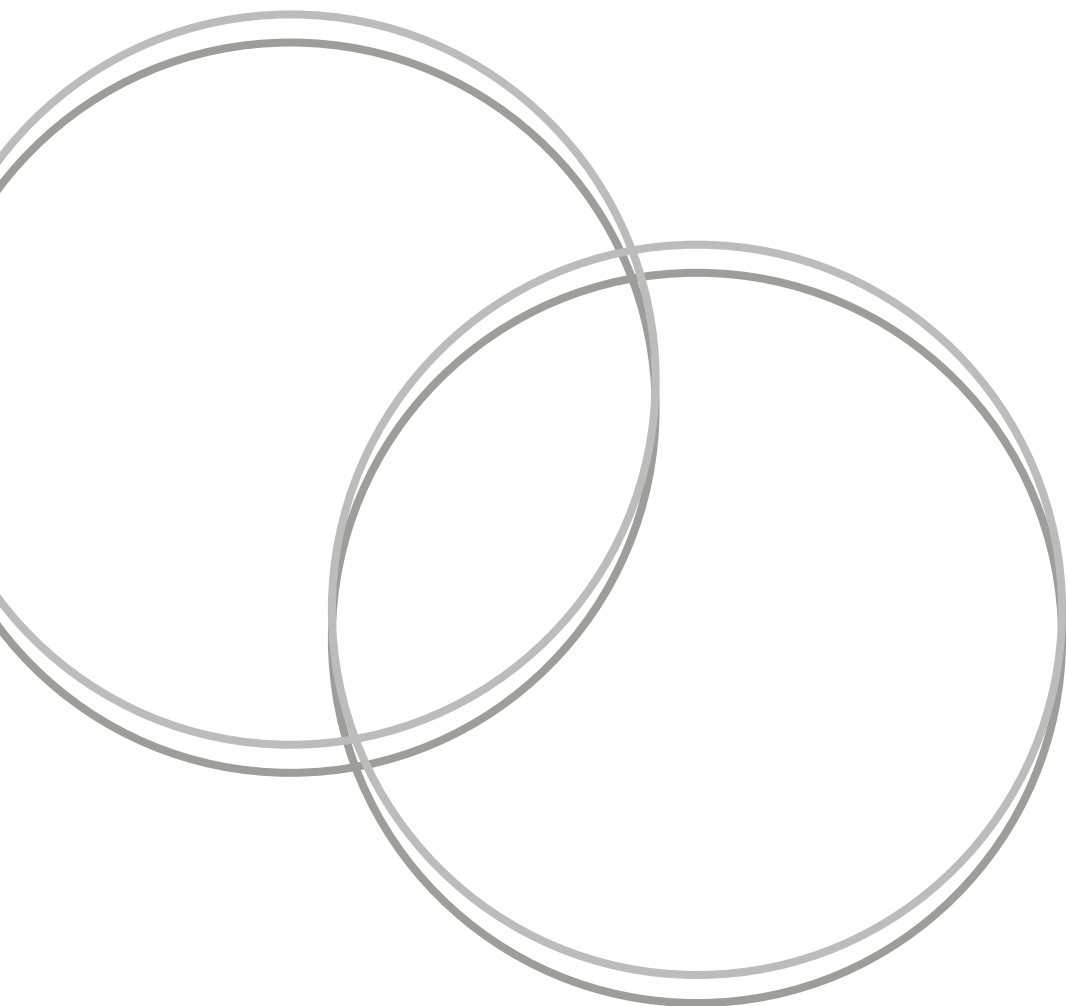




Oxford University Hospitals  
NHS Foundation Trust

# Percutaneous Coronary Intervention (PCI)

**Consent information for patients**



# **Percutaneous Coronary Intervention (PCI)**

This information sheet is for patients who are having a treatment for narrowed or blocked coronary arteries (blood vessels that supply the heart muscle), known as percutaneous coronary intervention (PCI). You may have some symptoms such as angina (chest pain) or breathlessness and PCI can help to improve these.

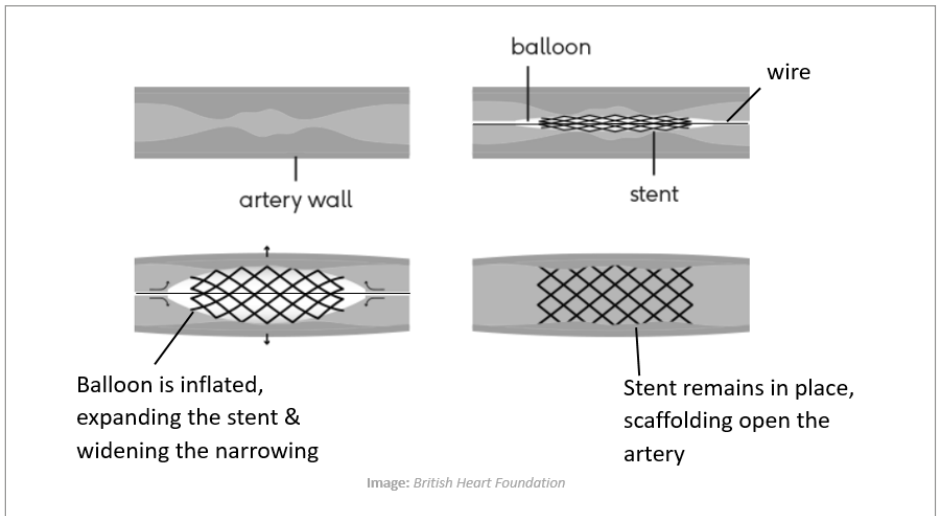
PCI can also be used to restore blood flow to the heart during a heart attack. The procedure is then called a Primary PCI and, in some circumstances, may reduce the risk of heart attacks in the future.

## **What happens during the procedure?**

First, we will take X-ray pictures of your coronary arteries to identify any narrowings or blockages. This is called an angiogram. It involves inserting a long thin tube, called a catheter, into an artery in either your wrist (radial artery) or at the top of your leg (femoral artery). We use local anaesthetic to make the area go numb and may also give you sedation medicine (which makes you feel relaxed and sleepy during the procedure). The catheter is guided using X-ray images until its tip reaches your heart. A special dye is then injected through the catheter into each of your heart arteries; this shows the position, size and shape of any narrowings or blockages. If no narrowings or blockages are found, the procedure will finish at this point, although we may need to carry out other tests to find the cause of your symptoms.

If a narrowing or blockage is found then we will carry out a procedure called a Percutaneous Coronary Intervention (PCI).

A very thin wire can be put in place across the narrowed part of the coronary artery. Once this is in position, a small balloon is passed over this wire into the narrowed area. Inflating the balloon clears the blockage and a stent (a small metal mesh in the shape of a tube) can then be inserted to keep the artery open. In some cases, additional techniques (such as making pressure measurements, or taking different types of pictures of the arteries) are used to guide the procedure; we will discuss these with you at the time.



After the procedure you will need to stay in hospital for a short time. You may be able to go home on the same day but if you have had a heart attack you may need to stay in hospital for longer. You are likely to need to take regular medication after the procedure; we will discuss this with you. It is very important that you do not miss doses or stop the medication as this may cause a blockage in the stent, which could be fatal. If you think you have missed a dose or want to stop taking the medication please speak with your cardiologist.

## **Benefits**

Most procedures are successful and current success rates in this hospital are greater than 98%. Most people who had angina before the procedure will notice an improvement. If you have an artery that is completely blocked before the procedure then the success rate is lower (50 to 70%, depending on the type of blockage). If the procedure is unsuccessful, your symptoms will usually be no worse than before.

## **Will I feel any pain?**

When the balloon is inflated you may feel a brief chest pain, similar to angina. This is nothing to worry about, but do tell the doctor if it happens. Bleeding or bruising can occur around the area where the catheter is inserted. This can be made worse if you are on any blood thinning drugs. The bruising will generally disappear in two to three weeks.

## **Risks**

Your doctor will recommend that you have percutaneous coronary intervention if they feel that the benefits of the procedure outweigh the risks. The figures quoted in this document are average figures; if you are at higher risk of a particular complication, your doctor will discuss this with you.

For all patients age 12-56, please let a member of staff know if there is any risk of you being pregnant.

There is a potential risk associated with the use of x-ray. Your doctor has considered this, and it is perceived that the benefit of the procedure outweighs the risk. In some long treatments, your skin may need to be monitored for changes, this is very rare, and we will let you know if it is necessary.

Important factors that can affect the risks of this procedure include:

- Age, underlying heart disease and other medical conditions, such as diabetes or kidney disease.
- How well you are before the procedure, for example, procedures are higher risk if being carried out in an emergency, after recent heart attacks or when angina is unstable and occurring at rest.

Whether more than one narrowing or blockage is being treated during the same procedure, whether the arteries are totally blocked (rather than just narrowed) and if the narrowing is located at a point where the artery divides (forks).

This procedure is safe and the risk of serious complications is less than 2% (less than 2 in every 100 people). Risks of the procedure include:

- Death or stroke – less than 1% (less than 1 in every 100 people) although this is more likely in an emergency rather than a planned procedure.
- Serious bleeding (which may require blood transfusion) – 1 to 2% (1 to 2 in every 100 people).
- Damage to the artery in the leg or arm where the tubes are inserted which may require an operation to correct – less than 1% (less than 1 in every 100 people). Bruising is the main risk.
- Damage to the heart muscle supplied by the artery being treated. This can be caused by closure of small branch vessels or the release of a blood clot or debris. This may occur to some extent in many cases but it only causes significant heart muscle damage in 2 to 3% (2 to 3 in every 100 people).
- Sudden blockage of a major coronary artery during or after the procedure – less than 1% (less than 1 in every 100 patients). This could cause a heart attack and may require treatment with an emergency coronary artery bypass operation.
- Development of an abnormal heart rhythm – less than 0.5% (less than 1 in every 200 people). In rare circumstances this may lead to loss of consciousness and might need to be treated with drugs or an electric shock.

- Perforation (making a hole) in one of the heart chambers or heart arteries, leading to a collection of blood around the heart – less than 0.1% (less than 1 in every 1000 people). This may require an operation or drainage using a special tube.
- Kidney damage - in rare circumstances the dye that is used can affect your kidney function. Usually this only happens for a few days and then gets better, but very occasionally may mean you need dialysis. This is more likely if you have abnormal kidney function before the procedure.
- An allergic reaction to the contrast dye used to take X-ray pictures. This may cause you to feel sick, develop a skin rash or, rarely, suffer a more severe reaction.
- Sometimes symptoms can return; this may mean the artery has narrowed again or become blocked. This happens to less than 5% of people (1 in 20). It is usually treated with a repeat procedure.

## **Observers**

We often have other health care professionals or specialist company representatives observing the work that we do. If you do not wish observers to be present during your procedure please tell your doctor.

## **Audit**

We are required to submit data on the procedures we carry out and our success rates to NICOR (the National Institute for Cardiovascular Outcomes Research) at University College London. All information is sent anonymously and nobody outside our organisation can access any of your identifiable data.

## Contact details

If you have a question about your appointment date or wish to change it, please call our Elective Access Team.

Telephone: 01865 572 809  
01865 572 810  
01865 572 811  
01865 572 879

If you have a question on the day of your admission or after you have left hospital, call the Cardiac Angiography Suite.

Telephone: 01865 572 616  
(Monday to Friday, 7.30am to 8.00pm)

Outside these hours you can call the Cardiology Ward.  
Telephone: 01865 572 671 (24 hours)

Or

Acute Cardiac Care Unit.  
Telephone: 01865 572 675 (24 hours)

## Further information

The following organisations produce information about heart disease and procedures:

### **British Heart Foundation.**

Website: [www.bhf.org.uk](http://www.bhf.org.uk)  
Telephone: 0300 330 3311

### **British Cardiovascular Intervention Society**

Website: [www.bcis.org.uk](http://www.bcis.org.uk)

### **British Cardiac Patients Association**

Website: [www.bcpa.co.uk](http://www.bcpa.co.uk)

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust  
[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)



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