



Living with angina

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Introduction

Living with Angina is written for people who have angina. Although thousands of Australians have angina, they continue to live full and productive lives. Advances in treatment also mean that much can now be done for the condition.

This booklet explains the cause of angina, its treatment, and how to deal with it. If you need more information, please talk to your doctor, or contact Heartline 1300 36 27 87.

What is angina?

Angina is caused by coronary heart disease and is temporary chest pain or discomfort, resulting from a reduced blood supply to the heart muscle. It occurs because part of the heart is temporarily unable to get enough blood and oxygen to meet its needs, due to an abnormally narrowed artery in the heart.

The pain usually feels tight, gripping, or squeezing, and can vary from mild to very severe. Angina is usually felt in the centre of the chest, but may spread to either or both shoulders, the neck or jaws, or down the arm, and can even be felt in the hands. Sometimes it is experienced in these other areas of the body without being felt in the chest. Many people, however, do not feel 'pain' - just an unpleasant sensation or discomfort in the chest.

Angina usually occurs when the heart has to work harder than usual, when its requirements for blood and oxygen are increased. This can happen, for example, during exercise or effort, or in response to emotion. It does not occur all the time because the blood supply, although reduced, is usually able to keep up with the heart's normal demands.

If brought on by exercise, the pain or discomfort usually goes away after a few minutes of rest.

Angina can affect different people in different ways, and individuals can experience different symptoms at different times. You may get the pain early in the morning only. Or you may get it at rest, even while sleeping. Many people tend to get it in cold weather or after a heavy meal.

What causes angina?

The heart is a muscle that pumps blood through the blood vessels to all parts of the body. To do its work properly, the heart itself must have a good blood supply. It gets this supply from its own special arteries, the coronary arteries. If the coronary arteries become clogged, the flow of blood is reduced and the heart cannot meet the demands placed on it to pump harder during times of exercise or stress. This can lead to angina or even a heart attack.

The underlying cause of artery clogging is a process called athero-sclerosis, where fatty deposits, called plaque, build up inside the arteries. The artery-clogging process probably starts in childhood and builds up gradually over the years. It is usually not until middle age or later that the coronary arteries can become so narrowed as to cause angina or a heart attack.

The primary causes of artery clogging over which we have some control are:

- * a high blood cholesterol (This is common in countries like Australia, which have a diet high in saturated fats.)
- * cigarette smoking
- * high blood pressure.

Other risk factors are:

- * being overweight
- * physical inactivity
- * diabetes.

Being male and having a family history of early death from heart disease are also risk factors for coronary heart disease.

Does angina damage the heart?

Angina does not mean that your heart muscle is damaged. Therefore, it is not the same as a heart attack. A heart attack is caused by a clot, suddenly blocking a narrowed artery and cutting the flow of blood to part of the heart muscle, which in turn, causes heart muscle damage.

Many people with angina live to a healthy old age without having a heart attack. However, a history of angina is associated with a higher risk of heart attack. If not treated effectively, angina can interfere with an active lifestyle.

How is angina diagnosed?

Your doctor will usually suspect angina just from the symptoms you describe. To assist with the diagnosis and management of the condition, you will be asked about smoking, your diet, physical activity level and family history. Your doctor will also measure your blood pressure, listen to your heart and chest, and assess your general condition, including weight. You may have some special tests, including an ECG (electrocardiogram), a chest X-ray, and perhaps an exercise stress test.

It is likely that you will also have a coronary angiogram - an X-ray of your coronary arteries to see if, and to what extent, they are narrowed or blocked. This will help doctors decide whether angioplasty (see page 10) or bypass surgery (see page 11) may be warranted to help control your angina symptoms and reduce your risk of heart attack.

Can angina be cured?

Although angina symptoms can be treated, and narrowed arteries widened with angioplasty, or bypassed with surgery, these techniques do not alter the underlying artery-clogging process.

There are hopeful signs, however, that in some cases, the lowering of blood cholesterol levels, as a result of changing to a healthy lifestyle and taking lipid-lowering medications can slow, or even reverse, atherosclerosis.

Living with angina

Your angina symptoms can be managed and are likely to improve if you follow suitable medical treatment and live a healthy lifestyle. You and your doctor should consult regularly about your angina and its treatment, and agree on a suitable management plan.

Medication for angina episodes

Nitrate medications which are absorbed through the lining of the mouth can rapidly stop angina once it has commenced. The most commonly used drug is nitroglycerine, mostly known as Anginine. To take Anginine place the tablet under the tongue; do not swallow; after angina has been relieved, you may spit out what is left of the tablet, to avoid adverse effects such as headache¹.

Nitrolingual spray is available as an alternative to Anginine tablets. You may prefer this. Two sprays into the mouth will relieve angina quickly in most people.

In some cases a 'sublingual' form of isosorbide dinitrate (Isordil) tablets may be preferred. Sublingual Isordil tablets are also dissolved in the mouth (an 'oral' form of Isordil tablets can also be used in the longer term prevention of angina - see page 8)

These drugs improve the blood-flow through the coronary arteries and also lower the heart's demand for oxygen. They usually bring relief within a few minutes and should be carried with you at all times.

¹ Australian Medicines Handbook 2000. Australian Medicines Handbook Pty Ltd Adelaide.

Anticipating an episode

If you know when you are likely to get an episode of angina use your nitrate medications to try and prevent the episode. That is, take your tablet dose or spray just before exposure to the situation that is likely to bring on the pain, such as prior to a walk in cold weather or before unavoidable exposure to a stressful situation.

What to do when you have angina

As soon as you get an episode of angina, stop and rest immediately. Sit or lie down before using medication to relieve angina as these drugs can cause dizziness. Then take a dose of tablet or spray. It is best to find the smallest dose that usually works for you, whether it is a full tablet, a half, or even a quarter.

If the chest pain is not relieved, the dose of nitrate medication may be repeated in 5 minutes and if it is not completely relieved within 15 minutes by medication and rest, regard it as a heart attack and call an ambulance. If an ambulance is not available rapidly, have someone drive you to hospital immediately. If it turns out you did not have a heart attack, it was better to have made sure. Any unusually prolonged pain, even if it goes away, may signal a mild heart attack.

Side effects

Nitrate medications may cause a tingling or burning feeling in your mouth. You may also get a headache or a heavy feeling in the head, or a hot and flushed feeling. These are normal reactions and will pass. If your headache is severe, try using a smaller dose next time.

Nitrate medications temporarily lower the blood pressure. You may feel a bit faint if you are using it for the first time or using too large a dose. If you feel dizzy, lie down immediately and remove whatever is left of the tablet in your mouth. You should do this even if your chest discomfort remains. You may need to use a smaller dose next time to avoid faintness.

Despite the side effects of these drugs, it is safe to take several tablets or sprays a day if needed.

Storing your tablets

Anginine tablets lose their effect if they are not stored properly.

Store tablets in a glass container and protect from moisture, light and heat; do not carry close to the body; discard unused tablets 3 months after opening the bottle¹.

Making angina less frequent and severe

Regular medications

A range of drugs, taken on a regular basis can help reduce how often you get angina, and its severity. The drugs work in different ways and you may need to use them in combination. However, using more than one drug can be complex and all medication issues should be discussed with your doctor.

Long-acting nitrates

These drugs are used on a regular basis to control angina symptoms. They include an oral form of Isordil, which must be swallowed three or four times daily. Up to eight or 12 tablets a day may be needed for the best effect. A tablet called Imdur can be used once a day.

Special nitroglycerine patches that allow the medication to be absorbed through the skin can also be used. The patches can be placed anywhere on the skin. Some people, however, have skin reactions if the patches are left in the same place for too long, so it is better to vary their position. The patch should be removed for at least 8 hours out of every 24, so that your body cannot build up resistance to its effects. A good time to remove the patch is at night, unless that is when you get angina. If this is the case, the patch should be removed during the day.

¹ Australian Medicines Handbook 2000. Australian Medicines Handbook Pty Ltd Adelaide.

Beta-blockers

Beta-blockers reduce angina by decreasing the heart's workload. Common examples are Inderal, Betaloc, Lopressor, Tenormin and Trasicor.

These drugs can have side effects, which must be balanced against their benefits. For example, beta-blockers can make asthma much worse and should be avoided if you are an asthmatic.

Calcium channel blockers

Calcium channel blockers help in several ways. They open out the narrowed artery and affect the chemical activity of the heart muscle cells. Isoptin, Cordilox, Adalat and Cardizem are common examples.

Beta-blockers and calcium channel blockers are also used to lower blood pressure and are useful for people who have both angina and high blood pressure.

Your doctor will work out the best drug or drug combination for you.

Aspirin

Small doses of aspirin are usually prescribed for people with heart disease. This is because aspirin can reduce the risk of heart attack by helping prevent clots forming in a narrowed artery.

Aspirin can worsen stomach or duodenal ulcers and should be avoided if you have active ulcers, or are allergic to or unable to tolerate it.

Lipid-lowering medications

People with angina should have their blood cholesterol level checked regularly and are likely to be advised to take lipid-lowering medication to lower blood cholesterol. Even those with cholesterol levels which were previously considered in the 'normal' range prior to a diagnosis of angina, are likely to benefit from lipid-lowering treatment.

Other medications may be required on an individual basis.

Coronary angiography

You are likely to be advised by your doctor to have a coronary angiogram to determine the seriousness and extent of coronary artery clogging and to determine whether you will benefit from other treatments including angioplasty or bypass surgery. Having an angiogram involves taking a special X-ray of your coronary arteries to see where and how badly they are clogged. The angiogram will also show how well your heart is pumping. The procedure is described in detail in the Heart Foundation publication *All about coronary angiography*.

Angioplasty and stents

Angioplasty is a technique that improves the blood flow to the heart by using a special balloon to open a blocked artery at the point of narrowing, without the need for open heart surgery. After angioplasty is performed, a stent, which is an expandable metal tube (such as a coil or wire mesh), is usually delivered to the newly dilated site where it is expanded and left in place. These procedures are described in detail in the Heart Foundation publication *All about coronary angioplasty and coronary stent implantation*.

Although angioplasty is still a complex procedure it generally involves only a short hospital stay, mostly one night. In some people, however, the artery may narrow again within a few months and the procedure may need to be repeated, or bypass surgery may be required.

Bypass graft surgery

Coronary artery bypass graft surgery (CABG) is offered to many thousands of Australians each year and has proven to be safe and successful. The procedure bypasses the blocked coronary artery often using an artery from inside the chest or a vein from your leg. Sometimes bypasses are obtained from other areas including an artery from the forearm. This procedure is described in detail in the Heart Foundation publication *Bypass: All about coronary artery bypass graft surgery*.

If your angina gets worse

Compared with previously, if your episodes of angina

- * become more severe
- * occur more often
- * last longer
- * do not respond as well to nitrate medications
- * come on with less exertion
- * come on at night or at rest

contact your doctor promptly.

You should also discuss any other symptoms with your doctor, such as increasing breathlessness, swollen feet or cold limbs.

Reducing the risk

The best way to lessen the risk of further coronary heart disease is to reduce or remove the 'risk factors' which contribute to it. Changing to a healthy lifestyle is good for everyone, not just those who know they have angina.

1. Stop smoking - smoking reduces the amount of oxygen in your blood, and damages and weakens the artery walls. Stopping smoking is the single most important thing you can do to reduce your risk of further coronary heart disease (for information on quitting smoking call the Quitline 131 848).

2. Healthy eating - cholesterol and fat contribute to the deposits which build up in the artery walls and cause disease. You can help lower your cholesterol level and limit further artery clogging by reducing the amount of saturated fat you eat. Saturated fat is found in fatty meats, full cream dairy products, butter, two vegetable oils (coconut and palm oils), most fried take-away foods and commercially baked products. Replace saturated fats with moderate amounts of mono-unsaturated and polyunsaturated fats such as canola, olive, sunflower and soybean oils.

Healthy eating is also about choosing mainly plant-based foods such as bread, cereals, rice, pasta, vegetables, fruits and legumes (dried peas, beans and lentils), and moderate amounts of lean meats, poultry, fish and reduced-fat dairy products.

3. Be physically active - the body is designed to move, therefore regular, moderate physical activity is good for the heart. Being active can be fun, make you feel good in yourself and help you to recover after your illness. However, the sort of exercise you do must be guided by any pain you get, and your general condition. You should build up your exercise level gradually under your doctor's supervision.

Physical activity can also help control other risk factors such as blood pressure, and weight. While your doctor or rehabilitation program coordinator can advise you on the right exercise program, walking is one of the easiest and best forms of activity to start with. Later on, other physical activities that you find enjoyable can be included.

- 4. Control blood pressure** - high blood pressure can strain your heart and speed up the process of coronary heart disease. Have regular blood pressure checks. If your blood pressure is high, reduce salt intake, limit alcohol to two drinks or less daily and follow your doctor's advice. Medication may be required to manage high blood pressure.
- 5. Lose weight if you need to** - being overweight and having too large a measurement around the waist are risk factors for coronary heart disease. Healthy eating and being physically active assists weight loss. Your doctor can help advise you on your waist measurement goal.

Cardiac rehabilitation

The right rehabilitation program will help most heart patients reduce their risk of further coronary heart disease. These programs provide patients and their families with education, information, physical activity and support.

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

Common questions about angina

How can I tell the difference between angina and a heart attack?

Angina pain typically comes on with exercise and goes away after a few minutes rest. It is also relieved by Anginine, Isordil tablets and Nitro-lingual spray.

A heart attack can occur at rest, or any time. The pain lasts much longer, is often more severe, and is not relieved by these medications. Nausea is much more common with a heart attack than it is with angina. It can, however, be difficult to tell the two conditions apart.

If the pain is not completely relieved by medication and rest within 15 minutes it should be regarded as a heart attack (see page 6-7).

Can I be sexually active when I have angina?

Yes, most people with angina can be sexually active without danger. This is particularly true for someone whose angina is well controlled with treatment. Sexual activity places a greater strain on the heart, so if angina tends to occur during lovemaking you and your partner may need to find methods that are less strenuous.

Can I continue with my employment?

Yes, most people who have had angina can continue with their usual form of work after treatment. There is no medical barrier to working in most cases and it often depends on how much you want to continue working. For some people the job may have to be adjusted to avoid too much physical or emotional strain.

What about alcohol?

There is usually no reason why you should not drink alcohol, but only in moderation. Excessive alcohol use is harmful, especially if you have high blood pressure or have not achieved a healthy weight. People with high blood pressure should limit alcohol intake to 2 drinks or less daily.

Where to find the Heart Foundation

Australian Capital Territory

Cnr Denison Street & Geils Court
Deakin ACT 2600
Phone: (02) 6282 5744

New South Wales

Sydney
407 Elizabeth Street
Surry Hills NSW 2010
Phone (02) 9219 2444

Newcastle

Suite 5, OTP House
Bradford Close
Kotara NSW 2289
Phone (02) 4952 4699

Northern Territory

Third Floor
Darwin Central Building
21 Knuckey Street
Darwin NT 0800
Phone (08) 8981 1966

Queensland

Brisbane
557 Gregory Terrace
Fortitude Valley QLD 4006
Phone (07) 3854 1696

Rockhampton

156 Bolsover St
Rockhampton QLD 4700
Phone (07) 4922 2195

Toowoomba

417 Ruthven Street
Toowoomba QLD 4350
Phone (07) 4632 3673

Townsville

36 Gregory Street
Townsville QLD 44810
Phone (07) 4721 4686

South Australia

155-159 Hutt St
Adelaide SA 5000
Phone (08) 8224 2888

Tasmania

86 Hampden Road
Battery Point Tas 7004
Phone (03) 6224 2722

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411 King Street
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Heart Foundation