Benign Pituitary Tumor

The pituitary gland is a small, pea-sized endocrine gland in the center of the brain. Also known as “the master gland”, the pituitary gland helps control the release of hormones from other endocrine glands, such as the thyroid and adrenal glands. The pituitary gland also controls the release of hormones that directly affect body tissues, such as bones and the breast’s milk glands. These hormones include:

- Adrenocorticotropic hormone (ACTH)
- Growth hormone (GH)
- Prolactin
- Thyroid-stimulating hormone (TSH)

Symptoms of a Pituitary Tumor

A pituitary tumor is an abnormal growth that develops in the pituitary gland. Most pituitary tumors are not cancer (benign), grow slow and do not spread to other areas of the body.

Not all pituitary tumors cause symptoms. If symptoms do occur, they may be caused for two reasons:

- The size of the tumor and its effect on nearby tissues.
- The tumor releases active hormones which send signals that cause changes in the body.

What are the symptoms caused by the tumor size?

The size of the tumor and its effect on nearby tissues may cause the following symptoms:

- Headache
- Changes or loss of vision

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

• Double vision
• Dizziness
• Nausea and vomiting
• Loss of body hair
• Change in a woman’s menstrual period (fewer or no periods)
• Change or loss in the ability of a woman to make breast milk (lactate)
• Women who are not pregnant or breast feeding make milk (lactate)
• The penis fails to become or stay erect (male impotence)
• Breast development in men
• Loss of male facial hair
• Lower sex drive for both men and women
• Slow growth in children
• Confusion
• Seizures

What are the symptoms caused by the tumor releasing active hormones?

If the tumor releases active hormones it may cause the following symptoms:

• **Adrenocorticotropic hormone (ACTH)** and **Cortisol** are two hormones that are made in different glands but work together. Too much of these hormones may cause **Cushings Disease**, a hormonal disorder caused by a tumor of the pituitary gland. The following are symptoms of Cushings Disease:
  - Headache
  - Loss of vision
  - Weight gain in the face (moon face), in the neck (buffalo hump) and around the stomach
  - Purple or pink stretch marks on the stomach or chest
  - Hair growth on the face, upper back, arms
  - Bruise easily
  - Bones that are brittle or break easily
  - Depression, anxiety, change in mood
• **Prolactin** is a hormone made by the pituitary gland that causes a woman’s breasts to make milk (lactate) during and after pregnancy. Too much of this hormone may cause the following symptoms:
  - Headache
  - Loss of vision
  - Change in a woman’s menstrual period (fewer or no periods)
  - Fertility problems (unable to get pregnant)
  - Women may make breast milk (lactation) even if they are not pregnant or breast feeding
  - Lower sex drive for both men and women
  - The penis does not become or stay erect (male impotence)

• **Growth hormone** (Somatotropin) is a hormone made by the pituitary gland that controls body growth. It also helps control the sugar and fat your body uses to make energy. Too much of this hormone may cause the following symptoms:
  - Headache
  - Abnormal or increased growth of the bones in the face, hands and feet (acromegaly)
  - Numbness and tingling in the hands/fingers (carpal tunnel)
  - Snoring a lot
  - Sleep apnea (stop breathing while sleeping)
  - Joint pain
  - Sweating a lot

• **Thyroid-Stimulating hormone** (Thyrotropin) is a hormone made in the pituitary gland which is sent out in the body to the thyroid gland. Too much of this hormone may cause the following symptoms:
  - Fast or irregular heart beat
  - Abnormal shaking
  - Unplanned weight loss
  - Trouble sleeping
  - Many bowel movements
  - Sweating a lot
Benign Pituitary Tumor

How will my doctor know if I have a pituitary tumor?

Your doctor will ask questions about your past health and do a physical exam. If your doctor thinks you have a pituitary tumor, the following tests may be done:

- **Imaging**
  
  Computed Tomography (CT scan) of the head and/or a MRI (Magnetic Resonance Imaging) of the brain can show if you have a pituitary tumor, its size and location. These pictures also show if the tumor is causing problems with other parts of the brain.

- **Blood Tests**
  
  Blood tests called a “pituitary panel” can help find out if the tumor is causing any abnormal amounts of each hormone.

- **24 Hour Urine Test**
  
  This test is done to see if you have a high amount of Cortisol, which is a sign of a pituitary tumor.

- **Dexamethasone Suppression Testing**
  
  This test is done to see if your body is making too much Cortisol and to help diagnose Cushing Disease. During this test, you will receive Dexamethasone and a sample of blood or urine will be taken to check your Cortisol levels.

- **Inferior Petrosal Sinus Sampling (IPSS)**
  
  This is another test that may be done to find out if you have Cushing’s Disease. IPSS is used to find out if a high ACTH level is from a tumor in the pituitary gland.

- **Eye Exam**
  
  An eye exam is done to check your vision and the general health of your eyes.

Treatment for Benign Pituitary Tumors

Benign pituitary tumors can be treated with medicine or surgery. Depending on the type of tumor you have, your doctor will decide the treatment that is best for you. The following is a list of treatments for each type of tumor:

- **Prolactinoma**
  
  A pituitary tumor that produces high levels of Prolactin is called a Prolactinoma. Medicine is the first treatment used for this type of
tumor. The medicine shrinks the tumor and brings the Prolactin amounts back to normal. If the medicine does not work or causes side effects, then surgery would be done to remove the tumor.

- **Cushings Disease**
  Surgery is the first treatment used for pituitary tumors that cause Cushings Disease. The surgery is done to remove the tumor. If the surgery does not completely control the disease, then medicine and radiation may be given to help with symptoms.

- **Acromegaly**
  Surgery is the first treatment for pituitary tumors that cause abnormal or increased growth of the bones in the face, hands and feet. If the surgery does not completely control the disease, then medicine and radiation may be given to help with symptoms.