

Cardiology services

Having a percutaneous coronary intervention

Information for patients, relatives and carers

Contact details

Booking team: **020 3313 1661** or email: ICHC-tr.cathlabs@nhs.net

Cardiac day ward: **020 3313 1663** or **020 3313 4034**

**Due to Covid 19, visiting restrictions remain in place to keep everyone safe. Please visit our website for more details <https://www.imperial.nhs.uk> > patients and visitors > visiting.

Pre-assessment Care Team: **0203 313 3412**

Transport booking team: **033 0678 1245** (Monday to Friday: 08.00-20.00, Saturday and Sunday: 10.00-13.00)

Above contacts are available Monday to Friday 09.00-17.00.

For out of hours, please contact NHS **111** for advice and health information.

What is a percutaneous coronary intervention (PCI)?

A coronary angioplasty or PCI is a very specific procedure in treating coronary artery disease (CAD). When the coronary arteries (blood vessels of the heart) are narrowed or blocked, blood flow to the heart muscle becomes restricted and this causes chest pain also known as angina.

Coronary angioplasty or PCI is a procedure to unblock the narrowed coronary arteries with the use of x-ray examination and a special dye (known as contrast) that shows up on the x-ray images. The narrowing will be unblocked and widened with a small balloon and a special metallic stent (wire-mesh) is placed permanently in these narrowed coronary arteries to maintain the blood flow to the heart muscle.

In some cases, the coronary arteries can be assessed using other medical imaging tools such as using ultrasound or a pressure wire to determine the degree of narrowing and the effect on blood flow through the coronary artery.

A PCI procedure is a day case procedure that takes between 1 hour and 3 hours. You should be able to go home in the afternoon. However, in some cases, you may need to stay overnight in the hospital for observation.

As part of NHS safety measures in response to Covid 19, there are restrictions in place when visiting our hospital. Please visit our website for more details <https://www.imperial.nhs.uk> > patients and visitors > visiting.

Your friends/relatives can phone up the cardiac day ward to find out how you are doing and what time you will be discharged.

Why has a PCI been recommended for me?

Your doctor may recommend a coronary angioplasty if you have:

- symptoms of CAD such as chest pain (angina) and/or breathlessness
- an acute heart attack
- sudden cardiac arrest (SCA) where the heart unexpectedly stops beating
- evidence of impaired blood flow to the heart on non-invasive heart tests

Are there any alternative to PCI?

A PCI will only be requested by your doctor if they feel that this is the best way to treat your heart condition and symptoms. Other alternatives to a PCI procedure will be to continue medical therapy or a surgical coronary artery bypass procedure (CABG).

What are the risks and complications involved in having a PCI?

The risks involved in having a PCI procedure vary from patient to patient. Your cardiologist will discuss the risk factors in detail with you on the day of your procedure.

Complication may include:

Fairly common but less serious:

- bleeding or bruising around or from the puncture site.

Uncommon but more serious:

- damage to the blood vessels leading to rupture and bleeding. This might need emergency bypass surgery
- blood clots formation and possible stroke
- kidney problems related to the dye used
- infection at insertion site
- reaction to the contrast medium. This is very rare and only occurs in a small handful of patients
- myocardial infarction (heart attack)
- death

If there is a major complication, we may carry out a coronary artery bypass procedure. Although the chances of requiring such emergency surgery after a PCI is extremely low.

What I need to know before having my PCI procedure

Before your procedure, you will need to attend a nurse-led pre-assessment clinic as the next step in your care pathway. Currently, this pre-assessment service will be either a telephone or face to face appointment. For further enquiries, please contact the pre-assessment care team at 0203 313 3412.

It is important that you **arrange for a relative or a friend to take you home** after your procedure by car/taxi. You will not be able to drive or use public transport (on your own). **Your relative or friend will need to stay with you overnight or you may choose to stay with them for the night.**

If you do not have anyone to take you home or stay with you after your procedure, you **must** contact the booking team to **arrange a new date** or **pre-arrange an overnight hospital stay**. If you do not contact us, we may cancel your procedure on the day.

If you are pregnant or think you may be pregnant, you must contact your cardiologist for appropriate advice about your treatment.

If you have had vomiting or diarrhoea, a cough, cold or skin infection with or without a fever during the 3 days before your procedure, please contact the booking team.

Plan your hospital journey beforehand. Wear a face mask (if possible) while travelling using public transport, hospital transport, a family car or a taxi. Please note that Hammersmith Hospital has a small number of general and disabled car parking spaces. Please visit our website for more details <https://www.imperial.nhs.uk> > our hospitals > hammersmith > parking.

What if I cannot keep my appointment?

If you cannot attend your appointment, please contact the booking team immediately. This allows us to agree a new appointment date and time with you and offer your original appointment to another patient. We will always aim to re-schedule your procedure appointment to the next available date.

If you are running late on the day of admission, please contact the cardiac day ward to notify them your estimated arrival time.

What happens if I need transport or an overnight stay?

In line with Department of Health guidelines, we provide a non-emergency transport service for patients whose clinical condition or mobility makes it very difficult for them to attend hospital without transport assistance. Please visit our website for more details <https://www.imperial.nhs.uk> > patients and visitors > help and support > patient transport.

Short stay studio flats are available for you and your visitors. We have purpose-built accommodation next to Hammersmith Hospital on Du Cane road. For further enquiries, please contact 020 3313 4873 or email imperial.accommodation@nhs.net for more information. Note that your relative or friend will need to stay with you overnight after your procedure.

How should I prepare for my PCI?

In response to Covid 19, we are taking every precaution to protect our patients and staff. We ask all patients and their carers to familiarise themselves with our new procedures for coming into hospital. Once you arrived at the hospital, please follow physical distancing rules (keep a two-metre distance from others), wear a face mask and practise good hand hygiene. Please visit our website for latest information on coronavirus infection prevention and control measures in place across our hospitals <https://www.imperial.nhs.uk> > patients and visitors > patients > coronavirus latest information.

Before coming to the hospital to attend your procedure, it is important to shower or bath. Please ensure any nail polish is removed and avoid applying heavy makeup. As monitoring equipment will be placed on your chest, it is advised not to apply moisturising skin lotion on your chest or on the procedure insertion sites - wrist or groin. To minimise the risk of infection, you may prefer to shave or remove any hairs from the chest, wrist and groin areas (if possible) on your own. If not, this can be done for you on the day of the procedure.

Please only bring essential items and avoid wearing jewellery or other valuables. Bring a dressing gown, loose clothing, and comfortable footwear such as a pair of slippers for ease. As you may be in the hospital for around 4 to 6 hours, we suggest bringing something to read or listen to with a headset or earphones while you wait.

It is important that you do not eat or drink before your procedure to reduce the risk of food and drinks going into your lungs:

- **no food or milky/flavoured drinks** for **6 hours** before your procedure
- **only plain (non-flavoured) water** is allowed **until 2 hours** before your procedure

For more details on how to prepare for your planned procedure, please visit our website <https://www.imperial.nhs.uk> >patients and visitors > patients > planned procedures and surgery.

Medication

The pre-assessment care team and your doctor will have advised and discussed with you about stopping any medications before your procedure. Please bring all your medications that you are currently taking with you when attending your procedure.

If you have any drug allergies, please ensure that you inform the team.

If you have asthma, please bring your inhaler medication with you.

If you are taking any 'water tablets' (diuretics), you may wish to postpone having them and only take

them after your procedure has been performed.

If you have diabetes:

- Please continue taking metformin unless advised otherwise by your doctor.
- You may be required to stop your insulin on the morning of your procedure or half your insulin dosage. The pre-assessment care team will be able to instruct you more during your pre-assessment clinic appointment. (Please bring your insulin medication with you on the day of your procedure. If required, a sweet drink or glucose can also be given to correct your low blood sugar on the day of procedure).

If you are taking any blood thinning medications such as Warfarin, Dabigatran, Rivaroxaban, Edoxaban or Apixaban, please speak to your doctor or the pre-assessment team on how to manage these medications at least a week before your procedure or during your pre-assessment clinic appointment.

Please note the effects of Warfarin can vary between individuals. Your procedure can be cancelled and postponed if your International Normalized Ratio (INR) value is not suitable to proceed with the procedure.

If you are taking other medications that are not stated above, please continue your medications as per prescribed with a glass of water at 06.00 on the morning of your procedure unless advised otherwise by your doctor or the pre-assessment team.

Renal (kidney) dysfunction

If you have kidney disease, please speak to your doctor or the pre-assessment team about any precautions you may need to take to reduce the risk of developing dye-induced worsening of your kidney function.

Your doctor or the pre-assessment team will be able to advise you on any pre-treatment such as stopping some medications like diuretics, ACE-inhibitors or Angiotensin receptor blocking drugs and giving intravenous saline on the day.

A blood test (48 hours after the angiogram) may be required to assess your kidney function.

What happens on the day of my appointment?

Please arrive at the hospital at the time stated in your admission letter. Note that this will not be the actual time of your procedure.

You will need to go to the cardiac day ward that is located beside the heart attack centre on the first floor of Block A, above the outpatients department. Please check in at the reception desk. Visit our website for our internal site map <https://www.imperial.nhs.uk> >our hospitals > hammersmith > hospital map.

A bed space will be allocated to you where blood samples will be taken, and your medical history discussed. One of the cardiologists will explain the risks and benefits of the procedure to you. Once you have understood and agree to go ahead with the procedure, you will be asked to sign a consent form.

If you are very anxious about the procedure and would like some sedation beforehand, please speak to the cardiologist on examination, or to a member of the nursing team. If you have any specific requests about the procedure (e.g., you want it done from a particular route), please let the cardiologist know and he/she can assess what is right for you.

You will then change into a hospital gown and a member of staff will escort you to the procedure room.

We will get you to lie down on the x-ray table and will connect you to the monitoring equipment. We will clean your groin area or wrist with antiseptic fluid and cover it with a sterile sheet.

The procedure

The cardiologist will inject local anaesthetic, which may cause some stinging initially, to numb the area. This stinging sensation will only last for a short period of time. When the insertion site is numb, the cardiologist will secure an access to your artery with a sheath and placed catheters into your coronaries using x-ray imaging. You may feel some pressure or pushing at the insertion site, but it should not be painful. If it does become uncomfortable, you can tell the cardiologist and they will be able to give you some more local anaesthetic.

When the catheters are in the correct positions, the cardiologist will inject the contrast, a special dye used to highlight blood vessels on x-rays. As the dye is injected into your blood vessels, x-rays will be taken to provide the cardiologist with more detailed information of your coronaries. You may experience a warm sensation throughout your body when the contrast is injected – this is very common and normal.

When the site of the narrowing coronary arteries is identified, the cardiologist will proceed in treating the narrowing by passing a balloon catheter to the narrow area to widen the arteries. In most cases, metallic stent (wire mesh) will be placed on the treated area to maintain the blood flow across the coronary arteries.

When the procedure is done, the catheter will be removed from the insertion site. If your wrist is the insertion site used for your procedure, a compression device called the TR band will be placed around your wrist to stop the bleeding.

If your groin is the insertion site, a closure device or plug will be used to stop any bleeding. In cases when a closure device or plug cannot be used, the nurse will stop the bleeding by pressing on the dressing covering the site for about 10 to 15 minutes.

Once you are back on the recovery ward, you will need to lie flat for at least 1 hour to prevent any bleeding from the insertion site at the groin. Afterwards, you will be asked to sit in a chair and/or mobilise (move around).

If your procedure insertion site was from the wrist, you will be able to sit in the chair after the procedure.

The nursing staff will continue to record your pulse and blood pressure during this recovery period. If you feel unwell, please tell one of the team of cardiology doctors or nursing staff immediately.

What happens after the procedure?

It is normal to feel some slight discomfort around your insertion site (either groin or wrist). You should keep an eye out for any unusual pain, bleeding and abnormal discoloration.

It is important to keep the insertion site clean and dry. If the insertion site becomes sore and swollen or there is excess discharge or oozing, please contact the cardiac day ward.

For out of hours, please go to your nearest urgent care centre: <https://www.imperial.nhs.uk> > our services > accident and emergency > urgent treatment centres.

Please be informed that after a stent procedure you will usually be on aspirin and an additional blood thinner such as clopidogrel or ticagrelor. It is very important you continue these medications. Please do not stop them earlier without discussing it with your cardiologist.

Any new medications prescribed for you as a result of the procedure will be supplied by the hospital.

At home

Depending on your insertion site, most patients recover within a day. Return to work after the procedure will depend on what type of work you do and the overall state of your health. It is advisable to avoid any strenuous exercise or heavy lifting activities.

Before you leave hospital, the doctor or nursing team will be able to provide more information about showering/bathing and when you can return to work or your normal routine.

Driving - when to notify the Driving and Vehicle Licensing Agency (DVLA)

You may need to tell the DVLA that you've had a PCI procedure, more information can be found on the DVLA website.

Group 1 licences (car, motorcycle): You do not need to notify DVLA and **must not drive for 1 week** after your procedure. Driving can be resumed after 1 week if there is no disqualifying condition and when your doctor says you're safe to do so.

Group 2 licences (Lorries, buses): You **must not drive** and will need to inform the DVLA of your heart condition using form VOCH1. You may need additional tests to fulfil the DVLA requirements for a group 2 licence. You may be relicensed/licensed after 6 weeks if there is no disqualifying condition.

Please refer to DVLA website for further guidance <https://www.gov.uk/guidance/cardiovascular-disorders-assessing-fitness-to-drive>



Or scan

Please note these guidelines are subject to change, always refer to the DVLA website for latest updates.

Is it safe to travel?

If there have been no complications, you will be able to travel in 2 weeks after your procedure. The UK Civil Aviation Authority has advised all passengers to discuss their individual medical circumstance with their doctor before making travel arrangements and always ensure that you have adequate travel insurance.

Useful links:

British Heart Foundation - <https://www.bhf.org.uk/>

How do I make a comment about my visit?

We aim to provide the best possible care and would like to hear about your experience of our services. By telling us about your experiences and raising any concerns you may have, it helps us to make improvements.

Please visit our website for more information <https://www.imperial.nhs.uk> > patients and visitors > help and support > your feedback.

If you have any general queries or would like to raise a concern, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) **020 3312 7777** (10.00 – 16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

If, despite our best efforts, we are not able to resolve your concerns informally with the staff caring for you or via PALS, you have the choice to make a formal complaint.

To make a complaint please email our complaints office at: ICHC-tr.Complaints@nhs.net or send a letter addressed to:

Complaints department

Fourth floor
Salton House
St Mary's Hospital
Praed Street
London W2 1NY

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages.

Please email the communications team: imperial.communications@nhs.net

Wi-Fi

Wi-Fi is available at our Trust. For more information visit our website: <https://www.imperial.nhs.uk> > our locations > hammersmith > our facilities.

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