

**Patient  
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# Cardiac catheterisation

## Introduction

This leaflet provides information for patients having cardiac catheterisation, also called cardiac angiography (angiogram).

## Your heart

Your heart is a muscular pump responsible for maintaining the circulation of blood around the body and lungs. It has its own electrical system to control the rate of pumping and valves so that blood flows in the right direction. Your heart needs its own blood supply and this is provided by 3 main coronary arteries. Diseases of the heart can affect any or all of the muscle, valves, electrical system or coronary arteries. When this happens your doctor may recommend a cardiac catheter test (angiogram).

## Why is the test performed?

An angiogram is performed to diagnose heart conditions including coronary artery disease, valvular disease (problems with the heart valves) and cardiomyopathy (changes to the heart muscle). An angiogram can also provide information about how well your heart is pumping and the pressures inside your heart. The test is essential for a definite diagnosis of coronary artery disease and for deciding what treatment may be best for you.

## Cardiac catheterisation

A cardiac catheter is a fine tube that is passed into an artery in your wrist or groin until it reaches your heart where it will measure pressures and/or take pictures of the pumping chambers, valves and coronary arteries. It is done using specialised X-ray machines in a cardiac catheter room.

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**Cardiology**

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## What happens before the cardiac catheterisation?

Before your procedure, the reasons why you are having the test and what information is being sought will be discussed with you. Alternative treatment will also be discussed.

Please bring with you all your medications, a dressing gown, slippers, reading glasses if needed. You may also like to bring a book or magazine to read.

Do not bring any valuables, such as jewellery (all neck chains must be removed) or large amounts of money.

On the day of your procedure, you can have an early light breakfast such as tea and toast before 6:00am. You may continue to drink clear fluids until the time of your procedure.

Please report to the Hartpury Suite reception at 7:45am on the day of your admission. You may need to take a seat outside until you are collected by a nurse.

On the day of the procedure take all your normal medication.

If you are taking anticoagulant medication for example, warfarin, rivaroxaban or dabigatran please contact the consultant's secretary on the telephone number at the top of your admission letter for advice.

If you have diabetes and you are taking metformin, stop this medication for 2 days following your procedure.

If you take insulin, do not administer any on the day of your procedure but you can still have an early light breakfast. Bring your insulin into hospital with you. At lunchtime, we will ask you to administer half of your normal morning dose of insulin with your lunch.

If you have any queries about taking your medication please telephone the Hartpury Suite on the number provided at the end of this leaflet.

On the unit, a nurse will go through a checklist with you, explain the procedure and answer any questions you may have. The nurse will also check your blood pressure and ask you to change into a gown.

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A cannula will be inserted into a vein in your arm or hand in case any medication needs to be given during or after your procedure. This will be removed before you are discharged.

Your doctor will discuss the procedure with you and ask you to sign a consent form. At this point the doctor will decide whether to perform the procedure through your wrist or groin. You will be able to ask any further questions at this stage.

### **What happens during cardiac catheterisation?**

You will be asked to lie flat on an X-ray table with your head supported with a pillow. ECG electrodes will be attached to your arms and legs to monitor your heart. You may be given sedation at this point, if you requested.

After the wrist or groin area has been cleaned with an antiseptic solution, you will be covered with a sterile drape.

The skin will then be numbed with local anaesthetic and a sheath (small hollow tube) is placed in the artery. Once the sheath is in the artery it is rare to feel anything, although you may have some discomfort. If you do have any pain please tell the doctor straight away.

A catheter will be passed through the sheath and into your heart, guided by an X-ray machine. The table and the X-ray machine will be moved during the procedure to allow multiple images of your heart arteries. You may be asked to hold your breath or to stop breathing for a few seconds while measurements or pictures of the heart are taken. A contrast medium (dye) is injected via the catheter to allow the coronary arteries and chambers of the heart to be seen clearly.

During the angiogram you may have a hot flush, a metallic taste and the sensation that you are passing water. You may also feel mild chest discomfort or have a fluttery heartbeat for a short time. The staff in the X-ray room will inform you about this at the time, so please do not be concerned.

The procedure will last about 15 minutes and once completed you will be taken back to the Hartpury Suite. Most patients will be told the results of their procedure and management plan before to going back to the Hartpury Suite.

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## After your cardiac catheterisation

If the procedure was performed via the wrist, you will have a band about the size of a watch strapped around your wrist to apply pressure in order to prevent bleeding. The pressure will gradually be reduced by nursing staff on the Hartpury Suite.

If the procedure was performed via the groin the sheath will be removed in the Hartpury Suite. Firm pressure will be applied to the puncture site for about 10 minutes. This will seal the artery and prevent any bleeding.

Normally, patients are kept on bed rest for 2 hours after this, 1 hour flat, 30 minutes sat at 45° and then 30 minutes sat at 90°. This is done to prevent bleeding and bruising. Occasionally, a collagen plug (Angio-Seal™) will be inserted into your groin to seal the artery, instead of pressure being applied. In this case you will need to remain on bed rest for at least 30 minutes. The collagen plug will dissolve in 60 to 90 days. You will be given a card with information about the plug to carry with you for 3 months.

Regular checks of your blood pressure, pulse rate, wound site and the pulses in your wrist or feet will be recorded. Following the procedure you will be encouraged to eat and drink.

It is important to drink plenty of fluids to help flush the contrast medium referred to as dye from your kidneys.

Before discharge, plans for further treatment will be discussed. Depending on your results you may be treated with medication or further treatment may be recommended, such as PCI (stents) or coronary artery bypass graft (CABG) or valve surgery. A letter will be sent to your GP explaining your results and treatment plan.

## Complications

Cardiac catheterisation is generally a safe procedure but as with any invasive test there are a number of small risks. The exact risks are specific to you. Your doctor will explain how these risks apply to you when you sign the consent form.

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Your doctor will not recommend the procedure unless the benefits outweigh the risk. You should discuss any worries or concerns you have with the doctor.

### **Discharge from hospital**

Most patients have the procedure performed as a day case and are able to go home later the same day, usually after midday. You will need a responsible adult to collect you from the Hartpury Suite and stay with you overnight. If this is not possible, please let us know straight away, and we will try to make alternative arrangements for your admission.

Before you are discharged a nurse will give you a discharge leaflet with instructions to follow once you are home. You will not be able to drive for 2 days after your procedure.

### **Follow-up appointment**

The need for a follow up appointment will be discussed with you before you are discharged. Sometimes your case may need to be discussed with other doctors and surgeons before final recommendations can be made.

If this is the case, your consultant will write to your GP with the recommendations after your results have been discussed.

### **Contact information**

If you have any questions or concerns please contact:

#### **Hartpury Suite**

Cheltenham General Hospital

Tel: 0300 422 2995

Monday to Friday, 7:45am to 5:00pm

Outside of these hours please contact:

#### **Cardiac Ward**

Cheltenham General Hospital

Tel: 0300 422 4011

Alternatively, contact your consultant's secretary.

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## Further information

British Heart Foundation

Website: [www.bhf.org.uk/heart-health/tests/angiogram](http://www.bhf.org.uk/heart-health/tests/angiogram)

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