



Inferior Petrosal Sinus Sampling (IPSS)

Your doctor has recommended that you have an Inferior Petrosal Sinus Sampling (IPSS) test

You are being tested for Cushing's syndrome, a condition whereby your body produces excessive amounts of cortisol hormone. Cortisol is produced by the adrenal glands which sit above the kidneys. Cortisol production is controlled by the pituitary gland which is a small gland underneath the brain. This vital hormone is responsible for enabling your body to respond to stress and illness. Cortisol also regulates your immune system, blood pressure and blood sugar levels.

Your adrenal glands are currently being stimulated by excessive amounts of adrenocorticotrophic hormone (ACTH). The purpose of this investigation is to establish whether the excess ACTH is coming from your pituitary gland or from somewhere else within your body.

Preparation for the test

A few days before the test, you will be reviewed in clinic (in person or virtually over video or phone) either by the consultant endocrinologist or endocrine specialist nurse who will explain the procedure to you. During your clinic appointment, you will also have a blood test in preparation for your test.

If you are on medications for the Cushing's syndrome, you will be asked to stop taking them for a few days before the IPSS. You will need to fast (no food just plain water) from midnight the night before your test.

If you have heart or bleeding problems, an allergy to contrast medium or are unable to lie flat for the procedure, please advise your endocrine specialist nurse.

You will be admitted in the hospital for at least 6 hours. Normally, you will be discharged home by 18:00 hrs on the same day. Please report to Ambulatory Care Department 15 minutes before your specified appointment time.

If you are intending to come by car, please arrange for someone to drive you as it is not advisable for you to drive after the test.

Children are not advised to attend. However, if this poses a particular problem for you, please discuss this with us.

What will happen before and during the test?

A doctor or nurse will explain the test to you in person. If you are happy to proceed with the test, you will be asked to sign a consent form.

The procedure is carried out in the angiography suite (a special X-ray room) by one of our consultant radiologists. You will be asked to lie on an X-ray table and a cannula (flexible hollow plastic tube) will be inserted into your arm. The skin in both of your groin areas will be cleaned with sterile solution followed by an injection of local anaesthetic to freeze/numb the area. The radiologist will then insert a plastic tube (catheter) in the main vein in both groins. The catheters

Information for Patients

are guided through the veins up to the vein near your pituitary gland under X-ray guidance to ensure their positions are correct.

You will be given an intravenous injection of corticotropin releasing hormone (CRH) or desmopressin (DDAVP) (whichever is available). Once you have had the CRH (or DDAVP) injection, a series of blood samples will be taken over a period of 10 minutes. After the blood samples have been collected, the catheters will be removed and gentle pressure will be applied to your groin region for a few minutes to stop any bleeding.

You will be asked to lie flat for 2–4 hours after the procedure and then gradually sit up and mobilise. You will be offered something to eat and drink after the test.

If there are no complications, you will then be allowed home on the same day.

Are there any risks with this test?

There are some risks and side effects which include:

- Bruising and bleeding may occur at the groin puncture sites
- You may experience a flushing sensation once the CRH injection is administered and this is something you should not worry about
- For a brief period, when the catheter is being inserted through your groin and reaches the vein in your pituitary gland, you might experience some headaches or discomfort in your jaw. This is temporary and will subside immediately after the catheter has reached the vein in your pituitary gland
- Serious complications are extremely rare but may include, stroke and blockage of vessels. These will be explained to you in detail before you sign the consent form

What will happen after the test?

You will be able to take your medication as usual immediately after the test. The result of your test will be reviewed by the endocrinology doctor. You do not have to contact the department for your test result as you will be contacted directly if necessary especially if you need to start on any treatment.

Your GP will also be informed of the result of your test.

Sometimes, it is also necessary for us to contact you by telephone, so please give your home and mobile telephone numbers when you come in for your test.

Contact details

Where to report for the test:
Ambulatory Care Department
Ground Floor, Queen Elizabeth Hospital
Birmingham
Mindelsohn Way, Edgbaston,
Birmingham B15 2GW

Who to contact for queries:
Endocrine Clinical Nurse Specialist Team
EndocrineNursesQEHB@uhb.nhs.uk
Tel: **0121 371 6950**

Endocrine

Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston, Birmingham, B15 2GW
Telephone: 0121 371 2000

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If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email patientexperience@uhb.nhs.uk.