

## Understanding Transsphenoidal Surgery

This information was developed by your nursing staff to acquaint you and your family with a procedure called transsphenoidal surgery. This procedure removes tumors of the pituitary gland in the brain.

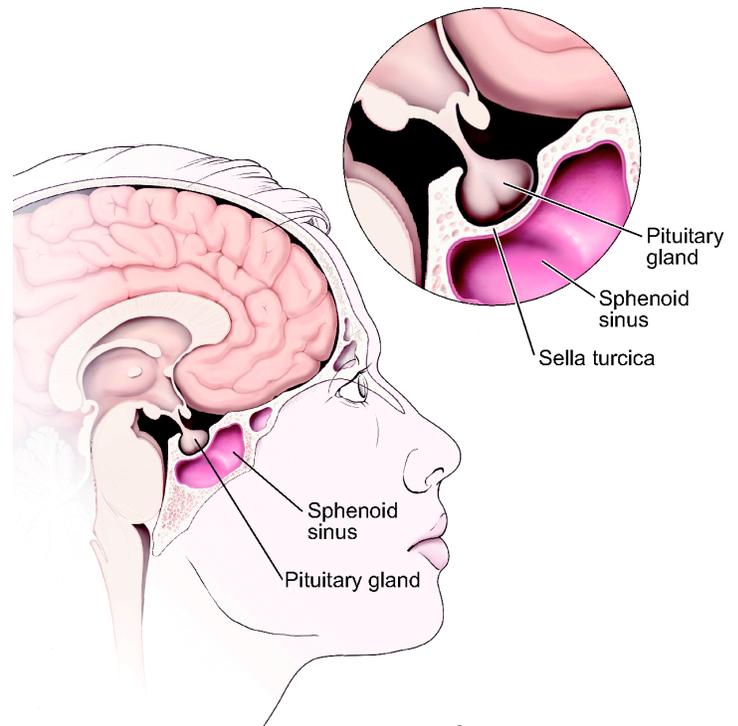
The term “transsphenoidal” means through the sphenoid, a sinus through which the surgeon will gain access to the pituitary gland. Tumors of the pituitary gland can be partly or completely removed by this type of surgery.

### Are there risks from transsphenoidal surgery?

This operation, like all surgical procedures, has risks. Among the most common risks are infection of the brain lining (meningitis), heavy bleeding from the incision, and a reaction to the anesthesia. Other risks include leakage of cerebrospinal fluid from the brain and problems with fluid balance, such as diabetes insipidus (DI) and the syndrome of inappropriate secretion of antidiuretic hormone (SIADH). These complications are treatable.

### What happens before the operation?

- ▶ The surgeon and anesthesiologist will visit you to discuss the surgery and answer your questions. When you understand what will happen, you will



be asked to sign a consent form. You may also have blood tests, an electrocardiogram (EKG), and a chest x-ray.

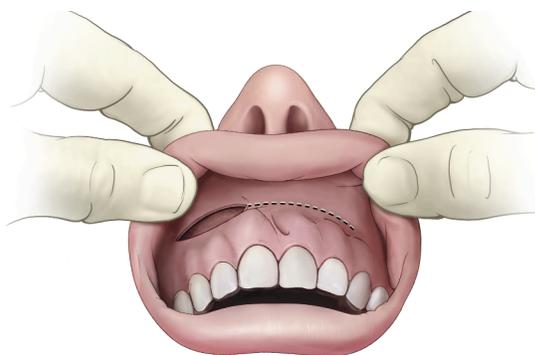
- ▶ Your nurse will teach you to do deep breathing exercises using a technique called “incentive spirometry.” You will use a hand-held device after surgery to help clear your lungs. You will also be encouraged to practice breathing through your mouth. Because your nostrils will be temporarily blocked after surgery, you must be comfortable breathing through your mouth.

- ▶ Your nurse will also show you how to do gentle exercises to promote blood circulation and prevent blood clots.
- ▶ The night before surgery, you will not be allowed to eat or drink.
- ▶ The morning of surgery, you should bathe and shampoo your hair. You will be asked to put on full-length support stockings..
- ▶ You may ask your nurse to show you the Post-Anesthesia Care Unit (PACU) or the Intensive Care Unit (ICU) so that you will know your surroundings after surgery.

## What happens during the operation?

### The procedure

- ▶ You will be placed under general anesthesia. This means that you will be given an anesthetic that will keep you asleep during the operation. Your head will be placed in a headrest to keep it still during surgery.
- ▶ The surgeon will make an incision under the upper lip along your gum line.



The bottom of the pituitary chamber will be entered through the base of the nose and the sphenoid sinus. Part of the pituitary chamber will be removed so that the surgeon can see the pituitary gland.

- ▶ The tissue covering the pituitary gland will be cut open. The surgeon will remove the tumor with special instruments. When the tumor is taken out, the bottom of the pituitary chamber will be replaced with pieces of bone that were removed earlier in the procedure. The incision will be closed, and your nostrils will be packed with gauze or a special nasal sponge. The tumor will then be sent to the laboratory for examination.

### The fat graft

Sometimes a small piece of fat will be taken from your abdomen and packed into the pituitary chamber. This is done to prevent brain fluid from leaking.

## What happens after the operation?

Immediately after surgery, you will be taken to the PACU. You will be monitored closely until you are ready to be taken to your patient care unit. You will stay on the unit for 2 to 5 days.

### Your bed position after surgery

The head of your bed will be slightly raised (30 degrees) to promote blood flow from your head and decrease the fluid pressure in your head. If you have a spinal drain in place, you will lie flat.

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### **Nasal packing**

Both your nostrils will be packed for 1 to 3 days after surgery. You will breathe through your mouth while your nostrils are packed. Because your lips will probably become dry, your nurse will give you a soothing gel for them. You will also be thirsty. Most patients say that the nasal packing is uncomfortable, and may cause a headache. Be sure to ask your nurse for pain medication.

When the packing is removed, there will be some bleeding and drainage from your nose. Your nurse will place a small piece of gauze under your nose to collect this discharge. The discharge should stop in a few days.

### **Incisions**

The incision that was made under the upper lip along the gumline will be closed with stitches. These stitches will dissolve in 7 to 10 days. If you had a fat graft, there will be a small gauze dressing over the site on your abdomen from which the fat was taken.

### **Brushing your teeth and bathing**

Do not brush your teeth using a regular toothbrush for at least 14 days after surgery. Your nurse will provide you with a special, ultra-soft toothbrush. You will also be given a special mouthwash and swabs with which to rinse your mouth throughout the day, especially after eating and drinking. This mouthwash helps rinse away dried blood and helps your incision heal.

The incision in your mouth will be stitched closed from the inside. You may bathe when your doctor gives you permission.

### **Urinary catheter**

During surgery, a urinary catheter will be placed in your bladder to drain your urine. This catheter will stay in place for about 1 to 2 days after surgery.

### **Lumbar drain**

Sometimes after surgery, the surgeon will insert a very small catheter in your lower back. This catheter, called a “lumbar drain,” is placed in the spinal canal. This catheter is not usually needed, but it may be used to allow fluid to flow away from the incision so that it can heal. If it is used, this drain will stay in place for 3 to 5 days after surgery. You must lie flat in bed if you have this drain, but you may turn side to side.

### **Diabetes insipidus**

Diabetes insipidus is a condition that occurs when your pituitary gland does not secrete enough ADH (antidiuretic hormone). This hormone regulates your urine output. Diabetes insipidus may occur as a result of the pituitary gland being disturbed during surgery. The three signs of diabetes insipidus are:

- ▶ Increased urine output
- ▶ Dilute urine and very light yellow in color
- ▶ Increased thirst

If you have these signs, report them to your nurse. Diabetes insipidus caused by surgery is temporary and treatable.

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## Activity

After surgery, be careful about doing certain types of physical activities. It is especially important not to cough, blow or pick your nose, sneeze, bend over, or strain for at least 1 month after surgery. If you feel an urge to sneeze, do not try to hold back the sneeze; sneeze with your mouth open. Here are listed some activities and when you will be able to do them after surgery.

- ▶ bending below the level of the knee: 4 weeks
- ▶ sneezing, coughing, blowing nose: 4 weeks
- ▶ aerobics, swimming, other exercise: 4 weeks
- ▶ brushing front teeth gently: 2 weeks
- ▶ returning to work: 3 to 6 weeks
- ▶ showering, washing hair: no restriction
- ▶ wearing contact lenses: no restriction
- ▶ wearing dentures/partial plate: 2 weeks (or when comfortable)

## Closing notes

Remember to be patient with yourself and to focus on positive thinking during recovery. You play a large part in helping to assure your well-being after surgery.

If you have questions about transsphenoidal surgery, please feel free to speak with your nurse or doctor.

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