

Coronary angioplasty

Improving blood flow to
your heart



What is coronary angioplasty?

Coronary angioplasty is a medical procedure used to treat the arteries carrying blood to your heart (coronary arteries) that have narrowed due to the build-up of fatty tissue. During coronary angioplasty, a small balloon is inflated inside one or more of your coronary arteries to open up the narrowed area. This improves blood flow to your heart.

Coronary angioplasty is not a cure

Coronary angioplasty is not a cure for the build-up of fatty tissue in your coronary arteries. It only treats the particular area of your arteries that have become very narrow due to heart disease. Some people's coronary arteries may narrow again at or near the site of the angioplasty, while others may develop new areas of narrowing in their arteries. Either situation can cause symptoms to return, which means you may need further treatment.

The best way to lower your chance of more heart problems is to:

- take your medicines as directed by your doctor
- be smoke free
- achieve and maintain a healthy body weight
- be physically active.

Coronary angioplasty is a medical procedure used to treat the coronary arteries that have narrowed due to a build-up of fatty tissue.

Why do I need coronary angioplasty?

Your cardiologist may recommend coronary angioplasty as treatment for coronary heart disease (CHD). In most cases, this will also involve putting an expandable metal tube (stent) in the area of your coronary artery that is being treated (refer below for more information about stents).

You may need coronary angioplasty to improve blood flow to your heart if one or more of your coronary arteries become too narrow. Coronary angioplasty is commonly used to treat angina and heart attack.

Angioplasty opens narrowed arteries, helping to quickly restore blood flow to your heart muscle and, during a heart attack, to minimise damage to the heart.

A coronary angioplasty improves blood flow to your heart and is commonly used to treat angina and heart attack.

Other treatments for narrowed arteries include bypass surgery (also called 'coronary artery bypass graft' or 'CABG' and pronounced 'cabbage'). Bypass surgery involves grafting a blood vessel from your chest, leg or forearm to your coronary artery to redirect blood flow around the most narrowed part of the artery. This lets your blood 'detour' past the narrowing to reach your heart muscle.

Your cardiologist will consider your symptoms and the results of your angiography test (coronary angiography; described below) and then tell you what treatment is most suitable for you.

What will happen before I have coronary angioplasty?

Coronary angiography

If your doctor suspects or knows you have narrowing of the coronary arteries, your cardiologist will perform a test called a 'coronary angiography'. It is a special real-time X-ray that shows the areas of narrowing or blockage of your coronary arteries.

Coronary angiography may be performed before or at the time of angioplasty. Your cardiologist will discuss it with you before you have the test.

During coronary angiography, you are given a local anaesthetic and then a long thin tube (catheter) is put into an artery in your groin, arm or wrist using an introducer sheath (a short, hollow plastic tube). The catheter is moved inside your artery until it reaches the heart. A special dye is then injected into the coronary arteries and X-rays are taken.

The X-ray image (coronary angiogram) shows your doctor detailed information about your coronary arteries, including whether your arteries are narrowed and, if so, how narrow.

Before your coronary angioplasty

- You might be asked not to eat or drink for 4–6 hours before having coronary angioplasty.

Coronary angiography is a special real-time X-ray that shows the areas of narrowing or blockage of your coronary arteries.

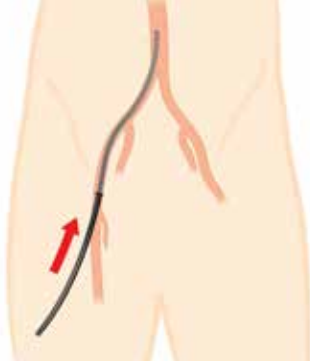
The day of your coronary angioplasty

1. Your cardiologist will explain coronary angioplasty and stents, including the benefits and risks. They will answer any questions you or your family ask.
2. If you agree to have the procedure after talking with your cardiologist, you will need to sign a consent form.
3. You will be shaved in the area where the catheter will be inserted through the introducer sheath. Catheters are usually put into your groin, but are sometimes put into your arm or wrist. You will be asked to remove any jewellery you are wearing.
4. You will be taken to the cardiac catheterisation laboratory (cath lab) and asked to lie on an examination table. Your heartbeat and blood pressure will be monitored.
5. A small needle may be inserted into a vein on the back of one of your hands so you can be given medicines during the procedure.
6. Your doctor may give you a sedative to help you to relax.
7. Your doctor will inject a local anaesthetic into the area of your body where the catheter will be inserted. This may cause you some pain, but it should go away quickly.

What will happen when I have coronary angioplasty?

During coronary angioplasty

1. An introducer sheath will be put into an artery in your groin, arm or wrist. A 'guiding catheter' is then inserted through the sheath. This catheter is moved up into one of your coronary arteries.
2. A special dye will be injected through the guiding catheter. The dye helps your cardiologist see the narrow area(s) of your coronary arteries.



Catheter insertion in angiography and angioplasty

3. Another catheter with a tiny balloon at its tip will be inserted into the same artery as the guiding catheter. It will be moved up into the narrow section of your coronary artery.
4. The balloon will be inflated and deflated several times to make your artery wider. Often a stent will be put into your artery to make sure it stays wide (refer below for more information about stents).
5. When your cardiologist thinks your artery is wide enough, they will take more X-rays to check the blood flow through the artery.
6. They will remove the catheters, but will leave the sheath in place for a few hours. It will be removed later when you are in the ward.
7. If the catheter was put into your groin, your cardiologist might use a special type of closure device to seal the artery where the catheter was.

Will it hurt?

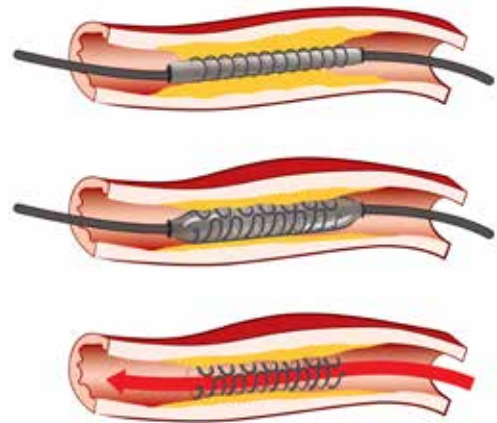
Moving catheters through your arteries won't hurt. However, you may feel chest pain when the balloon is inflated, because it temporarily blocks the blood flow through your artery.

What are stents?

Stents are expandable metal tubes that come in various types, such as coils or wire mesh. Stents are usually put into the section of your coronary artery that was widened during the angioplasty. They are expanded and left there to keep the artery wide. Over time, the lining of your artery grows over the stent, which becomes part of the artery wall.

Blood clots can develop on the surface of stents soon after they are inserted. If you have a stent, your doctor will prescribe anti-clotting medicine (refer below for more information about medicines).

There are two types of stents: bare metal stents (BMS) and drug-eluting stents (DES). DES are more commonly used than BMS. Unlike BMS, they are coated with a special medicine that is slowly released into your artery wall. This medicine helps to stop tissue growing too much around the stent in your coronary artery. If the tissue grows too much it can make your artery narrow again. Your doctor will tell you which stent is most suitable for you.



Stent implantation



A note about cardiac rehabilitation

The National Heart Foundation of Australia and the World Health Organization recommend all patients who have had a heart attack, heart surgery, coronary angioplasty or other heart or blood vessel disease attend an appropriate cardiac rehabilitation and prevention program.

Some hospitals, community health centres and Primary Health Networks (PHNs) run outpatient cardiac rehabilitation programs. These programs continue the gradual increase in physical activity started in hospital and provide you and your family with education, information and support. You should attend a cardiac rehabilitation program as soon as possible after hospital discharge.

The right rehabilitation program will help most people to reduce their risk of further heart problems.

What will happen after I have coronary angioplasty?

After coronary angioplasty, you will be taken to an observation ward so your heart rate, blood pressure and circulation in your leg can be checked frequently. You will be asked to stay in bed, lying flat on your back, for a few hours. You can eat and drink as soon as you feel like it. You may feel pain in your back or leg. If you do, ask your doctor for pain relief.

You will be discharged when you are feeling well and have no temporary chest pain or discomfort (angina) – usually the day after the procedure. Most people can return to moderate-intensity activities, such as brisk walking, as soon as they go home and can return to work within a week. You should avoid straining or lifting anything heavy for about a week.

For the best recovery, you should take any medicines as prescribed by your doctor and keep appointments with your cardiologist. Your doctor may ask you to take one or more exercise or stress tests after your coronary angioplasty so they can check how well it worked.

We recommend that you attend a cardiac rehabilitation program (refer to ‘A note about cardiac rehabilitation’).

Will I need to take medicine?

To get the most benefit from your coronary angioplasty and stent implantation, you should take all medicines as prescribed by your doctor and follow their advice.

Do not stop taking your medicines unless your doctor tells you that you can. If you stop taking your medicine, a clot may suddenly form within the area of your artery with the stent and can lead to more heart problems.

Your doctor might prescribe:

- a small dose of aspirin each day indefinitely (unless you are allergic to or unable to tolerate it)
- a medicine to thin the blood and to prevent clots for up to 12 months (and sometimes longer or indefinitely) after coronary angioplasty
- a medicine to lower your cholesterol and reduce your risk of further problems
- a spray medicine or tablet to put under your tongue if you get angina
- other medicines, depending on your individual circumstances.

Before you leave hospital after coronary angioplasty, make sure that you ask your doctor for your angina action plan.

Tell your doctor about any changes in the frequency or severity of your angina as soon as possible.

Ask your doctor for an angina action plan before you leave the hospital.

Want to know more?

For more information, call our Health Information Service on 1300 36 27 87 (local call cost) and talk to one of our trained health professionals. You can also visit www.heartfoundation.org.au

What to do if you have angina

1 As soon as you get an episode of angina → immediately stop and rest.

2 If rest alone does not bring rapid or effective relief → take a dose of your angina medicine.

Make sure that you are sitting or lying down before using your tablet or spray, because they can cause dizziness. It is best to find the smallest dose that usually works for you (e.g. a full tablet, a half or even a quarter).

Tablets: place the tablet under your tongue – do not swallow. After your angina has been relieved, you can spit out the rest of the tablet.

Spray: one spray under the tongue will relieve angina quickly in most people.

3 If the angina is not relieved within five minutes → take another dose of your angina medicine.

4 If the angina

- is not completely relieved by rest and medicine within 10 minutes of onset or
- is severe or
- gets worse quickly

Call Triple Zero (000)* and ask for an ambulance. Don't hang up. Wait for advice from the 000 operator.

If it is a heart attack, getting to hospital quickly can reduce the damage to your heart and increase your chance of survival. Don't ignore the warning signs! Get help fast. Every minute counts. If it turns out that you did not have a heart attack, it is better to have made sure.

*If calling 000 does not work on your mobile phone, try 112.



For heart health information,
please contact us

1300 36 27 87

heartfoundation.org.au

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