

# Taking blood samples with X-ray guidance for hormone level testing (venous sampling)

Department of Radiology

Information for Patients

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## Introduction

This leaflet tells you about the procedure called venous sampling. It explains how the procedure is carried out and what the possible risks are. This will help you to decide whether or not to go ahead with the procedure.

## What is venous sampling?

Some of the organs in your body release chemicals called hormones into the bloodstream. The hormones affect how the body works. Sometimes the release of hormones from one of these organs into the bloodstream may be too high or too low, which can affect how the body functions.

Venous sampling is a procedure that involves inserting a thin tube (catheter) into a specific vein or veins near to the organ in your body that your doctor thinks is causing the hormone level to be too high or too low. Blood samples are then taken and sent for testing. The results will hopefully assess the function of the organ and help your doctor in treating your condition.

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

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## Important information if you are taking blood thinning medication

If you are taking medication that thins the blood (anticoagulants or antiplatelets) please call the Radiology Department for advice by phoning the number on your appointment letter as soon as possible. Your blood thinning medication may need to be stopped or replaced with a different one for a few days.

### Common examples of these drugs include:

- aspirin
- warfarin
- clopidogrel (Plavix®)
- apixiban (Eliquis)
- rivaroxaban (Xarelto)
- ticagrelor (Brilinta)
- dalteparin
- heparin

You will be asked what blood thinning medication you are taking, how much you take (dose), and what you are taking it for.

You may have already been given instructions on blood thinners by the doctor who referred you for this procedure. Please still call the Radiology Department so we can check this.

**If you are taking aspirin, please tell the doctor doing the venous sampling procedure when you come to the hospital.**

## Important information before you have X-rays / X-ray contrast liquid

The contrast liquid contains iodine and is cleared by the kidneys in your pee (urine) or at your routine dialysis if you have dialysis.

### Please tell the X-ray staff when you arrive if you:

- **are allergic to iodine or rubber (latex)**, have any other allergies or have asthma.
- **have had a reaction in the past to an intravenous contrast liquid**, the dye used for kidney X-rays and CT scanning and X-rays of your heart and blood vessels.
- **are on renal dialysis or have any problems with your kidneys.**
- **have diabetes.**
- **think there is any possibility that you might be pregnant.**

## Asking for your permission (consent)

The doctor who referred you should have talked to you about the reasons for this procedure and any other options.

You have been referred to a hospital doctor or a radiologist for this procedure. Radiologists are doctors who specialise in imaging and X-ray treatments. They will check that you understand why the procedure is being done, its potential risks and what the chances of success are. You will then be asked to sign a consent form to confirm this. **You should feel that you have had enough explanation before you sign the consent form.**

If after talking to the hospital doctor or radiologist you do not want to have the procedure, then you can decide against it at any time.

If the radiologist feels that your condition has changed they will talk to you about whether the procedure is still needed. They may then ask you to return to your referring doctor for review.

If you feel during the procedure that you do not want it to continue, we will explain the implications of not doing so, to help you decide.

## How to get ready for the procedure

Venous sampling is usually done as a day case procedure and you should follow the information sent to you about the appointment.

### The night before your appointment or in the morning of your appointment:

- Have a bath or shower in the morning of your appointment, or the night before.

### On the day of your appointment:

- **Before 6am - have a light breakfast.** This could be a piece of toast or a small bowl of cereal and a cup of water, tea or coffee.
- **Continue to drink until 1 hour before your appointment time** - this is important.
- **Stop drinking 1 hour before your appointment time.**
- **Take all your usual morning medications and bring all your usual medication with you.**
- At the hospital you will be asked to put on a hospital gown and disposable pants before the procedure.
- You will be in hospital for about 2 to 3 hours.

## What happens during the procedure?

- The procedure is performed in the Radiology Department.
- You will lie on the X-ray table, generally flat on your back, or nearly flat.
- Everything will be kept clean (sterile). Your skin will be cleaned with antiseptic and you will have some of your body covered with sterile sheets.
- An injection of local anaesthetic will be given into the skin in your groin; this may sting a little until the area becomes numb. When your groin becomes numb, the radiologist will place a very thin plastic tube called a catheter into the vein.
- A colourless liquid that shows up on X-rays (contrast liquid) will be injected through the catheter. X-rays will be taken to identify the exact position of the organ in your body. The contrast liquid will give you a warm sensation but this will last only a few seconds.
- Once the catheter is in the correct position a sample of blood will be taken via the catheter from several positions around the organ.
- The procedure should not be painful but you may feel minor discomfort at the puncture site. There will be a nurse or another member of staff looking after you. If the procedure does become uncomfortable, they can arrange for you to have some painkillers or sedation.
- Once the procedure is complete, the catheter will be removed. The radiologist will then press firmly on the skin entry point for several minutes to prevent any bleeding.

## How long will it take?

Every patient's situation is different. It is not always easy to predict how straightforward or complex the procedure will be. It may take 30 minutes, or sometimes it can take longer than 1 hour.

## Are there any risks or complications?

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet, although they are different for each person. Your risks will be discussed with you before you sign the consent form.

- **Bruising** - some bruising and tenderness is to be expected around the site where the needle has been inserted.
- **Reaction to the contrast liquid** - some patients may be allergic to the contrast liquid and may have symptoms such as feeling or being sick (nausea or vomiting), or a rash. If you get any of these symptoms at the hospital please tell the doctor, nurse or staff looking after you. If you develop symptoms at home you should contact your GP or call the NHS helpline on 111.

## What happens after the procedure?

Nurses will carry out routine observations, such as taking your pulse and blood pressure, to make sure there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it. You will be asked to rest for about 45 minutes within the department.

## What aftercare instructions do I follow?

The nurse will give you important instructions about your aftercare, including how to look after yourself at home.

- **Do not drive for 48 hours** after the procedure. You are advised to relax and take things easy for the rest of the day.
- **If a dressing has been applied**, this can be removed 24 hours after the procedure. You should expect to have some bruising and tenderness. This should disappear after a few days. Check your wound site as detailed below.
- **If you have any pain** this can be relieved by taking your usual painkiller. However, if your usual painkiller is aspirin it is recommended that you use an alternative. If your usual painkiller does not work you should see your GP or pharmacist.
- **Do not have sex or sexual activity** for 3 days after the procedure.
- It is recommended that you do not do any strenuous exercise or heavy lifting for 3 days after the procedure. If your job involves strenuous exercise or heavy lifting, it is advisable to ask for light duties.

## Checking your wound site

The skin entry point (puncture site) will heal very quickly and does not usually need a dressing. If you have any bleeding at the site it will show itself in one of two ways:

- fresh blood will be seen coming from the wound site, or
- blood will collect under the skin and cause a hard swelling.

In both circumstances you must get someone to help you to apply pressure over the site. They should press firmly for 5 minutes. If this does not stop the bleeding, continue to apply pressure yourself while the person with you contacts your doctor or calls an ambulance. They will advise you what to do.

## How do I get the results?

The results of the procedure will not be available immediately as the blood samples will need to be sent for testing. You will be given an explanation on how to get the results of your procedure along with a discharge letter, which should be handed to your GP as soon as possible.

## What are the risks from radiation in this procedure?

The main risk from exposure to X-rays is an increase in the risk of getting a cancer in the future. This risk is thought to be very small. We are all exposed to natural background radiation every day of our lives. This comes from the sun, food we eat, and the ground. Each examination which uses X-rays gives a dose on top of this natural background radiation. The risks of radiation are slightly higher for an unborn child so we must ask some patients aged 10 to 55 years about their menstrual periods and possibility of being pregnant.

The benefits of this test are likely to outweigh any potential risk, and the risk from not having the test could be greater. We will take all safeguards to minimise the amount of X-rays you receive.

## What if I need to talk to someone?

If you have any questions or concerns, or cannot make your appointment, please call the Radiology Department on **0116 258 8765 (option 7)** - Monday to Friday, 9am to 5pm, excluding bank holidays.

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