The doctor will use a needle to puncture the blood vessel and you will feel some pushing as a thin, flexible tube (about the width of a pencil lead) called a sheath is inserted. A thin soft tube (catheter) will be passed through the sheath and, using the X ray equipment, the doctor will guide it to your heart. When the catheter has reached the right position the doctor will inject a dye (contrast) into the catheter. X ray pictures are taken as the dye flows through the heart's arteries (see fig. 3) and the doctor will look at these on a monitor to see if there are any narrowings.

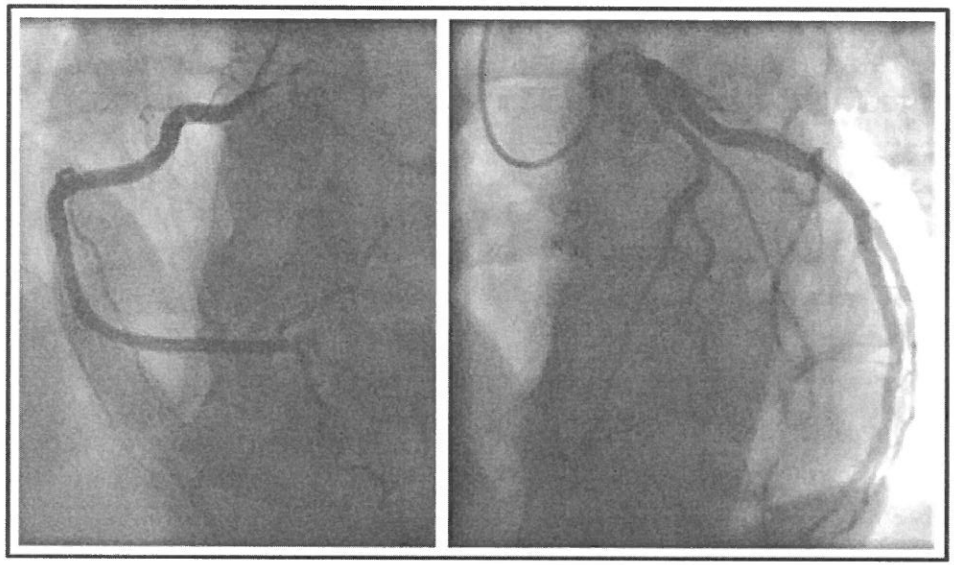

**Fig. 3 – Stills of coronary angiogram**

At a certain point during an angiogram you may experience 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 with you in the lab will inform you about this at the time, so do not be concerned.



## After the procedure

The tube in your wrist/groin will be removed when the test is complete. If you have had a groin entry site, a small collagen plug (angioseal) may be inserted to help seal the blood vessel. This plug dissolves in 60 to 90 days. You will be given a card with information about the plug to carry with you for three months.

If you have had a puncture to the radial artery, 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, starting between one and two hours after the procedure.

You will be transferred back to the daycase unit where you will be closely monitored. If you have not had sedation you will be able to resume eating and drinking straight away. If the entry point is in your groin you may have to lie flat for one hour and remain on bed rest for a further two hours. If the entry point is in your wrist, you will be able to walk around straight away if your observations are stable.

If you have been booked as a day case you will usually be ready go to home within three to six hours of the procedure. You must be taken home by a responsible adult who can stay with you overnight in order to be suitable for same day discharge. If this is not possible, please let us know straight away, and we will endeavour to make alternative arrangements for your admission.

## Risks of angiogram and angioplasty

Although most procedures are straightforward and without complication, some problems can arise.

### The more common complications are:

**Haematoma** – the build up of blood under the skin around the puncture site. This often improves on its own, but you may need surgery to drain the area if it persists.

### Rarely, the following complications can occur:

**Reaction to contrast** – this is like an allergic reaction. Please let us know if you have had problems with contrast medium in the past or an allergy to iodine or shellfish (one in 500 risk).

**Arrhythmia (abnormal heart beat)** – this often improves on its own but may need treatment if it persists.

**Embolism (blood clot)** – during the procedure, a piece of atheroma (fatty plaque) may dislodge and travel down the leg. This may be dealt with immediately, and rarely means having to undergo emergency surgery.

**Heart attack or stroke** – very rarely, the tip of the catheter can dislodge a blood clot or fatty plaque from the wall of a blood vessel. There is a risk that this may block the blood supply to the heart or brain and trigger a heart attack or stroke (less than one in 100 risk).

**Rupture of artery** – this can rarely happen during angioplasty and may require emergency surgery to correct.

**Death** – a very rare possibility due to heart attack or stroke (less than one in 1000 risk).



## During the procedure

Your angiogram will be carried out in a 'catheter lab', which looks like an operating theatre (see fig. 2).

It will be carried out under local anaesthetic. This means you will be awake throughout, so that the doctors can talk to you, although you may be offered light sedation if required. A local anaesthetic will be injected to numb the area where the tube enters the blood vessel, either in the wrist (radial artery) or the groin (femoral artery). You will be required to lie flat with one pillow. An X ray machine will be positioned above your chest. The table and the X ray machine will be moved during the procedure to acquire multiple images of your heart arteries.

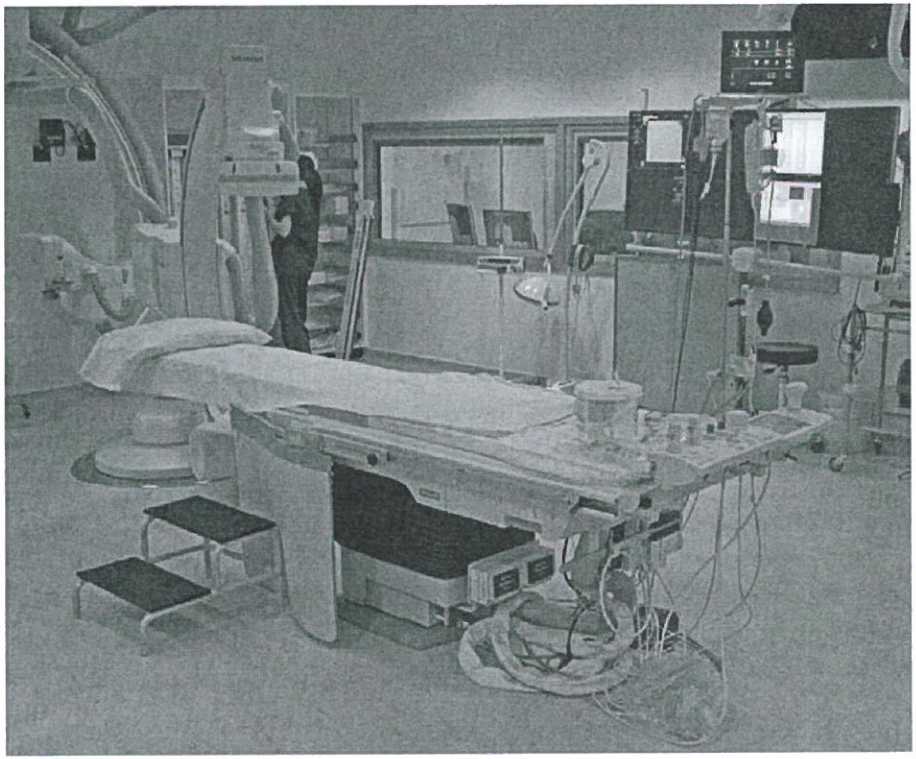

**Fig. 2 – The catheter lab**

## Preparing for your procedure

Your pre-op assessment nurse will have told you when to stop eating and drinking, and whether or not you need to stop taking any of your tablets before your procedure. For patients undergoing coronary angiogram or angioplasty, you can continue to drink sips of water until your admission. Please bring your medications with you.

The appointment time on your letter is the time of your admission time into the daycase unit – it is not your actual procedure time. We often need to further prepare patients and repeat blood tests prior to their procedures. Procedure times are also subject to change, as we provide an emergency service. This can often cause delays to our operating lists, and very occasionally, it can cause cancellations to planned procedures. We will always inform you of any delays on the day and tell you the estimated time for your procedure.

On the day of the procedure you are welcome to have a relative or friend with you in the daycase unit before and after your procedure. We are a very busy unit and would ask that you only have one person in the unit with you at a time.



### Extra procedures which may become necessary during or after the procedure:

- blood transfusion
- emergency heart bypass surgery (one in 1250)
- surgical repair of groin artery (one in 500)
- urgent repeat angioplasty (one in 400)
- kidney dialysis (one in 1000).

The exact risks are specific to you and differ for every person. Your doctor will explain how these risks apply to you when you sign the consent form.

## What to bring into hospital:

- medications
- dressing gown
- slippers
- £1 coin for lockers
- reading material
- glasses
- dentures
- washbag
- nightwear (if staying overnight).

### Please do not bring:

- jewellery
- large amounts of cash
- high value items.

## Contact details

If you have any questions that you think of after your pre-op assessment appointment, or if you are unwell in the week before your admission date, please contact the pre-op assessment nurses who will be happy to help you:

Telephone: 0117 342 5904

Or contact the arrhythmia specialist nurses on: 0117 342 6635.

### Email:

Nicola.Lukasewicz@UHBristol.nhs.uk

Sarah.Battaglia@UHBristol.nhs.uk

Hannah.Lightfoot@UHBristol.nhs.uk

Mark.Herbert@UHBristol.nhs.uk

Sarah.Battaglia@UHBristol.nhs.uk

Anna.Sice@UHBristol.nhs.uk

Jenny.Tagney@UHBristol.nhs.uk

### Arrhythmia specialist nurses:

Carolyn.Shepherd@UHBristol.nhs.uk

Eleanor.Cusack@UHBristol.nhs.uk

### Or contact:

Daycase unit (for enquiries on the day): 0117 342 6538

Waiting list coordinators: 0117 342 6550 / 6557

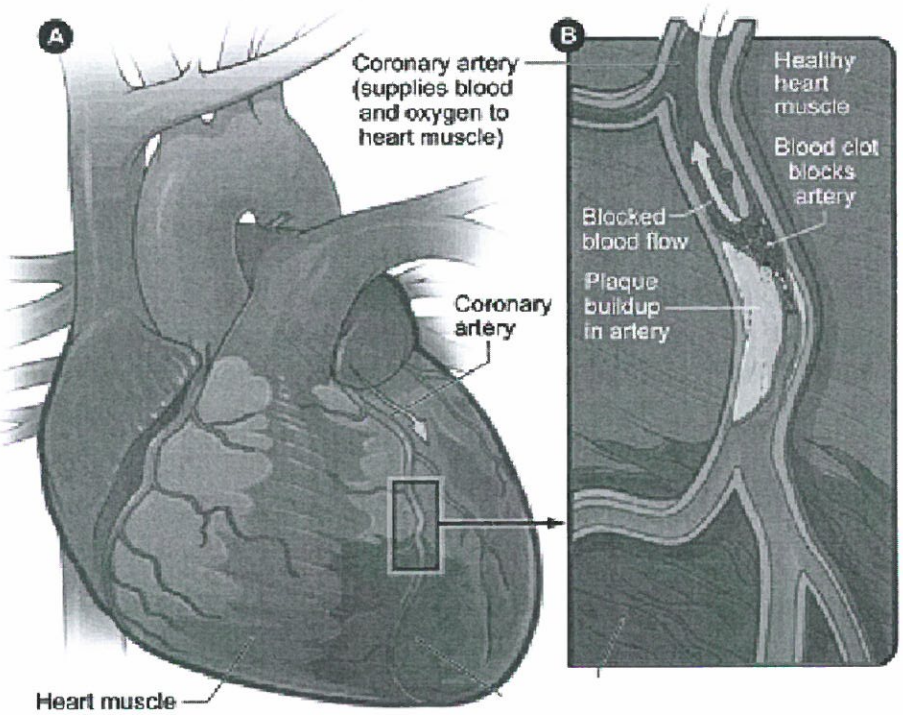


**Fig. 1 – Diseased coronary arteries**

## Why is angiography done?

An angiogram is performed to diagnose heart conditions, particularly coronary artery disease. An angiogram can also provide information about how well your heart is pumping and the pressures inside your heart. It is essential for a definite diagnosis of coronary artery disease and for deciding what treatment may be best for you.

## The heart

The heart is made of muscle which pumps blood through arteries (blood vessels). Arteries take blood that is rich in oxygen to every part of the body. Like any other muscle, the heart muscle needs a good blood supply to work properly. The heart muscle's blood supply comes from the coronary arteries, which are the first arteries to branch off the aorta.

## Angina

Angina is a pain that comes from not getting enough oxygen to meet the needs of the heart muscle. It can be caused by a narrowing or 'furring up' of one or more coronary arteries by atheroma (the build up of fat and calcium in the wall of the coronary arteries) which reduces the blood supply to part, or parts, of the heart muscle.

The blood supply may be enough when you are resting, but when you exercise your heart has to work harder. This means that the heart muscle needs more oxygen to keep pumping the extra blood around your body to other muscles. If the extra blood required by your heart cannot get past the narrowing in the arteries, you may experience angina pain or find yourself very short of breath. In the case of more severe narrowing, these symptoms can also occur at rest.



Further information about your procedure can be accessed on the Bristol Heart Institute website: www.bris.ac.uk/bhi/.

## References

British Heart Foundation (2008)
'Living with A Heart Condition' London: BHF

BUPA Health Team (2008)
'Angiogram' (Cardiac Catheterisation) Factsheet

Vascularweb.org (2009) 'What is an Angiogram?'
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Barrett D, Gretton M, Quinn T (2007)
'Cardiac Care – An Introduction for Healthcare Professionals'
Chichester: Wiley

With thanks to the National Heart, Lung, and Blood Institute. Part of the National Institutes of Health and the U.S. Department of Health and Human Services.

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:
**www.uhbristol.nhs.uk/research-innovation**
or call the research and innovation team on
**0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

**www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/.**

**Hospital Switchboard: 0117 923 0000**

**Minicom: 0117 934 9869**

**www.uhbristol.nhs.uk**

For an interpreter or signer please contact the telephone number on your appointment letter.

For this leaflet in large print, braille, audio, or email, please call the patient information service: 0117 342 3728 / 3725

 Published: **19/12/14** Expires: **31/12/17** SS/CAS/AI/CORANGBHI/DEC14

University Hospitals Bristol NHS
NHS Foundation Trust

Patient information service
**Bristol Heart Institute (Zone C)**

# Coronary angiography

## At the Bristol Heart Institute

Respecting everyone
Embracing change
**Recognising success**
Working together
**Our hospitals.**

Above + Beyond
For Patients. For Health. For Bristol.

## Medication

You may be taking a variety of tablets to treat your angina. They aim to improve the blood supply to your heart in a variety of ways. You will receive information about these on the cardiac rehabilitation course.

## Protocol for angina

1. If you think you are experiencing symtoms of angina, stop what you are doing, sit down and take some slow deep breaths.

2. If the pain or discomfort does not ease in one to two minutes, use the GTN spray. Take two sprays under the tongue (it is absorbed quickly this way, but it is important that you close your mouth afterwards).

3. Wait five minutes.

4. If the symptoms remain, take another two sprays under the tongue.

5. Wait five minutes.

6. If you still have symptoms, stay calm and dial 999 immediately.

If you do have angina, the sooner you get to hospital and start your treatment, the better for your heart.

**Possible side effects of GTN**

Headache, dizziness and facial flushing.

If you had been told to stop any medication prior to the angioplasty / stenting, you will be advised by the doctor or nurse when to restart them.



## Sedation advice

If you have received any form of sedation during your procedure, you must follow this advice.

You have received a sedative, which may impair your judgement over the next 24 hours. The doctor has advised the following:

### Do

- ☑ rest
- ☑ ensure you are accompanied home by a responsible adult who can stay with you.

### Do not

- ☒ take sleeping pills or tranquilisers without medical advice
- ☒ drink alcohol
- ☒ operate machinery (including kitchen equipment)
- ☒ sign any important documents or make a responsible decision
- ☒ drive a vehicle
- ☒ climb ladders or scaffolding
- ☒ be in charge of people.

## Your future health

Your angioplasty / stent and your tablets are helping to maximise the blood supply to your heart muscle. Risk factors for reducing this blood supply due to coronary artery disease are family history, smoking, high blood pressure, diabetes, high cholesterol, obesity and sedentary lifestyle. You can help your heart by considering your current lifestyle and making appropriate changes.

### Be smoke free

If you smoke, consider reducing the number of cigarettes you smoke and then, if you can, stopping altogether. Smoking not only reduces the oxygen available to your heart from the blood stream; it also damages the lining of the arteries, increasing the risk of coronary artery disease. It also can increase heart rate and blood pressure.

Help is available from your GP and at NHS walk-in centres, who can provide advice and practical help to support your decision to stop smoking.

If you have a computer, you can visit **www.smokefree.nhs.uk** or **www.ash.org.uk** for help and advice. You can also visit **www.smokefreebristol.com**, phone Smokefree Bristol on **0117 922 2255**, or text 'ready' to **60060**.



## Cardiac rehabilitation

Rehabilitation programmes aim to help you, your partner and your family to recover and return to normal after a heart problem. It can also help you adapt to life with heart disease in the long term by improving your quality of life and long term outlook.

### Most progammes offer:

- **information and discussion** on how to keep your heart healthy and prevent further problems
- **stress management and relaxation** to help you cope with life's day to day stresses and adapt to life with heart diseases
- **exercise** to help you regain physical fitness and confidence in being active
- **support** from health professionals and other patients.

Rehabilitation programmes are available in most areas of the UK. Your GP or cardiologist can advise you about groups in your area. If you have had your procedure in the Bristol Heart Institute and you live in southwest Bristol, the rehabilitation team from the Bristol Royal Infirmary (BRI) will contact you within four to seven days of discharge to discuss recovery and further support. Patients from other areas will be referred to their local rehab group from the BRI.

In the meantime, you have any queries, please do not hesitate to contact the team on **0117 342 6601** between the hours of 9am and 5pm, Monday to Friday. Messages can be left on the answerphone outside of these hours.

## Work

Please ask the hospital doctors or your GP when it is advisable for you to return to work. This will differ from person to person depending on the type of work you do.

## Driving

Information on current driving regulations is available on the DVLA website:

**www.dvla.gov.uk** or **www.direct.gov.uk/motoring**

**It is an offence to drive a mechanically propelled vehicle when unfit to do so because of drugs, including sedatives (Section 4, Road Traffic Act, 1992). This could invalidate your insurance policy.**

**You are advised to not drive for a week following angioplasty.**



## Healthy eating

Too much saturated fat from your diet can clog up your arteries. Think about what you eat and how you cook it. Increase the amount of fruit and vegetables you eat, and reduce the amount of foods like red meat, cakes, biscuits, chips and dairy products.

### Further tips

Bake, grill or steam vegetables, remove the skin and trim the fat from meat, and aim for two or three helpings of oily fish a week such as pilchards, sardines, salmon, and mackerel. Avoid adding salt at the table.

Visit the British Heart Foundation (BHF) website at **www.bhf.org.uk** for lots of diet-related information and publications.

## Weight

If you are overweight, your heart has to work harder to carry the extra weight. Being overweight is associated with high cholesterol, high blood presssure and diabetes, so by reducing your weight by even a modest amount, you may also reduce these other risk factors.

Losing weight is not always easy, so you may want to seek some help from your GP or a slimming group.

## Be more active

Half an hour of exercise a day makes a positive difference to your heart. Start gently and build up gradually. Walking and swimming are excellent exercises and may also help to trim any excess weight you might have, as well as giving you a sense of wellbeing, helping you to relax and sleep better.

## Blood pressure

A certain amount of pressure is necessary to keep the blood flowing around the arteries of the body. Blood pressure changes constantly throughout the day in response to what you do.

Blood pressure is recorded as two numbers, for example 120/80. The higher number is the pressure in your arteries when your heart contracts. The figure underneath is the pressure in your arteries when your heart relaxes.

A high blood pressure can damage your artery walls, which can lead to the arteries narrowing.

Make sure your blood pressure is checked regularly, so it stays at a healthy level. Your GP can arrange to do this.

## Stress

When you experience stress, your body produces adrenaline. Adrenaline can help to make you alert and better able to cope with what you do. Too much adrenaline can, however, raise your heart rate and blood pressure.

There is no evidence to show that stress causes heart attacks. However, studies show that stress can lead to an increase in other risk factors such as:

- increased blood pressure and heart rate
- excessive eating
- excessive drinking of alcohol
- increase in smoking.



## Puncture sites

### Groin (femoral artery)

If you have had an angioseal inserted (a collagen plug used to seal the artery), this will dissolve over the following 90 days. You will be given a card, which you should keep with you at all times, and follow the instructions on the previous page regarding bathing. It is normal to feel a pea-sized lump for these 90 days.

If you have not had an angioseal implanted and you had a member of staff press on your groin for a long period of time, you should ensure your wound is kept clean and dry. It is important to rest and only take gentle exercise for the next 48 hours.

### Wrist (radial artery)

If the wound is on your wrist, a small dressing will be applied when the transradial band (TR band) is removed. You may remove this dressing 24 hours after going home in order to prevent the risk of infection. Again, it is important to stick to gentle exercise for the next 48 hours.

## Exercise

You should avoid lifting, gardening and housework for two to three days. This avoids putting a strain on the healing artery and helps to prevent unnecessary complications. Slowly return to your normal activities within your own limits. Hobbies such as golf, tennis and cycling must be discussed with your doctor.

## Sexual activity

As long as it has been 48 hours after an angioplasty / stent, there is no reason why you cannot return to a normal sex life once your wound has healed.

## Your future care

You will be discharged with a letter for your GP, and a copy of your electrocardiogram (ECG). This will inform them of your stay in hospital and the procedures you have had.

Following your procedure you will receive a letter for a follow-up appointment, or further treatment, within six weeks.

If you cannot come to this appointment, please phone the number on the letter to arrange a new time.

## Going home

### Puncture site

Your puncture site has now stopped bleeding, but it takes a further two to three days to heal completely from the inside. Bruising is normal and may get worse over the next few days, and it may take up to two weeks to completely disappear. If it is painful, take a non-aspirin based painkiller (such as paracetamol) and rest.

If an egg-shaped lump appears at the puncture site, please visit your GP to get it checked. In most cases this is a collection of blood under the skin.

If you are a day case patient, you should be collected after the procedure and have someone with you overnight in case of complications, although these are rare.

If your puncture site starts to bleed, apply direct pressure and go to the nearest emergency department. If it is bleeding uncontrollably, dial 999 for an ambulance.

You should not have a bath. However, a quick shower is acceptable. Please ensure the wound site is well dried with a clean towel, especially if you have a groin wound.



## More information

Please take any British Heart Foundation (BHF) leaflets that may be of use to you from our large selection. The BHF also have a website with information that may be of help to you:

**www.bhf.org.uk**

You can also ring **NHS 111** for advice.

**Discharging nurse**

Sign: _____

Print name: _____

## For information on the heart and leading a healthy life

**Diabetes UK**

Telephone: 0345 123 2399

Website: www.diabetes.org.uk

**The Sexual Advice Association**

Helpline: 0207 486 7262

Website: www.sda.uk.net

**Alcohol Concern**

Telephone 0300 123 1110

**If you have any queries or concerns, please contact the appropriate ward or the cardiology department:**

## Cardiology day case area

| | |
|---|---|
| Monday to Friday | 8am to 8pm |
| Telephone: | 0117 342 6538 / 5939 |

## Anytime

| | |
|---|---|
| Ward C705: | 0117 342 6551 / 6651 |
| Ward C805: | 0117 342 6553 / 6653 |
| Coronary care unit: | 0117 342 6527 / 6528 |

## Other useful numbers:

| | |
|---|---|
| Bristol Royal Infirmary switchboard: | 0117 923 0000 |
| Patient support and complaints team: | 0117 342 1050 |



Name _____

Consultant _____

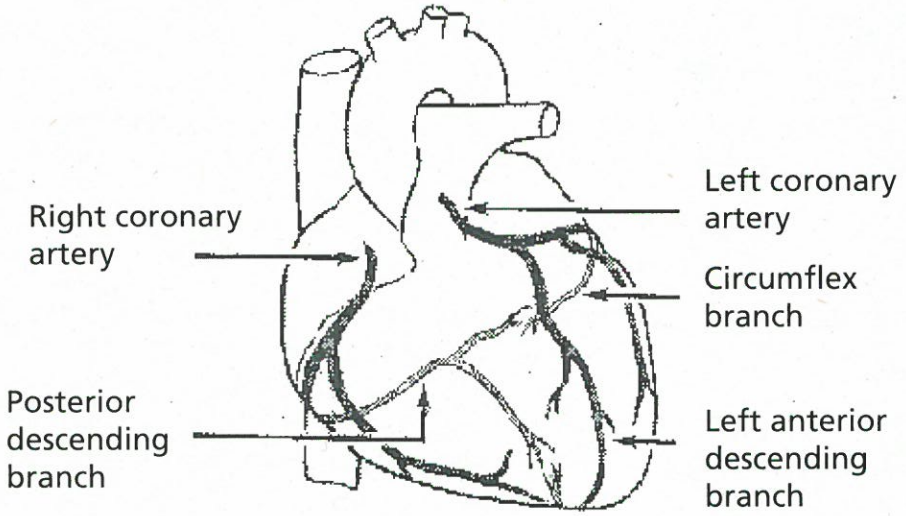
On _____ you had a coronary angioplasty / stent(s) to your _____ coronary artery

performed by Dr _____.

Angioplasty is a procedure which involves inserting a thin tube with a tiny balloon on the end into your narrowed coronary artery. The balloon is then inflated to open up your coronary artery, which allows more fresh blood to reach your heart muscle.

A stent is a small stainless steel wire mesh tube which is then placed in that coronary artery to hold the artery open. It is possible to have more than one stent in more than one artery. A stent will remain in the artery permanently.

This is a diagram of the coronary arteries, which provide the heart muscle with fresh blood. The position of your angioplasty / stent(s) is marked on the diagram.



## H.E.A.R.T team

If you require any further information or have any queries, please contact us or your local cardiac rehabilitation team.

Telephone: **0117 342 6601** or **0117 342 6639**. Please leave a clear message and contact number on our answerphone.

Email: HeartTeam@uhbristol.nhs.uk

H.E.A.R.T team
Management Offices
Bristol Heart Institute (BHI)
Bristol Royal Infirmary
Upper Maudlin Street
Bristol BS2 8HW

**Notes/queries**

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:
**www.uhbristol.nhs.uk/research-innovation**
or call the research and innovation team on
**0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

**www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/**

**Hospital switchboard: 0117 923 0000**

**Minicom: 0117 934 9869**

**www.uhbristol.nhs.uk**

For an interpreter or signer please contact the telephone number on your appointment letter.

For this leaflet in large print, audio or PDF format, please email patientleaflets@uhbristol.nhs.uk.

 Published: **12/05/16** Expires: **31/05/19** SS/CAS/AI/DPCAS/MAY16

University Hospitals Bristol NHS
NHS Foundation Trust

Patient information service
**Cardiothoracic department (Zone C)**

# Discharge plan

## following coronary artery stenting

Respecting everyone
Embracing change
**Recognising success**
Working together
**Our hospitals.**

Above + Beyond
For Patients. For Health. For Bristol.

## ACE inhibitors

This tablet prevents a chemical in the blood from narrowing your arteries. It helps to lower blood pressure, can be used to treat heart failure (weak heart), and can be used to help the heart recover after a heart attack.

### Possible side effects

Persistent dry cough, low blood pressure, giddiness, rash and altered kidney function. Your GP will monitor your kidney function.

## Cholesterol lowering drugs

Excess cholesterol in the bloodstream is deposited in the lining of your arteries, causing narrowing. This tablet works to reduce the level of cholesterol. It works best when taken at bedtime, as this is when most cholesterol is made. However, if you are taking atorvastatin, you can take this at a time to suit you. Statins act by reducing the amount of cholesterol that the body manufactures from fatty foods, but they are only effective when combined with a healthy low fat diet.

Grapefruit must be avoided if you are taking simvastatin.

### Possible side effects

Muscle aches/weakness (these can be temporary), upset stomach, insomnia and altered liver function. Your GP will monitor your liver function.



## GTN spray

This spray is taken when you get chest pain. It dilates the arteries in the heart and immediately improves the blood and oxygen supply, so relieving the pain.

## Protocol for GTN use

1. If you think you are experiencing symtoms of angina, stop what you are doing, sit down and take some slow deep breaths.

2. If the pain or discomfort does not ease in one to two minutes, use the GTN spray. Take two sprays under the tongue (it is absorbed quickly this way, but it is important that you close your mouth afterwards).

3. Wait five minutes.

4. If the symptoms remain, take another two sprays under the tongue.

5. Wait five minutes.

6. If you still have symptoms, stay calm and dial 999 immediately.

If you do have angina, the sooner you get to hospital and start your treatment, the better for your heart.

### Possible side effects of GTN

Headache, dizziness and facial flushing.

## Sedation advice

If you have received any form of sedation during your procedure, you **must** follow this advice.

You have received a sedative, which may impair your judgement over the next 24 hours. The doctor has advised the following:

### Do

- ☑ rest
- ☑ ensure you are accompanied home by a responsible adult who can stay with you.

### Do not

- ☒ take sleeping pills or tranquilisers without medical advice
- ☒ drink alcohol
- ☒ operate machinery (including kitchen equipment)
- ☒ sign any important documents or make a responsible decision
- ☒ drive a vehicle
- ☒ climb ladders or scaffolding
- ☒ be in charge of people.

If you had been told to stop any medication prior to the angiogram, you will be advised by the doctor or nurse when to restart them.



## Medication

You may be taking a variety of tablets to treat your angina. They aim to improve the blood supply to your heart in a variety of ways. There is a list below of the common sorts of tablets with an explanation of how they are helping you. The name of each of your tablets is written in the relevant section. You do not need to be taking tablets from all of the groups. The doctors will decide which combination will benefit you the most.

### Aspirin

Aspirin reduces the stickiness of the platelets (small blood cells) in the bloodstream. This stops them clumping together to form clots and keeps the blood flowing freely.

#### Possible side effects

Bleeding and bruising (for example nose bleeds) and stomach discomfort. If you experience severe bleeding, seek medical attention immediately. If you experience any other possible side effects, such as shortness of breath, please contact your GP. It is advisable to take aspirin with or after food to reduce the risk of stomach irritation.

### Beta blockers

This tablet prevents the heart from beating as quickly and forcefully on exercise and emotion. It helps to protect your heart from damage.

#### Possible side effects

Cold hands and feet, tiredness, weight gain, impotence/sexual dysfunction and nightmares. Beta blockers can affect asthma, so if you notice that your breathing has been affected, please consult your GP. If you are diabetic, beta blockers can mask the signs of a hypoglycaemic attack (low blood sugar level).

## Exercise

You will need to avoid lifting, gardening and housework for two to three days. This avoids putting a strain on the healing artery and helps to prevent unnecessary complications. Slowly return to your normal activities within your own limits. Hobbies such as golf, tennis and cycling must be discussed with your doctor.

## Sexual activity

As long as your wound has healed, there is no reason why you cannot return to a normal sex life 48 hours after an angiogram.

## Work

Please ask the hospital doctors or your GP when it is advisable for you to return to work. This will differ from person to person depending on the type of work you do.

## Driving

Information on current driving regulations is available on the DVLA website:

**www.dvla.gov.uk** or **www.direct.gov.uk/motoring**

**It is an offence to drive a mechanically propelled vehicle when unfit to do so because of drugs, including sedatives (Section 4, Road Traffic Act, 1992). This could invalidate your insurance policy.**

**You are not insured to drive for 48 hours following an angiogram.**



## Your future health

Your tablets are helping to maximise the blood supply to your heart muscle. Risk factors for reducing this blood supply due to coronary artery disease are family history, smoking, high blood pressure, diabetes, high cholesterol, obesity and sedentary lifestyle. You can help your heart by considering your current lifestyle and making appropriate changes.

### Be smoke free

If you smoke, consider reducing the number of cigarettes you smoke and then, if you can, stopping altogether. Smoking not only reduces the oxygen available to your heart from the blood stream; it also damages the lining of the arteries, increasing the risk of coronary artery disease. It also can increase heart rate and blood pressure.

Help is available from your GP and at NHS walk-in centres, who can provide advice and practical help to support your decision to stop smoking.

If you have a computer, you can visit **www.smokefree.nhs.uk** or **www.ash.org.uk** for help and advice. You can also visit **www.smokefreebristol.com**, call Smokefree Bristol on **0117 922 2255**, or text 'ready' to **60060**.

### Healthy eating

Too much saturated fat from your diet can clog up your arteries. Think about what you eat, and how you cook it. Increase the amount of fruit, fibre and vegetables you eat, and reduce the amount of foods like red meat, processed food, fried food, sugary foods, cakes, biscuits, salt, chips and dairy products.

## Further tips

Bake, grill or steam vegetables, remove the skin and trim the fat from meat, and aim for two or three helpings of oily fish a week such as pilchards, sardines, salmon, and mackerel. Avoid adding salt at the table.

Visit the British Heart Foundation (BHF) website at **www.bhf.org.uk** for lots of diet-related information and publications.

## Weight

If you are overweight, your heart has to work harder to carry the extra weight. Being overweight is associated with high cholesterol, high blood presssure and diabetes, so by reducing your weight by even a modest amount, you may also reduce these other risk factors.

Losing weight is not always easy, so you may want to seek some help from your GP or a slimming group.

## Be more active

Half an hour of exercise a day makes a positive difference to your heart. Start gently and build up gradually. Walking and swimming are excellent exercises and may also help to trim any excess weight you might have, as well as giving you a sense of wellbeing, helping you to relax and sleep better.



# Wound sites

## Groin (femoral artery)

If you have had an angioseal inserted (a collagen plug used to seal the artery), this will dissolve over the following 90 days. You will be given a card, which you should keep with you at all times, and follow the instructions on the previous page regarding bathing. It is normal to feel a pea-sized lump for these 90 days.

If you have not had an angioseal implanted and you had a member of staff press on your groin for a long period of time, then you should ensure your wound is kept clean and dry.

## Wrist (radial artery)

If the wound is on your wrist, a small dressing will be applied when the transradial band (TR band) is removed. You may remove this dressing 24 hours after going home in order to prevent the risk of infection.

## Wrist and groin

If an egg shaped/sized lump appears at the wound site, please visit your GP to get it checked. In most cases this is not a problem and is usually caused by a collection of blood under your skin.

## Your future care

You will be discharged with a letter for your GP. This will inform them of your stay in hospital and the procedures you have had.

Following your procedure you will receive a letter for a follow-up appointment, or further treatment, within six weeks.

If you cannot come to this appointment, please call the number on the letter to arrange a new time.

In the event that you have no coronary artery disease, you will be referred back to your GP.

## Going home

### Puncture site

Your puncture site has now stopped bleeding, but it takes a further two to three days to heal completely from the inside. Bruising is normal and may get worse over the next few days, and it may take up to two weeks to completely disappear. If it is painful, take a non-aspirin based painkiller (such as paracetamol) and rest.

If you are a day case patient, you should be collected after the procedure and have someone with you overnight in case of complications, although these are rare.

If your puncture site starts to bleed, apply direct pressure and go to the nearest emergency department. If it is bleeding uncontrollably, dial 999 for an ambulance.

You should not have a bath. However, a quick shower is acceptable. Please ensure the wound site is well dried with a clean towel, especially if you have a groin wound.



### Blood pressure

A certain amount of pressure is necessary to keep the blood flowing around the arteries of the body. Blood pressure changes constantly throughout the day in response to what you do.

Blood pressure is recorded as two numbers, for example 120/80. The higher number is the pressure in your arteries when your heart contracts. The figure underneath is the pressure in your arteries when your heart relaxes.

A high blood pressure can damage your artery walls, which can lead to the arteries narrowing.

Make sure your blood pressure is checked regularly, so it stays at a healthy level. Your GP can arrange to do this.

### Stress

When you experience stress, your body produces adrenaline. Adrenaline can help to make you alert and better able to cope with what you do. Too much adrenaline can, however, raise your heart rate and blood pressure.

There is no evidence to show that stress causes heart attacks. However, studies show that stress can lead to an increase in other risk factors such as:

- increased blood pressure and heart rate
- excessive eating
- excessive drinking of alcohol
- increase in smoking.

## More information

Please take any British Heart Foundation (BHF) leaflets that may be of use to you from our large selection. The BHF also have a website with information that may be of help to you:

**www.bhf.org.uk**

You can also ring **NHS 111** for advice.

**Discharging nurse**

Sign: _____

Print name: _____

## For information on the heart and leading a healthy life

**Diabetes UK**

Telephone: 0345 123 2399

Website: www.diabetes.org.uk

**The Sexual Advice Association**

Helpline: 0207 486 7262

Website: www.sda.uk.net

**Alcohol Concern**

Telephone 0300 123 1110



## Results

Having carefully assessed the results of your coronary angiogram, your consultant and their team have decided that the following treatment is best for you:

Name _____

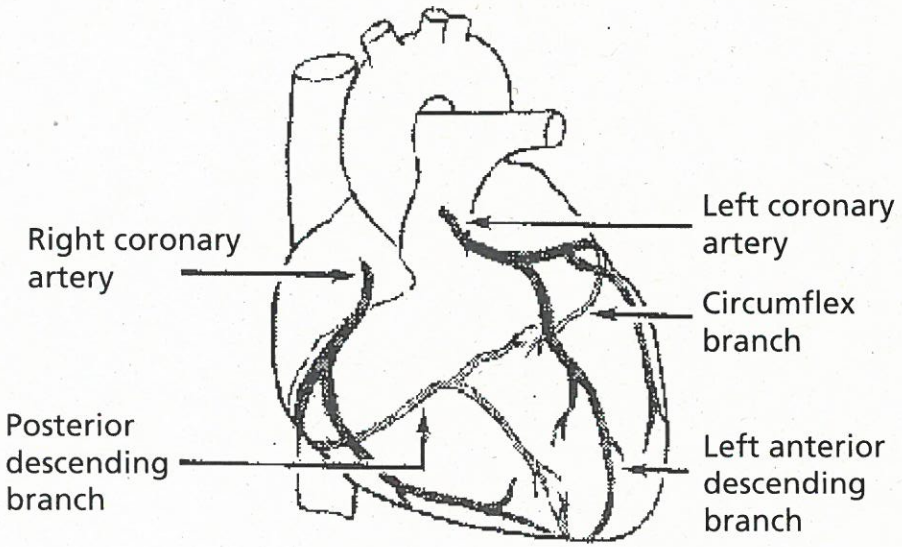
Consultant _____

On _____ you had a coronary angiogram

performed by Dr _____.

A coronary angiogram is a procedure to assess your coronary arteries for narrowings. Any narrowings will compromise blood flow to the heart muscle. The procedure will also assess the pumping strength of your heart. This is a diagnostic procedure rather than a therapeutic one.

This is a diagram of the coronary arteries, which provide the heart muscle with fresh blood. The position of any narrowings is marked on the diagram.






**If you have any queries or concerns, please contact the appropriate ward or the cardiology department:**

## Cardiology day case area

| | |
|---|---|
| Monday to Friday | 8am to 8pm |
| Telephone: | 0117 342 6538 / 5939 |

## Anytime

| | |
|---|---|
| Ward C705: | 0117 342 6551 / 6651 |
| Ward C805: | 0117 342 6553 / 6653 |
| Coronary care unit: | 0117 342 6527 / 6528 |

## Other useful numbers:

| | |
|---|---|
| Bristol Royal Infirmary switchboard: | 0117 923 0000 |
| Patient support and complaints team: | 0117 342 1050 |

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:
**www.uhbristol.nhs.uk/research-innovation**
or call the research and innovation team on
**0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

**www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/**

**Hospital switchboard: 0117 923 0000**

**Minicom: 0117 934 9869**

**www.uhbristol.nhs.uk**

For an interpreter or signer please contact the telephone number on your appointment letter.

For this leaflet in large print, audio or PDF format, please email patientleaflets@uhbristol.nhs.uk.

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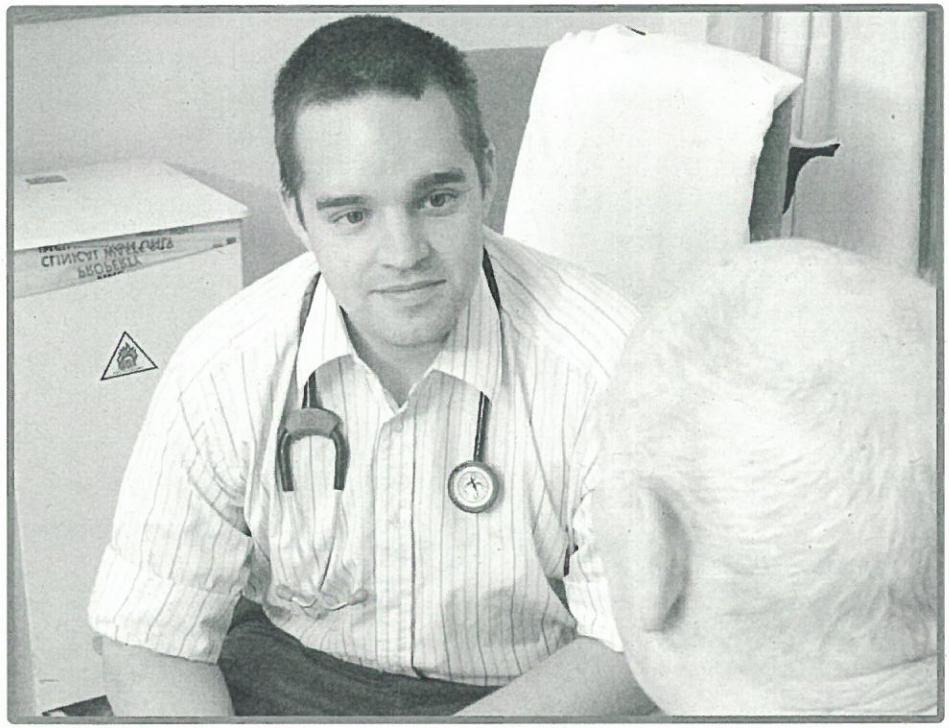
University Hospitals Bristol NHS
NHS Foundation Trust

Patient information service
**Cardiothoracic department (Zone C)**

# Discharge plan following coronary angiogram



Respecting everyone
Embracing change
Recognising success
Working together
**Our hospitals.**

Above + Beyond
For Patients. For Health. For Bristol.