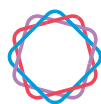




YOUR GUIDE TO

Coronary Angiography and Percutaneous Coronary Intervention (PCI)



IntraCare

Interventional
Cardiology



IntraCare's angiography suite

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About this procedure

This guide provides information about a Coronary Angiography and Percutaneous Coronary Intervention (PCI) procedure. It includes details about what is involved, how to prepare and what to expect during and after the procedure. Please use this in addition to information from your doctor and nurse.

A PCI procedure is performed in an angiography suite at IntraCare in Epsom. Your cardiologist will be assisted by our team of nurses and other highly skilled personnel.

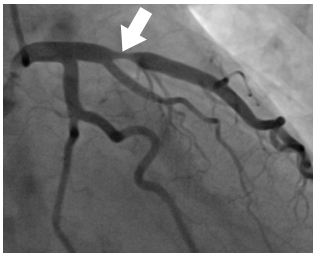
Both IntraCare and Allevia Hospital will be involved with your care for this procedure. Allevia Hospital is responsible for your admission, preparation and aftercare in the Cardiac Investigation Unit (CIU).

What is coronary artery stenosis?

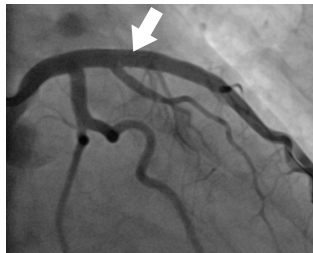
Coronary artery stenosis is the narrowing of a coronary artery. Just as an engine needs petrol, the heart needs blood to do its job of pumping blood around the body. Slow build-up of fatty plaque within the artery wall can cause an artery to narrow, reducing blood flow. Sudden changes in the plaque may cause angina to worsen or may cause a heart attack.

What is a coronary angiography?

Coronary angiography is an examination of the coronary arteries and identifies the presence, extent and location of coronary artery narrowings. Some coronary narrowings are severe and need treatment and some are mild and do not need treatment. For narrowings in between, a test to determine whether the narrowing needs treatment is called FFR (fractional flow reserve). Pressure is measured upstream and downstream from the narrowing during infusion of a dilating agent usually adenosine and according to the result, a decision can be made whether to stent or not. This infusion can make a patient feel 'peculiar' for a few minutes.



A narrowing in the left anterior descending coronary artery.



After treatment with a stent (mesh tube), the arterial diameter is normal.

Before your procedure

Pre procedure phone call

A nurse from IntraCare will call you 24–48 hours prior to your procedure to discuss the following information:

- When you should stop eating and drinking.
- Medication instructions.
- Allergies (including medications, contrast dye, dressings/plasters and food).
- Answer any further questions.

Anticoagulation (blood thinner)

- If you take Aspirin/Cartia and/or Clopidogrel you may continue to take these.
- If you are taking a blood thinner e.g. Dabigatran (Pradaxa), Rivaroxaban, Warfarin or Clexane, your cardiologist will advise if you need to stop this medication temporarily for a few days before the procedure.

Warfarin

If you are currently taking Warfarin, please inform IntraCare via email or phone as soon as possible. Our nurses will review your INR levels and advise any medication changes if necessary.

Other regular medications

Please continue to take these unless advised otherwise by your cardiologist. If you are taking a diuretic or water pills (e.g. frusemide, spironolactone), you may need to withhold this on the morning of the procedure.

Reminders for the day of your procedure

- If you are on regular medication, please bring this with you in its original packaging.
- Please leave all your jewellery and valuables at home. You are welcome to bring your mobile phone in with you.
- We recommend wearing loose-fitting clothing and shoes that are easy to slip on/off.
- You are encouraged to bring a friend or a family member as a support person before and after your procedure.

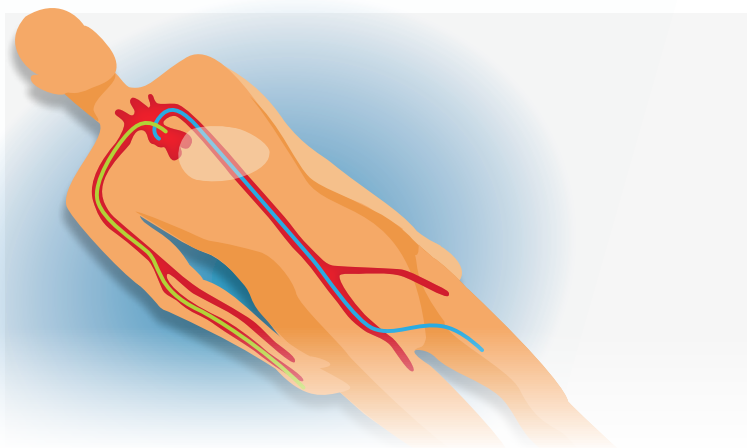
- This is commonly a day stay procedure, but please bring an overnight bag with you in case you are required to stay overnight.
- The planned procedure time is an estimate only and may vary. We will keep you informed of any unexpected delays on the day.

Informed consent

As with any procedure, there are potential risks involved. Your cardiologist will explain the procedure, discuss possible risks and answer any questions you may have. Your whānau or support person are welcome to be part of this discussion. You will then be asked to sign the consent form. This will occur either at an earlier appointment, or on the day of your procedure.

Your procedure

A small intravenous needle (IV line) will be inserted into a vein in your arm. This will be used to administer medication to help you relax and to keep you comfortable during the procedure. We may need to remove hair with clippers at the access site for sterile preparation. Please avoid shaving the area yourself as this may cause minor abrasions to the skin, increasing the risk of infection.

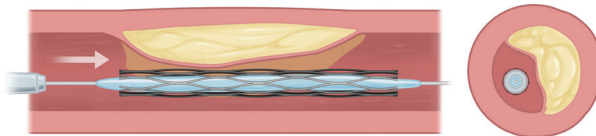


Once you are in the lab, several adhesive patches, small and large will be placed on your back and chest for monitoring. Other devices for monitoring blood pressure, heart rate and oxygen levels will be fitted to ensure your safety during the procedure.

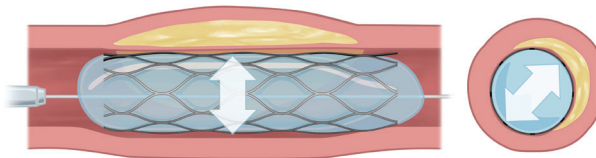
The procedure

You will be lightly sedated but awake throughout. You will feel the local anaesthetic injection into your wrist or groin, then a tiny plastic tube called a catheter is introduced. You should not feel pain at the entry site, but there still may be some non-painful sensations, such as pressure. You should tell the interventional cardiologist doing the procedure if you are experiencing any pain.

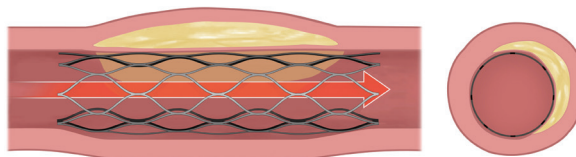
Your cardiologist watches the catheter on a screen via x-ray placing the tip of the catheter to one of the coronary arteries. Contrast dye is injected into the coronary arteries and images are displayed on the x-ray screens. If a narrowing suitable for stenting is found, the interventional cardiologist may then insert a stent. This procedure is referred to as Percutaneous Coronary Intervention (PCI).



Through the guiding catheter, a wire about the thickness of a hair is passed across the narrowing. A stent (a fine mesh metal alloy tube that comes squashed down on a balloon) is directed across the narrowing through the wire.

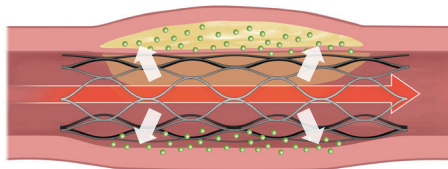


The balloon is inflated to expand the stent and artery. The stent is pushed into the artery wall holding the artery open.



The balloon is deflated and removed leaving the expanded stent in place. Once expanded, the stent cannot move.

Drug eluting stents



Drug eluting permanent stents are the most frequently inserted stents with excellent results achieved over years. These stents are coated with a medication to prevent or substantially reduce the chance of re-narrowing and the need for repeat treatment.

After your procedure

You will be transferred from IntraCare to CIU, where the Allevia Hospital team will look after you during your recovery, and if appropriate you will usually be discharged home after 4–6 hours. Prior to your discharge, the nursing staff will give you advice about your medication, procedure site care and resuming your normal daily activities.

Recovery and discharge

- Following your procedure, it is important that you **do not drive for 24 hours**. Please ensure you have a family member or friend to drive you home from the hospital, as you may still be under the effects of sedation.
- You will need to arrange for someone to be at home with you on the day of your discharge and overnight to support you in your recovery.
- Due to the sedation, you may feel lethargic afterwards with reduced concentration. For this reason, for 24 hours after your procedure:
 - Do not do any activity requiring strength, concentration, or full alertness.
 - Do not make any legal decisions or sign legal documents.
- Due to the nature of stenting, it is common to experience some chest discomfort for a few days.

Resuming travel and activities

- You will be able to return to work within a week of having the procedure unless your job involves heavy lifting (>5kg).
- You can begin light exercise after 1 week.
- If you have had a PCI done, do not fly domestically for 48 hours, short international flights (e.g. Australia) for 2 weeks or long-haul international flights for 6 weeks.

Medication

Your cardiologist will discuss any medication changes with you, if necessary. If you have any questions regarding your medications after your procedure, please contact your cardiologist.

Follow up appointment

You will be seen in clinic at The Heart Group approximately 1–3 months following your procedure. If you have minor concerns prior to your follow up appointment, please arrange to see your general practitioner (GP) or contact IntraCare.

Radial (wrist) site care

If one of the puncture sites during the operation is through the wrist, it is normal to experience some minor bruising and/or feel a small pea-sized lump under the skin at the puncture site. This will disappear in time or remain as permanent scar tissue. This is nothing to be concerned about.

Please follow these instructions in CIU and the first few days at home:

- Keep the site clean and do not rub the wound. Until the site has healed, gently pat it dry after showering.
- If the site looks red, inflamed and/or infected please see your general practitioner (GP).
- You may take paracetamol if your arm is sore. Should your arm continue to be painful, please phone IntraCare on 09 630 1961 (office hours) or 027 482 0763 (after hours).
- Do not lift with the affected arm or do any strenuous activity.

Femoral (groin) site care

It is normal to experience some bruising at the puncture site. During the first few days after your procedure:

- Do not do any heavy lifting (>5kg) or strenuous exercise.
- Try not to excessively cough, sneeze, or strain as this puts pressure on the puncture site which may cause it to bleed.
- Do not sit in a bath, hot tub or spa until the skin has healed.
- Do not cross your legs while sitting.
- You may resume walking if your puncture site is not painful.
- If applicable, remove the dressing on your groin once the skin has healed (approximately 3 days).

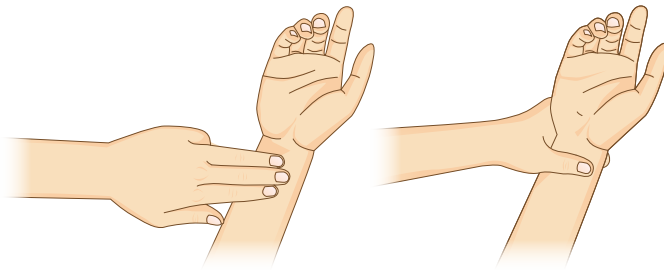
Haematoma

It is common for a haematoma to develop after this procedure. A haematoma is a collection of blood under the skin that is sometimes painful. A small hard lump (similar in size to a pea) may also be felt under the skin and remain for several weeks:

- If a large lump (haematoma) occurs, lie down, and get another person to press down firmly on the centre of the haematoma for approximately 10 minutes.
- If after releasing pressure, the haematoma reoccurs, keep applying the pressure and go to your local accident and emergency department.

Bleeding

- It is common for there to be a small amount of ooze from the puncture sites. If this occurs, re-apply a sticking plaster and lightly press for a few minutes.
- If there is significant bleeding, you should lie flat, and another person will need to apply firm pressure for 10 minutes. If this does not stop the bleeding, call an ambulance.



Example of how to manage a haematoma or bleeding at the radial site.

Seek immediate medical attention (dial 111 for an ambulance) if there is excessive bleeding from the puncture site or if you are experiencing severe chest pain.

Please take this booklet and your discharge summary with you if visiting the GP, afterhours or hospital.

**If you have any concerns after your procedure, please contact IntraCare:
Monday to Friday: 09 630 1961 (between 6:30am and 6:00pm).
For after-hours, weekends, and public holidays, contact 027 482 0763.**

How to find us

IntraCare Epsom

Both IntraCare and Allevia Hospital will be involved with your care for this procedure.

When you arrive, please report to the Allevia Hospital reception desk (number 1 on the map).

First Floor, Allevia Hospital Reception
98 Mountain Rd, Epsom, Auckland 1023

P: +64 9 630 1961 (Monday to Friday 6:30am–6:00pm)

P: +64 27 482 0763 (after hours, weekends and public holidays)

E: admin@intracare.co.nz

W: intracare.co.nz

Where to park

A 10 minute patient 'drop off zone' is available on the level 1 carpark. Head up the ramp as you enter into the carpark from the Main Entrance on Mountain Road.

The first 30 minutes are free and apply only once the vehicle licence plate number has been entered into a payment terminal. Patient parking is available on all levels of the car park. Parking limits apply, and parking spaces are marked (P90, P180, and All Day Parking).

The Allevia Hospital parking is managed by a separate company, and a fine may be issued if your vehicle breaches any of the parking terms and conditions.

There is free 120 minute parking available nearby on Mountain Road, Gilgit Road and Almorah Road after 9am.



Main entrance to patient and visitor car park
 ~ 250 spaces

Walkway to main reception
 Pedestrian access to main reception from car park

- | | |
|--|--|
| 1 Allevia Hospital reception and Allevia Radiology 1 reception | 8 Allevia Radiology 2 (CT, ultrasound) |
| 2 Canopy Cancer Care | 9 The Heart Group |
| 3 ARO (Auckland Radiation Oncology) | 10 Allevia Radiology PET-CT Canopy Cancer Care |
| 4 Allevia Café and outdoor dining courtyard | 11 Allevia Specialist Centre |
| 5 Allevia Pharmacy | 12 Allevia Radiology 1 (MRI/X-ray) |
| 6 IntraCare | A B C D E Allevia Specialist Centre entrances |
| 7 Awanui Labs (blood tests) | |



IntraCare

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