who had head imaging with MRI (magnetic resonance imaging) or CT (computed tomography) scans for reasons other than pituitary disease, small incidentalomas were present in up to 20 percent of patients. People may find out they have this lesion when they get imaging after a neck or head injury, or because they have symptoms that are due to something else.

Suddenly finding out that you have a pituitary lesion may seem scary. The good news is that these lesions are almost always benign (not cancerous) and seldom need surgery. However, they sometimes can interfere with the normal function of the pituitary gland or cause a hormone imbalance.

This guide for patients is based on The Endocrine Society's practice guidelines for physicians about the diagnosis and treatment of pituitary incidentaloma in adults.

What are the types of pituitary incidentalomas?

The most common type of incidentaloma is a benign pituitary tumor called an *adenoma*. Other incidentalomas are benign growths near the pituitary that are not tumors. They can interfere with the gland in much the same way as tumors. These growths include congenital (present at birth) cysts called *Rathke's cleft cysts* and *craniopharyngiomas*. This guide applies the term *lesion* to both tumors and non-tumor growths.

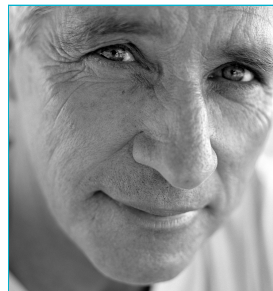
Some pituitary tumors are *secretory*, meaning they make hormones. If the tumor makes too many hormones, it is *hypersecreting*. One common type of hypersecreting adenoma is a *prolactinoma*. This benign tumor makes too much prolactin, a hormone that stimulates breast milk production after childbirth and affects sex hormones.

Other pituitary tumors are *non-secretory*, meaning they do not make hormones. Based on blood testing, most incidentalomas show no evidence of hormone overproduction and most are probably non-secretory tumors.

Some incidentalomas cause the pituitary to make too few

hormones, a condition called hypopituitarism. This happens if the lesion—whether a tumor or a non-tumor growth—presses on the normal pituitary gland.

If pituitary incidentalomas are smaller than 1 centimeter (cm), which is less than 4/10 of an inch, they go by the name *micro-incidentalomas*. Those larger than 1 cm are *macro-incidentalomas*. The larger lesions are less common but are more likely to press on the pituitary or nearby tissues.



The good news is that incidentalomas are almost always benign (not cancerous) and seldom need surgery.

What are the symptoms of pituitary incidentalomas?

Since these lesions are found by chance, most of them have not caused symptoms. Most incidentalomas grow slowly and will not grow to the extent that they cause problems. That is why doctors needed guidelines for testing and treatment of patients with these lesions.

When symptoms do occur from an incidentaloma, they depend on whether the cause is pressure of the lesion (*mass effect*) or hormone changes (too many or too few hormones).

Effects of lesion pressure include:

- Headaches
- Trouble seeing, mainly loss of side vision or sometimes double vision
- Eyes not moving together because of paralysis or weakness of muscles that control eye movement



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- Pituitary apoplexy: stroke-like damage to the pituitary gland or sudden bleeding into the lesion, often causing a severe headache, vision problems, and rapid loss of pituitary function. An uncommon complication, apoplexy is a medical emergency.



All patients with an incidentaloma, even if they have no symptoms, should have a complete physical exam with an endocrinologist or other physician.

Symptoms related to low pituitary hormones include:

- Fatigue
- Dizziness
- Dry skin
- Irregular periods in women
- Sexual dysfunction

Symptoms of excess hormones vary widely, depending on the hormone affected. Just a few of the possible symptoms appear below.

Symptom	Tumor causing the symptom	Name of condition
Infertility, low sex drive, and/or bone loss; breast milk production when not pregnant	Prolactinoma	Hyperprolactinemia
Enlargement of hands, feet, and facial bones	Growth hormone-producing tumors	Acromegaly
Excess body fat around the midsection and upper back	Tumors that produce too much adrenocorticotrophic hormone (ACTH)	Cushing's disease

What tests are needed after diagnosis?

All patients with an incidentaloma, even if they have no symptoms, should have a complete physical exam with an endocrinologist or other physician. They also should have blood tests to check for abnormally high or low hormone levels.

If a CT scan found your lesion, you should get an MRI if possible. This test gives a better picture of the extent of the lesion.

You should have a visual field test if an MRI shows that your lesion is in a place where it could affect your vision. This includes a lesion next to the optic nerve (the nerve from each eye that carries images to the brain) or the optic chiasm (where the two optic nerves cross). A visual field test measures your full field of vision, including your peripheral (side) vision and central vision.

What follow-up care is recommended?

Most patients will not need surgical removal of the lesion. Few types of non-secretory incidentalomas shrink with medical treatment, so drug therapy is not routine for this type of lesion.

All patients still will need monitoring to make sure the lesion is not growing or causing health problems. Doctors sometimes call this careful observation a “watch and wait” approach. Your physician will tell you how often to return for visits and tests.

In general, experts recommend the following schedule:

- **If your lesion is smaller than 1 cm:** Get another MRI 1 year after the first one. Your doctor will tell you how often to repeat MRIs after that.
- **If your lesion is 1 cm or larger:** Get another MRI 6 months after the first one. Your doctor will tell you how often to repeat MRIs after that. Repeat tests for an underactive pituitary gland (hypopituitarism) 6 months after the first blood tests and each year after that.
- **If your lesion is growing or you have symptoms** that could be due to the lesion: Ask your doctor if you should get MRIs and blood tests more often.
- **If your lesion gets bigger so that it is on or next to your optic nerve or optic chiasm:** Get a visual field test.

When does a pituitary incidentaloma need surgery?

Doctors recommend surgery to remove the lesion if any of these problems is present:

- Vision abnormalities, such as an inability to see in part of one's field of vision (visual field deficit) or double vision caused by the tumor pressing on a nerve
- Threat to sight from the tumor sitting next to or pressing on the optic nerve or optic chiasm
- Vision problems due to pituitary apoplexy
- A hypersecreting lesion, except for a prolactinoma, which often responds to medicine

Some doctors may suggest surgery as an option when a patient has:

- Major growth of the lesion, which could cause problems
- Loss of hormone function due to hypopituitarism
- Plans to become pregnant, when the lesion is close to the optic chiasm
- Constant headaches

Surgeons often can remove the lesion through your nose (*transsphenoidal microsurgery*). In most patients who have visual field problems, vision improves after surgery.

Surgery does not always relieve headaches or hypopituitarism. Ask your doctor whether the possible benefits of surgery outweigh the potential risks.

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