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## **CORONARY ANGIOGRAPHY (CARDIAC CATHETERISATION)**

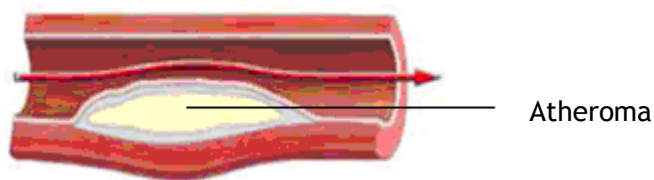
This information booklet will talk you through all aspects of coronary angiography, including:

- Why this procedure has been recommended for you
- Preparation for the procedure
- The patient's perspective
- Potential risks and side-effects

## Coronary Angiography (Cardiac Catheterisation)

**Coronary angiography**, also called cardiac catheterisation, is a specialised X-ray test to find out detailed information about your coronary arteries. It is mainly used to assess whether you have furred up coronary arteries (coronary artery disease), which causes chest pain (angina) and heart attacks (myocardial infarction), and the extent and severity of the disease, which determines the best type of treatment for you, i.e. medication, angioplasty (PCI) or surgery (CABG).

The narrowing of the arteries is caused by “atheroma”, which is a build-up of fatty cholesterol deposits or “plaques” within the lining of arteries. Plaques of atheroma may gradually form over a number of years in one or more places in the coronary arteries. In time, these can become bigger and cause enough narrowing of one or more of the arteries to cause symptoms.



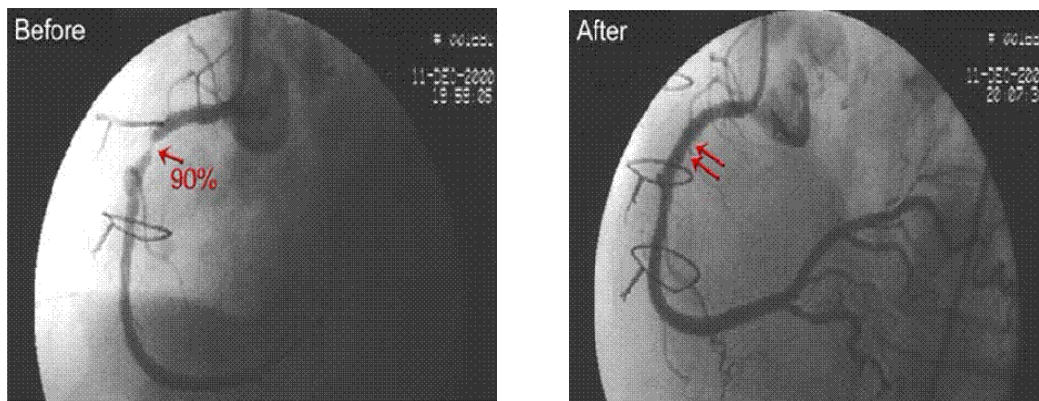
**Figure 1: Atheroma within the wall of the artery**

### The patient's perspective

You lie on a couch/table in the cardiac cath lab (angiography suite). It looks similar to an operating theatre. An X-ray machine is mounted above you and moves around you to take the pictures.

The doctor injects some local anaesthetic into the skin above the blood vessel in the groin or wrist to numb the area. A short tube (catheter) is then inserted through a 3mm cut in the skin into the blood vessel in the groin or arm. Through this short tube different shaped catheters are passed to the heart and to the coronary arteries.

X-rays are used to monitor the progress of the catheter, which is positioned in the main pumping chamber to show how well the heart muscle is working, and in the opening of the coronary arteries to show whether or not there are any narrowings. Dye is injected through the catheter to identify these.



**Figure 2: Angiogram showing a narrowing (arrow) in a coronary artery (left), then successfully treated with a stent (right)**

You are asked not to eat or drink for 6 hours before the procedure. You should take your usual medication with a sip of water, but generally speaking you will be advised to omit water tablets (diuretics) on that day. Diabetics are given special advice, particularly those taking Metformin or Insulin, as are patients on Warfarin.



**Figure 3: Coronary angiography**

The procedure only takes between 10 and 20 minutes in most cases. However, because we are dealing with the heart, you are kept in hospital for a few hours after the procedure before being allowed home.

### **Are there any risks or side-effects?**

Any procedure on the heart carries risks, which have to be balanced against the benefits. Risks vary depending on patient factors, including age, presence of other medical problems such as diabetes, previous stroke, and kidney damage. The most common side-effect is bruising and some discomfort at the site of catheter entry (usually the groin). This is generally mild and short-lived, but may be greater in patients taking blood thinners.

Serious risks are rare, but if they occur they can be potentially life-threatening. Generally speaking, the risk of a serious complication is approximately 1 in 1000. Complications include damage at the site of arterial access, bleeding, heart attack, impairment of kidney function (rare in patients with normal kidney function), allergic reaction to the dye, stroke, emergency heart surgery and death. However, remember that you will be in a cardiac catheter lab, with a cardiology team (doctor, nurses, radiographer and cardiac technician) and all the equipment needed to look after you, should there be a problem with your heart.

It is important that you have the opportunity to discuss your case and air any concerns you may have, so that you understand the procedure, what it involves, why it has been recommended, together with the risks and benefits. You can find out more information from my website ([www.drholdright.co.uk](http://www.drholdright.co.uk)) and many others, including national bodies such as the British Heart Foundation ([www.bhf.org.uk](http://www.bhf.org.uk)), the British Cardiovascular Society ([www.bcs.com](http://www.bcs.com)) and the British Cardiovascular Intervention Society ([www.bcis.org.uk](http://www.bcis.org.uk)).

Please do not hesitate to contact the practice should you have any concerns or questions.

Created by Dr. Diana Holdright, 2008