Benign Pituitary Tumor

The pituitary gland is a small, pea-sized endocrine gland in the center of your brain. Also known as “the master gland”, the pituitary gland helps control the release of hormones from your other endocrine glands, such as your thyroid and adrenal glands. The pituitary gland also controls the release of hormones that directly affect your body tissues, such as your bones and breast. 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 your pituitary gland. Most pituitary tumors are not cancer (benign), grow slow and do not spread to other areas of your body.

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

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

What symptoms are caused by tumor size?

The size of your tumor and its effect on nearby tissues may cause the symptoms, including:

- Headache
- Changes or loss of vision
- Double vision

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

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

What symptoms are caused by the tumor releasing active hormones?

If your 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 a hormonal disorder called **Cushings Disease**. The following are symptoms of Cushings Disease:
  - Headache
  - Loss of vision
  - Weight gain in your face (moon face), in your neck (buffalo hump) and around your stomach
  - Purple or pink stretch marks on your stomach or chest
  - Hair growth on your face, upper back, arms
  - Bruise easily
  - Bones that are brittle or break easily
  - Depression, anxiety, or changes in mood

Benign Pituitary Tumor
• **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 cycle (fewer or no periods)
  ▶ Fertility problems (unable to get pregnant)
  ▶ Women may make breast milk (lactate) even if they are not pregnant or breastfeeding
  ▶ Lower sex drive
  ▶ The penis does not become or stay erect (male impotence)

• **Growth hormone** (Somatotropin) is a hormone made by your 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 your face, hands and feet (acromegaly)
  ▶ Numbness and tingling in your hands/fingers (carpal tunnel)
  ▶ Snoring a lot
  ▶ Sleep apnea (stop breathing when you sleep)
  ▶ Joint pain
  ▶ Sweating a lot

• **Thyroid-Stimulating hormone** (Thyrotropin) is a hormone made in the pituitary gland that travels 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
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 your head and/or a MRI (Magnetic Resonance Imaging) of your 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 your brain.

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

- **24 Hour Urine Test**
  
  This test is done to see if you have a high amount of the hormone, cortisol in your body, 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 your 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 your 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 amount of prolactin back to normal. If the medicine does not work or causes side effects, then surgery is needed 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 your tumor. If the surgery does not completely control your disease, then medicine and radiation may be ordered to help with your symptoms.

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