

Adrenal Vein Sampling

Information for patients, relatives and carers

① For more information, please contact:

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About this leaflet

This leaflet tells you about the procedure known as adrenal vein sampling. It explains what is involved and what the possible risks are. It is not meant to replace any discussion with your consultant about the procedure but can act as a starting point for such a discussion.

Adrenal vein sampling is a pre-planned procedure, and you should have plenty of time to discuss the situation with your consultant before you are asked to sign the consent form.

What is adrenal vein sampling?

The procedure involves taking multiple blood samples from the blood vessels (veins) draining your adrenal glands. This will be done via a specialised tube (called a catheter) reaching the adrenal veins from the groin. During the test, your blood will be transferred to a special tube and labelled with your name and date of birth. The special tube will then be sent to a laboratory where testing will be performed. Your results will be sent to the consultant or nurse who requested the test. Sometimes, receiving results can be stressful and upsetting. If you are worried about the outcome of a test, you may wish to take a trusted friend or relative with you for support.

Why do I need adrenal vein sampling?

Adrenal glands are two small glands which sit on top of the kidneys. They secrete several hormones which help maintain the internal stability of the organs by self-regulation. One of the hormones secreted, Aldosterone, is a steroid hormone. It is involved in regulating blood pressure. Your recent blood tests have shown that you have high levels of Aldosterone. To investigate further whether one or both adrenal glands are over-producing the hormone, your consultant has recommended you undergo adrenal vein sampling.

Who will be doing the sampling?

A specially trained doctor called an interventional radiologist will carry out the sampling procedure. Interventional radiologists have special expertise in using x-ray and scanning equipment, interpreting the images produced and using them to guide medical procedures such as these. Nurses and radiographers will assist during the procedure.

Where will the procedure take place?

In the Vascular Imaging Unit (VIU) at York Hospital.

How do I prepare for adrenal vein sampling?

You need to be an in-patient in the hospital. You should avoid eating for one hour before, though it is all right for you to drink some water. You will be asked to put on a hospital gown. The sampling will be done via a puncture to the vein the groin. We may need to shave the skin around the groin. If you are taking any anti-coagulant medication, this may need to be stopped, or the dose modified before the procedure.

If you have any allergies, you must inform your consultant when the procedure is being offered or discussed with you.

If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and CT scanning) you must also tell your consultant about this when the procedure is being offered or discussed with you.

What happens during adrenal vein sampling?

- You will lie on the x-ray table, generally flat on your back.
- You may have a monitoring device attached to your chest and finger and may be given oxygen through small tubes in your nose.
- The radiologist will wear a theatre gown and operating gloves.
- The skin over the chosen groin vein will be cleaned with antiseptic, and the surrounding area covered with a sterile drape.
- Local anaesthetic will be given in the skin and then a needle will be inserted into the vein. This may be guided with an ultrasound scanner.
- A plastic cannula called a sheath will be introduced to secure the access.
- Long tubes called catheters will be passed into the adrenal veins.
- Contrast media (x-ray dye) is given through the catheter and pictures taken to confirm the correct position.
- Once the veins are confirmed, samples are obtained, from each gland, in correctly labelled pots to be sent to laboratory.
- The catheter and sheath will then be removed and one of the team will press firmly on the skin entry point for several minutes to minimize any bleeding.

Will it hurt?

Some discomfort may be felt during injection of the local anaesthetic or whilst injecting contrast media (x-ray dye) into the adrenal veins. After this, the procedure should not be painful. There will be a nurse on hand to look after you. You will be awake during the procedure. Tell the radiologist if you become uncomfortable in any way.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. Generally, the procedure will take between one and two hours.

What happens afterwards?

You will be taken back to your ward on a trolley. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding. You will generally stay in bed for a few hours until you are fit for discharge. If you are fit for discharge, you will be allowed home on the same day. If you are not fit for discharge, you will stay in hospital overnight.

Are there any risks or complications?

Adrenal vein sampling is a very safe procedure, but there are some risks and complications can arise. These include:

- A bruise over the vein where the needle has been inserted, and this is quite normal. More serious bleeding is very unlikely.
- The veins from which we draw blood might get blocked or injured, causing bleeding. In most cases the bleeding stops by itself and will only need overnight observation.
- There is a small possibility of injuring the glands itself while injecting the dye. This could cause laceration and bleeding.

X-rays are used to take the pictures, so the procedure also carries a small risk associated with ionising radiation. If you might be pregnant, it is essential that you inform a member of staff beforehand. The amount of radiation varies depending on the complexity of the procedure. This is like what you receive naturally from the environment, as something called background radiation, in about three years.

Summary

Hopefully, some of your questions have been answered by this leaflet. However, remember that this is only a starting point for discussion about your treatment with the consultant looking after you. Make sure you are satisfied that you have received enough information about the procedure before you sign the consent form.

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Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact: Dr Rajashekar Gali, Radiology, York Hospital, Wigginton Road, York, YO31 8HE or telephone: 01904 726675.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website: www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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