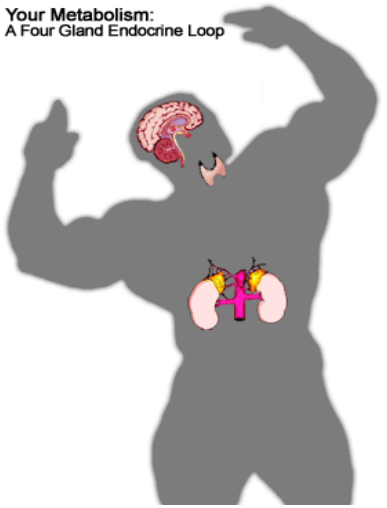
Patient/Family Guide

Vancouver Neuropituitary Program

UBC Division of Endocrinology & Metabolism

Vancouver Coastal Health



Transsphenoidal Pituitary Surgery

A Patient's Guide: Transsphenoidal Pituitary Surgery

What is the pituitary gland?

The pituitary gland is very small, about the size of a pea, and is found just below the base of the brain, behind the nose. It consists of many different kinds of cells that each produces a specific hormone. Each hormone triggers other glands or organs in the body to perform specific functions. Because the pituitary impacts so many parts of the body it is often called the master gland.

What are pituitary tumours?

Pituitary tumours are abnormal growths in the pituitary gland. These tumours are almost always benign (not cancerous), but can affect hormonal balance and can disrupt the normal functioning of the pituitary gland. The two types of pituitary tumours are: secretory (makes hormones) and non-secretory (don't make hormones). Depending on which hormone the tumour produces, a variety of imbalances can occur. If non-secretory tumours become large (1cm or larger), they can press against the pituitary gland or the brain and cause problems with normal pituitary function.

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EMD Serono

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Vancouver General Hospital, June 2012.

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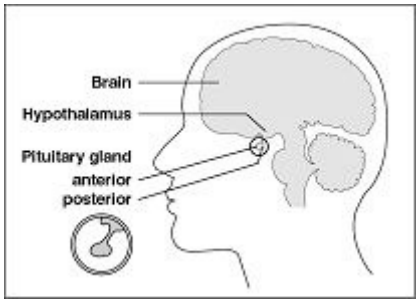
Also ask us for these materials:

- Information booklets
- Medication Guidelines & coverage
- Adrenal insufficiency book
- Hypopituitarism brochure and hand-outs
- Lab tests
- Endocrine links & support groups
- Travel letters

When is surgery needed?



Your doctor has recommended surgery as the best treatment to remove your tumour. The pituitary gland is often best reached through one of the nostrils. This is called **transsphenoidal surgery**, which means "through the sphenoid sinus".

The surgeon removes a small piece of bone to reach the pituitary gland and the tumour. The tumour is often removed using an endoscope (fine telescope). The surgery is often performed by a neurosurgeon and an otolaryngology ("ENT") surgeon.

The goal of surgery is to relieve symptoms, confirm a diagnosis (through a pathology report), and to bring hormone levels back to normal.

How do I prepare for surgery?

Before surgery imaging studies called an MRI and CT scan are done to help the surgeon locate the tumour exactly in the brain. A visual field or eye examination may also be performed to determine whether the tumour is interfering with your vision or not.

Your endocrinologist (doctor that specializes in hormone disorders) will be following you before and after your surgery. Before surgery, blood and urine tests will also be performed to assess your hormone levels.

A pre-admission visit to the hospital will be booked for you. During this visit, a nurse will collect information about your medical history and will provide you with more information on the surgery. Please remember to bring a list of all the medications you are taking (including vitamins and 'over the counter medications') to this visit. Please also let your surgeon know if you are taking Warfarin or ASA as these will need to be stopped prior to surgery. You will also see an anesthetist, do further blood tests, an ECG, and chest x-ray at this visit.

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Neurosurgeon: _____
Phone: _____

Neurosurgery Nurse: _____
Phone: _____

Endocrinologist: _____
Phone: _____

Pituitary Nurse: Crystal Gagnon
Phone: Ph: 604-682-2344 ext. 62413
Pager: 604-252-4832
cgagnon2@providencehealth.bc.ca

Otolaryngologist: _____
Phone: _____
Notes:
_____
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_____
_____
_____
_____
_____
_____
_____

7. Light-headed, dizzy, or fainting

Go to the nearest Emergency Department immediately if:

1. Persistent dripping of clear, watery solution from nose
2. Drowsiness, difficult to awaken
3. Confusion, restless, nausea, and vomiting

Follow-up

You will need to see your endocrinologist within 4-6 weeks after surgery. Until this time continue any prescribed medications. Blood work will be done 1 week prior to this appointment.

You will also have an MRI, visual field testing, blood work, and a clinic visit with your neurosurgeon and endocrinologist within 3 months.

An eye doctor (ophthalmologist) will follow you after surgery.

Your Discharge Plan

Discharge Medications:

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It is advised to not eat or drink after midnight the night prior to surgery and to quit smoking prior to surgery.

After Surgery

After surgery you will be moved from the operating room to the recovery room. As you recover you will be moved to the general neurosurgery unit. You will be in the hospital for about **2-5 days.**

In the first 24hrs after surgery you will be monitored closely and regularly.

Blood and urine tests will be frequently done to monitor certain hormones that can be affected by surgery (antidiuretic hormone, ADH, and cortisol).

Sometimes patients may develop ADH deficiency called diabetes insipidus due to damage to the pituitary after surgery. Antidiuretic hormone helps regulate water balance in the body by controlling the amount of water the kidneys reabsorb. If there is too little ADH or the kidneys do not respond to ADH, then too much water is lost through the kidneys, the urine produced is more dilute than normal, and the blood becomes more concentrated. This can cause excessive thirst, frequent urination, dehydration, and high blood sodium (hypernatremia). If there is too much ADH,

then water is retained, blood volume increases, and the person may experience nausea, headaches, disorientation, lethargy, and hyponatremia. Frequently this disorder is corrected with temporary use of medication (desmopressin) during the post-operative period. In some cases, the damage can take longer to correct and you may need to continue medication for a longer period of time after surgery.

As much as possible, avoid sniffing, coughing, and sneezing as this will interfere with healing around the incision behind your nose. Your sense of smell and taste will gradually return to normal in the next couple of months.

After surgery, you will have a soft pad under your nose to collect small amounts of drainage from your nose. If you feel any salty liquid dripping in the back of your throat, or any watery discharge from your nose, notify the nurses.

Ask about any medications you are taking and any side effects before leaving the hospital.

At Home- Recovery

You may slowly return to your usual activities once you are feeling better. Do not stay in one position but allow for rest periods throughout the day. ***Ask your nurse or surgeon for specific restrictions on activity following surgery.***

Constipation is a common side effect of surgery. Medication, eating fruit and a high-fibre diet, and drinking water or juice will help.

You will see the ENT surgeon and/or your neurosurgeon to inspect your nasal cavities and remove any excess secretions following surgery.

Medications

Sometimes following surgery there may be permanent loss of some or all of the pituitary hormones. These deficiencies must be replaced using medications. Your endocrinologist will follow you after surgery to monitor your hormone levels.

Call your doctor if you have:

1. *Persistent fresh bleeding from the nose (more than a little blood stain)*
2. *Change in your vision (loss or double vision)*
3. *Neck pain, increased temperature, or sensitivity to light*
4. *Worsening headache or odour from the nasal cavities*
5. *Constant, unquenchable thirst*
6. *Frequent urination that is pale coloured*