

Inferior Petrosal Sinus Sampling (IPSS)

What to expect and self-care after your procedure

This handout explains a procedure called inferior petrosal sinus sampling.

What are the petrosal sinuses?

Petrosal sinuses are a group of veins on both sides of the head. They drain blood from the pituitary gland.

What is inferior petrosal sinus sampling?

Inferior petrosal sinus sampling (IPSS) is a procedure that checks for *adrenocorticotrophic hormone (ACTH)* in the petrosal sinuses. This procedure may be done if you had a *magnetic resonance imaging (MRI)* scan to find the cause of a high ACTH level, but the scans did not find or diagnose a tumor. The results of IPSS will tell your doctor if you have *Cushing's disease* (a pituitary tumor).

IPSS is an *outpatient* procedure. Most patients can go home the same day as their IPSS.



This image was taken during inferior petrosal sinus sampling.

What can I expect?

- You will be awake for the procedure. You will be given:
 - A mild *sedative* (medicine to help you relax)
 - A local *anesthesia* (numbing medicine) at the puncture site
- A *catheter* (a long, slim tube) will be inserted into veins in your upper thigh (femoral veins).
- The catheter will be moved through your veins to the petrosal sinuses.
- *Contrast* (X-ray dye) will be injected through the catheter. This dye helps images show up more clearly on X-rays.
- Your doctor will use X-rays to help guide the catheter to the right place.

- Blood samples will be taken from the left and right petrosal sinuses, and from the femoral vein.
- *Corticotrophin-releasing hormone* (CRH) will be injected into the peripheral vein.
- More blood samples will be taken 2, 5, and 10 minutes after the CRH injection.
- Your doctor will compare ACTH from the left petrosal and right petrosal samples to the femoral vein samples. The results help your doctor know if your symptoms are caused by a pituitary tumor.
- IPSS can also show which side of the pituitary gland the tumor is on.

How do I prepare?

- You may be asked to stop certain medicines before the procedure. Please see the handout “Cerebral Angiogram” for medicine instructions.
- Plan to have a responsible adult to take you home after the procedure. This person can drive you home, or ride with you on a bus or in a taxi. Also plan for someone to stay with you the first night.

Day of the Procedure

At Home

- Starting 8 hours before your IPSS, do not eat or drink anything.
- If you must take medicines, take them with **only** a small sip of water.
- Bring your medicines with you in case you need to take them after your procedure.
- Do not wear makeup, nail polish, or jewelry.
- Leave all valuables at home.

At the Hospital

- Check in at Admitting on the 3rd floor (main level) of the medical center.
- If you were told to have lab work done before your procedure, go to Blood Draw on the 3rd floor near the Cascade elevators.
- Go to the Radiology department on the 2nd floor. Check in at the main desk.
- Tell your doctor or nurse if you have had any kidney problems or allergies to contrast. If so, your doctor may prescribe medicine for you to take before the procedure.

- The neuro-radiologist will see you before the procedure to talk about the procedure and ask you to sign a consent form. You will be able to ask any questions you have at this time.

During Your Procedure

- We will closely monitor your blood pressure, heart rate, breathing rate, and comfort level.
- Your skin will be cleaned with a special soap. Some hair may be shaved in the areas where the doctor will be working.
- An *intravenous* (IV) line will be placed into a vein in your arm to give you medicines and fluids.
- The medicines you receive will relax you. You should not feel any pain.
- When the contrast is sent into your blood vessel, you may feel a warm to hot flush sensation spreading all over your body. These feelings are normal and should only last a few seconds.
- X-rays are taken while the contrast moves through your blood vessel.
- After blood samples are taken, the catheter will be removed. Pressure will be placed over the puncture site for about 15 to 20 minutes.

After Your Procedure

- You will be monitored for 4 hours in a short-stay unit in the hospital.
- During this time, you must lie flat in bed to reduce bleeding from the groin site.
- You will likely be able to go home the same day.
- You may feel light headed or dizzy.

For Your Safety

The sedative you were given for the procedure can affect your ability to think clearly. For your safety, for **24 hours** after your procedure:

- Do **not** drive.
- Do **not** use machinery or power tools.
- Do **not** drink alcohol.
- Do **not** take sedating medicines unless your doctor told you to.
- Do **not** be responsible for children, pets, or adults who need care.
- Do **not** make important decisions or sign legal documents.

Self-care at Home

- For 24 hours after your procedure:
 - Do only light activity and get plenty of rest.
 - Keep the puncture site clean and dry.
- Drink plenty of fluids and eat as usual, if you can. If you cannot eat at first, start with water and slowly add foods that you can handle.
- Unless your doctor or nurse tells you otherwise:
 - You may shower after 24 hours.
 - Gently pat the puncture site dry.
 - Do **not** apply any creams, lotions, ointments, or powders to the site.
- On the 2nd day, you can be more active, but do not do strenuous exercise, or anything that puts strain on your puncture site.
- For 7 days after your procedure, do not take a bath, sit in a hot tub, or go swimming, unless your doctor or nurse told you otherwise.

When to Call

Call the clinic nurse at 206.598.5637 **right away** if:

- Your leg or foot feels cold or numb.
- The puncture site begins to bleed, swell, or becomes more painful.
- Your speech is slurred.
- You have balance problems or trouble using your arm or leg.
- You develop a rash.
- You have a fever higher than 101.5°F (38.6°C).

The Neurosurgery Clinic is open weekdays from 8 a.m. to 5 p.m. If you are calling after clinic hours, call 206. 598.5637.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Weekdays from 8 a.m. to 5 p.m., call a nurse at the Pituitary Program/ Neurosurgery Clinic:
206.598.5637

After hours and on holidays and weekends, call
206.744.2500.