

PITUITARY GLAND

What Is The Pituitary Gland?

The Pituitary Gland is often referred to as the control center of the endocrine system. This is because it controls and regulates the functions of the other endocrine glands within the body. Remarkably, this regulating gland is no larger than the size of an average pencil eraser, and is located at the base of the brain. The pituitary gland is connected to the brain via the hypothalamus. Ensuring that the pituitary gland is healthy and functioning properly is important to the body's overall well-being.

Signs & Symptoms

Ask yourself the following questions to see if you have pituitary disorder symptoms.

FOR ADULTS

How do I know if I have a Pituitary problem?

If you can answer yes to two or more of these questions, you may need to check with your endocrinologist on an appropriate course of action.

- *Have you experienced change in vision, either partial or total?*
- *Are you experiencing menstrual irregularities?*
- *Are you experiencing sexual dysfunction?*
- *Are you experiencing an enlargement of the fingers, face or forehead?*
- *Do you bruise easily?*

FOR CHILDREN

- *Are they growing at a normal rate?*
- *Are they showing signs of puberty too early? Girls before age 7? Boys before age 8?*
- *Are they drinking excessive amounts of water (more than 2 quarts per day)?*

FOR MENARCHAL GIRLS

*Do they have a milky discharge from their breasts?
Have they missed more than one period?*

If you feel that you may have symptoms, which could be caused by a pituitary tumor, you should discuss these symptoms with your physician. A detailed history and physical examination will then be done to determine

whether measurement of specific pituitary hormones is necessary, as well as formal visual field testing. If findings are suggestive that a tumor may be present, an MRI may be ordered.

Conditions

PITUITARY TUMOR

If you have been diagnosed with a pituitary tumor, please review the following supportive information.

What can I expect?

The next steps will be determined based on how the tumor was found.

- If the tumor was found as part of a routine examination, then further testing will be necessary if it exceeds a certain size or appears to press upon the visual tract on the MRI.
- If the tumor was found because of the finding of pressure symptoms or loss of pituitary function, detailed hormonal testing as well as visual evaluation is necessary.
- If the tumor was found because of over secretion of pituitary hormones, the rest of the pituitary hormones as well as visual examination are necessary.

TAKING CHARGE: KNOW YOUR STATS

After diagnosis, it often becomes necessary to share vital information about your tumor with appropriate medical personnel. Having this information at your fingertips greatly facilitates the efficiency of your physician. The following is information you should keep updated and accessible.

- *What is the size of the tumor?*
- *Is the tumor currently pressing on any vital structures?*
- *According to the current blood tests, what hormones are over secreted?*
- *What hormones are under secreted?*
- *What are my current symptoms?*

It's Good to Know

Pituitary tumors are not a common cause of medical problems. They represent only about 10% of all tumors in the head. They are not "brain tumors," since the pitu-

itary is located just below the main portion of the brain. Pituitary tumors may sometimes cause headache, but this is actually quite rare. They do not cause loss of thinking function, movement, or sensation. Many people live with pituitary problems and lead normal, healthy, happy lives. Making your endocrinologist a part of your healthcare team is a vital component in maintaining an optimal life-style while living with pituitary abnormalities.

Treatment

QUESTIONS TO ASK YOUR DOCTOR AT EACH EXAMINATION

- *How often should I come back for follow-up?*
- *What symptoms would you like me to report to you in between visits?*
- *Do I need surgery, continued medication, or radiation?*
- *Do you expect that the medication that I am currently on will be required indefinitely?*

What treatments are available for pituitary tumors?

The treatment is based upon the behavior of the pituitary gland. If it is overproducing a chemical called prolactin, then it will be treated, in most cases, with an oral medication which can reduce the over secretion of this hormone and often shrink the tumor as well. If the tumor is secreting growth hormone or another hormone called ACTH, then the gland will be treated surgically. In some cases, where surgery is postponed, additional treatment with radiotherapy is often used as additional therapy. Often no therapy is proscribed for tumors that are not over secreting any hormones and are not otherwise causing vision problems. In the event that surgery becomes necessary, it is extremely important that surgery be performed by an experienced pituitary neurosurgeon, as surgical results are dependent upon the skill and experience of the surgeon.

Medication may be required to replace the hormones which are deficient. This may include cortisone to replace inadequate adrenal function, thyroid hormone, and sex hormones (estrogen and progesterone for women, testosterone for men). Growth hormone is necessary to restore appropriate growth in children. Growth hormone deficiency in adults may be associated with symptoms of fatigue as well as abnormal weight gain and osteoporosis (thinning of the bones). Its use in adults should be discussed in detail with your endocrinologist.

What can I expect from the surgery or radiology treatments?

Generally pituitary tumors are removed by an operation called a trans-sphenoidal hypophysectomy. The pituitary gland is reached by a surgical incision on the

inside of the lip or nose that is not visible after healing. The surgeon then proceeds through the sinus cavity to reach the tumor. Complications of pituitary surgery are rare and include loss of normal pituitary function (including water balance control), and rarely infection, bleeding, or leakage of fluid from inside the brain cavity (spinal fluid). Your endocrinologist will discuss with you the surgical team in your area which is best equipped to handle your care. If you live in an area without such a team, referral to a center with experience in pituitary surgery is advised.

Radiation therapy for the pituitary may take various forms including cobalt radiation or new highly focused high-energy radiation treatment called gamma knife therapy or conformational radiotherapy used at a few centers with specialized expertise. Although all of the radiation used for pituitary radiation are safe and usually not associated with serious side effects, your endocrinologist and radiotherapist will discuss with you the specific indications, benefits and risks of your particular situation.

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