Feedback

We appreciate and encourage feedback from patients and the public

If you need advice or are concerned about any aspect of your care or treatment please speak to a member of staff or contact the Patient Advice and Liaison Service (PALS).

This service aims to provide advice and information to support patients, their families and carers.
Freephone / textphone 0800 183 0204.

If you wish to contact us formally please write to:
The Chief Executive
Nottingham University Hospitals NHS Trust
Derby Road. Nottingham,NG7 2UH
Telephone: 0115 924 9924
www.nuh.nhs.uk
INTRODUCTION
Your heart specialist has recommended that you have treatment called coronary angioplasty. This booklet has been written to help you understand what a coronary angioplasty is. It will give you guidance on the procedure itself including risks and benefits. However, the decision is yours whether you have the procedure or not.

CORONARY (HEART) ARTERIES
The coronary arteries are small arteries which supply the heart muscle with blood. Coronary arteries normally vary in size, from 2 - 4mm in diameter.

View of the heart and its vessels

Notes and Questions

Further Information
Information is available from
• NHS Direct on 0845 46 47
text phone 0845 606 46
www.nhsdirect.nhs.uk
• British Heart Foundation on 020 7935 0185
Heart information line 08450 70 80 70
www.bhf.org.uk
• Cardiac support group
Michael Wagstaff 01773 717648
www.info@heartsupport.co.uk
• Nottingham University Hospitals,
City Hospital Campus - 0115 9691169
Cardiac Short Stay Unit - 53103 or 53132
Morris Ward Extension - 53136 or 53135
Cardiology Clinic Nurse - Bleep 80 7470
WHAT IS ANGINA?

Angina is an uncomfortable feeling or pain experienced usually in the chest. It is often described as a heaviness or tightness in the chest that may spread to the jaw or down the arms. It is brought on by exercise or stress, but sometimes also occurs at rest. It is usually relieved by rest and/or GTN spray or tablets. Angina is due to the coronary arteries becoming narrowed. Narrowed arteries obstruct blood flow and may not deliver enough oxygen and fuel to the heart muscle. This lack of oxygen causes angina pain.

Narrowing in the coronary artery

The precise reason for coronary artery disease developing is unknown, but it is more likely to develop in people who smoke, have high blood pressure or have high levels of cholesterol (fat) in the blood.

Please write your relative’s or friend’s name and telephone number below:

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel No.</td>
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CHECKLIST

Things to remember before your procedure

☑ Bring all of your medication in the green bag provided
☑ Toiletries and overnight things
☑ No solid food for 6 hours before your procedure
☑ Nothing to drink for 2 hours before your procedure
☑ Transport arrangements for your collection from hospital
☑ Contact number of relative or friend
☑ Write down previous allergies

This document is intended for information purposes only and you should read it either together with, or depending on, any advice given by your relevant health professional.
CORONARY ANGIOPLASTY – WHAT IS IT?
Coronary Angioplasty (sometimes called percutaneous coronary intervention PCI) is a method of improving blood flow through a narrowed artery to improve the blood supply to the heart. The procedure usually takes between 1 to 2 hours and is done in a special x-ray room.

How is angioplasty done?
The doctor may use the artery either in the top of the leg (femoral), the wrist (radial), or the middle of the arm (brachial) to do the procedure. Each doctor prefers one particular route. The area over the artery is numbed using a local anaesthetic (this doesn’t make you sleepy), this may sting for a few seconds. Once the area is numb a small tube (sheath) is put into the artery.

The equipment used during the angioplasty is then passed through the small sheath in the artery and is guided to the heart using the x-ray machine. This is very similar to having an angiogram.

A fine wire is introduced down the artery, crossing the narrowing. Over this a balloon tipped catheter (often with a stent on it) is advanced into the narrowed area. The balloon and stent are then inflated to open the narrowed area. The balloon is inflated for approximately 20-30 seconds. It is common during this to feel angina symptoms briefly. If this is prolonged, tell the doctor or nurse who may offer you some pain-killing medicine.

ADVICE FOR DISCHARGE
Usually you will be discharged from hospital one day after your angioplasty. The doctor will see you on the ward and decide when you may go home. You will need to arrange someone to collect you from the ward.

Your medications may be different from before your angioplasty, you will be advised of this prior to leaving the hospital. A slight bruise may appear in your groin, this will fade in 2-3 weeks. If this is tender take your usual pain killers. If a hard lump develops in your groin and your leg changes colour please seek prompt medical advice.

For the first 48 hours you should avoid strenuous exercise. Normal activity should then be resumed. If you have been previously inactive, exercise should be started at a low level and increased until back to previous levels of activity.

You should not drive for one week. If you have a PLV or a HGV licence, you should talk to your doctor/consultant about when you can drive again.

There are no reasons why sexual activity should not be resumed if you remain chest pain free. Please ask your doctor for advice if sexual relations cause you to develop chest pains or any shortness of breath.

If you are working, it is usual to take a week off following the angioplasty. Should you require any Health Education or advice regarding smoking, exercise or healthy eating, please ask your nurse.
After your angioplasty
At the end of the angioplasty, the sheath (tube) in your groin/arm may be secured with a stitch or taken out and a plug put into the artery. If your doctor uses a plug to seal the artery you will be given discharge instructions and a card to carry.

On the ward
You will be monitored closely for several hours after the angioplasty. Please inform the nursing staff if you have any pain or feel uncomfortable.

You will be asked to lie on your bed with a pillow under your head for an hour or two. You will gradually be sat upright. You are able to eat and drink.

Once the balloon is released and taken away the stent is fully open inside the artery.

Angioplasty Diagram

1. Guide wire moving across the narrowing
2. Balloon is advanced over guide wire across the narrowing
3. Balloon is inflated
4. Balloon has widened the narrowing in the coronary artery to improve the blood flow
**Stents – what are they?**

A stent is a small metal (stainless steel) tube. Before the stent is expanded in the artery it looks like a thin wire tube. Once in position the stent is then expanded to the exact size of the artery.

The stent stays in place for the rest of your life. It won’t activate security alarms or stop you doing any activities.

To help protect the stent we will give you a tablet called clopidogrel (plavix). Further explanation of clopidogrel is given later in this booklet.

• **Serious complications.** The risk of serious complications are very rare. These include heart attack (1:300), stroke (1:350), need for emergency bypass surgery (1:350) and death (less than 1 in 200).

These figures are based on the national average for planned angioplasty. Your individual risk will vary but we think these figures are a good guide for most patients. Things that increase individual risk include increasing age and weight, the presence of reduced heart or kidney function and if we need to perform the procedure urgently or as an emergency. The difficulty of the procedure can also increase the risk.

Your doctor will have to balance the risks of the procedure with the risks of not doing the procedure in your individual case. For example, a much greater than average risk such as 1 in 20 of a serious complication might be acceptable to you if without it you would die or be severely limited by angina. On the other hand that risk might not be acceptable if you were only mildly troubled by angina and could cope on tablet treatment alone.
What are the risks and complications of coronary angioplasty?
We try to make sure that angioplasty treatment is safe. However, every procedure has risks and possible complications. Those that are most relevant to angioplasty are described below:

- Bruising in the groin or arm. This usually fades in about three weeks.

- Haematoma (collection of blood), or false aneurysm (a swelling due to a leak in the artery) (risk 1 in 250). If this happens, you may get more widespread bruising or a painful lump. You may need further treatment. You will be asked to rest following your procedure to reduce this risk.

- Allergic reaction to the dye (risk: less than 1 in 100). This usually causes a skin rash, which settles on its own. Rarely the reaction can be serious (anaphylactic shock).

- Effect on the Kidneys. Usually any effect on your kidneys is temporary. After the procedure your kidneys will filter the dye from your bloodstream and into your urine. Because the dye is colour less, you will not see it. If you already have existing kidney problems, there is a risk of further damage and rarely this may lead to kidney failure.

- Abnormal heart rhythm. The heart may go very fast or very slow. Very fast heart flutters are called fibrillation (risk less than 1 in 100). This is usually caused by the procedure itself and is easily treated.

Pre-admission clinic
You will be asked to attend a pre-admission clinic about one week before your angioplasty. This is to reduce the time you need to spend in hospital for the procedure. You will be asked to go for blood tests and an electrocardiograph (heart tracing or ECG).

You will be seen by a nurse who will explain the procedure, and answer any questions you may have. There is a space in the back of this booklet to write any relevant information or questions. Please note down relevant contact details of relatives or friends including mobile telephone numbers in the pages provided.

Medication

PLEASE BRING ALL YOUR MEDICATION (INCLUDING VITAMINS OR SUPPLEMENTS) THAT YOU ARE CURRENTLY TAKING

- If you are taking a tablet called warfarin it is usual to stop this four full days prior to your procedure.

- If you take metformin this should not be taken on the day of your procedure or for 48 hours (two days) afterwards.

- You will be given a further tablet called clopidogrel at the pre-assessment appointment.
This drug helps to prevent clots from forming and sticking to the surface of the stent. You will be asked to take the tablet the day before your procedure and for 6-12 months after the procedure. A full explanation and an information leaflet about clopidogrel will be given to you at the pre-assessment clinic.

After discussion of the benefits, alternatives and risks of the angioplasty (described below) you will be asked to sign a consent form. You may still change your mind about having angioplasty at any point before the procedure.

**What will happen if I decide not to have the procedure?**
Angioplasty is recommended when tablets don’t control your symptoms, or the coronary artery narrowing is severe. However, if you decide not to have angioplasty treatment you will be able to continue on medication. You may continue to have angina or other heart symptoms.

You should discuss this very carefully with your doctor or nurse.

**What are the alternatives to the angioplasty?**
Angioplasty is suitable for treating many areas where a narrowing forms in the coronary arteries. It is however, not suitable for all people. The alternative treatment is coronary bypass surgery.

**Before the procedure**
We would like you to shave your right groin area the day before admission. This will be checked by the ward nurse when you arrive in hospital.

**Please** do not eat for 6 hours before the procedure, fluids may be taken until 2 hours before the procedure. Instructions will be confirmed at the pre-admission clinic or your hospital letter. **Please** leave valuable items at home.

**THE DAY OF ADMISSION**
The ward staff will prepare you for your angioplasty. If you haven’t already done so, you will be asked to sign a consent form. You will need to remove all clothing, put on a gown and a pair of paper underpants, (these will be supplied by the ward).

You should keep your dentures, hearing aid, and glasses in place (if applicable). It is important to empty your bladder before the procedure, as it may be a while before you can otherwise do so.

**Sedation**
Just before the test, your doctor may offer you sedation. The sedation will make you somewhat sleepy, but not unconscious. It is NOT a general anaesthetic. You will be in a state called co-operative sedation: this means that, although drowsy, you will still hear what is said to you and will be able to carry out simple instructions during your procedure. You will be relaxed and should be able to breathe quite normally during the procedure.

Please avoid alcohol for 8 hours before and after the test.