



## TRANS-SPHENOIDAL EXCISION OF PITUITARY TUMOUR

Pituitary tumours are either secreting or non-secreting. The majority of prolactin secreting tumours can be treated with oral medications such as bromocriptine or cabergoline that reduces the production of prolactin and shrinks down the pituitary gland.

Tumours that are non-secreting or causing neurological compromise require neurosurgical removal of the tumour.

### OPERATION

#### Trans-sphenoidal excision of pituitary tumour

Most pituitary tumors are removed by the surgical procedure called a trans-sphenoidal operation. Trans-sphenoidal means the operation is directed through the sphenoid bone and sphenoid sinus. The sphenoid is a small bone in the back of your nose located just below the pituitary gland. It often contains a large air filled cavity called the sphenoid sinus. The procedure is called an endonasal procedure because the tumour is approached through the nasal cavity without an incision under the lip or in the front part of the nose. There is no incision on the face. A submucosal approach means a small incision is made in the skin just at the entrance of the nostril. The approach to the tumour is then made beneath the skin or mucosa of the nose through the sphenoid sinus.

The tumour is reached by working through one nostril and making a hole at the back of the nose into the sphenoid sinus and through the layer of bone between the sphenoid sinus and the pituitary gland. The tumour is then removed using the microscope. A small piece of fat may be removed from the skin on your thigh to fill the cavity created by the tumour removal. This will help to prevent leakage of cerebrospinal fluid (CSF). There is usually no need for stitches to close the area since no incision has been made in the nose and mouth. If a submucosal approach has been taken several stitches will be present inside the nose. Sometimes the nose is packed with a spongy material to stop the bleeding for 24-48 hrs material to stop the bleeding for 24-48 hrs.

In certain cases the tumour is not able to be removed by the trans-sphenoidal approach. A craniotomy to remove the tumour may be required.

### ADJUVANT THERAPY

#### Radiotherapy

Radiotherapy treatment is the use of high-energy rays to destroy abnormal cells, which may be used following pituitary surgery in the presence of recurrent tumour or with invasion into the vascular surrounding structures eg cavernous sinus.

#### Risks of the procedure

The risks of this operation includes the following. A detailed discussion with your surgeon is recommended prior to surgery.

- Visual disturbance – this may be present prior to the operation and may not improve. In rare cases vision may deteriorate after surgery
- Pituitary dysfunction – this may result in the need for hormone replacement treatment. In most cases, the pituitary gland regains normal function after a recovery period
- Diabetes Insipidus – this is a condition with due to a lack of ADH or vasopressin and is seen by the production of excessive amounts of dilute urine. The pressure from the pituitary tumour or surgery may cause this. Many cases will resolve by themselves however some will require replacement hormone usually through a nasal spray.
- Stroke – weakness, numbness or paralysis may occur if there is damage to the surrounding brain or vascular structures (rare)
- CSF leak – occasionally CSF may leak through the operation site. Most will resolve spontaneously, however some cases may need the use of a lumbar drain or another operation to cease.
- Coma
- Death – very rare.

Treatment of pituitary tumours is usually very successful, although many people will have to continue taking hormone replacements, sometimes for the rest of their lives. Regular check-ups by an endocrinologist where your hormone levels will be monitored may continue for several years.

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#### St Vincent's Private Hospital Melbourne

St Vincent's Private Hospital Fitzroy  
Phone: (03) 9411 7111

Website: [www.svphm.org.au](http://www.svphm.org.au)

St Vincent's Private Hospital East Melbourne  
Phone: (03) 9928 6555

Website: [www.svphm.org.au](http://www.svphm.org.au)

#### St Vincent's Hospital Melbourne

St Vincent's Hospital Fitzroy  
Telephone: (03) 9231 2211

Website: [www.svhm.org.au](http://www.svhm.org.au)

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#### Neurosurgery

**Dr. Kristian Bulluss**  
Phone: (03) 9416 4619

**Dr. Peter McNeill**  
Phone: (03) 9928 6333

**Dr. Paul Smith**  
Phone: (03) 9639 3889

**Dr. Carlos Chung**  
Phone: (03) 9419 5597

**Assoc. Prof. Michael Murphy**  
Phone: (03) 9416 4619

**Dr. Christopher Thien**  
Phone: (03) 9421 0355

**Dr. Tiew Han**  
Phone: (03) 03 9417

**Dr. Brendan O'Brien**  
Phone: (03) 9417 5033

**Dr. Yi Yuen (Ian) Wang**  
Phone: (03) 9939 7112

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#### Neurology

**Prof. Mark Cook**  
Phone: (03) 9288 3068