IRISH HEART FOUNDATION
Fighting Heart Disease & Stroke

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STEP BY STEP THROUGH ANGINA

Produced by the Irish Heart Foundation
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The Irish Heart Foundation
The Irish Heart Foundation is the national charity fighting heart disease and stroke. More people in Ireland die from these causes than from cancer, road deaths and suicide combined. We work to bring hope, relief and a better future to Irish families. We support pioneering medical research, campaign for improved patient care and provide vital support and information for patients. In hospitals, schools and workplaces, we support, educate and train people to save lives. As a charity we depend on your ongoing support - through your donations or by giving of your time as a volunteer or on a training course.

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Heart and Stroke Helpline:
Locall 1890 432 787 (Monday to Friday 10.00am to 5.00pm)

Irish Heart Foundation,
50 Ringsend Road,
Dublin 4.

Phone: +353 1 668 5001
Fax: +353 1 668 5896
Email: info@irishheart.ie

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contd. overleaf

Angina is a message from your heart to tell you that it is suffering from a lack of blood carrying oxygen.

Introduction

Angina is a pain or discomfort you feel if your heart cannot get enough oxygen-rich blood. This booklet has information about angina to help you understand and manage your condition. It adds to the information you already have from your doctor. It does not replace the advice of your doctor, consultant or nurse.

The booklet explains:

- what causes angina
- the different types
- the common symptoms of angina and
- how you can adjust your lifestyle to reduce the number of angina attacks you get.

Many people have angina. The information in this booklet will tell you what you can expect if you have angina and how you can maintain your quality of life.

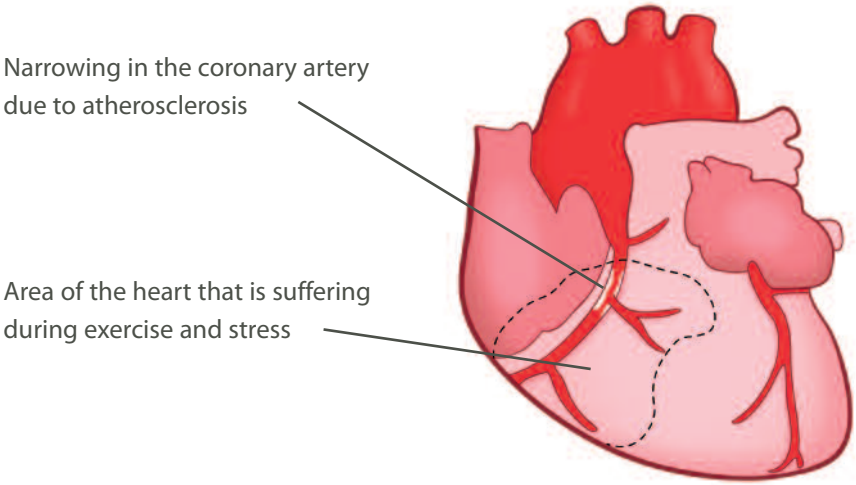
Angina is a warning that there is a problem with the blood supply to your heart. This is usually due to narrowed coronary arteries, which is a serious condition. By understanding your heart condition, you will be able to work with your doctor to control your angina symptoms and to stop your heart disease from getting worse.

What is angina?

Angina is short for the term 'angina pectoris', which means chest cramp in Latin. It is pain or discomfort you feel when your heart cannot get enough blood. The discomfort is a warning that there is a problem with the blood supply to your heart.

Our heart is a muscular bag which squeezes and pumps blood around our bodies. Like all muscles, your heart needs its own blood supply to provide it with oxygen and nutrients. The blood is supplied to your heart through the coronary arteries. These arteries can normally adjust when your heart needs more blood during exercise.

However, if the arteries are narrowed due to a build-up of plaque (fatty deposits on the walls of the arteries known as atheroma), the artery may not be able to supply enough blood for your heart during exercise. This means that the part of your heart muscle supplied by the narrowed artery will not have enough oxygen. To protect itself from further lack of oxygen, your heart produces angina to stop you from doing more exercise.



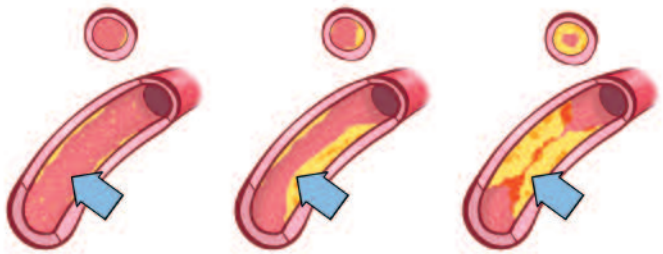
What narrows our arteries?

Apart from a few rare exceptions, the condition that narrows our coronary arteries is called atherosclerosis (pronounced ath-er-o-scler-o-sis). Atherosclerosis is Greek for hard porridge. This condition happens when fatty material builds up on the inside wall of your coronary arteries. This fatty material hardens into what is called atherosclerotic plaque, which narrows the artery and reduces the flow of blood to your heart muscle. This is what is commonly called hardening of the arteries.

The rate at which the plaque grows depends on a number of factors such as:

- whether you are male or female
- your cholesterol level
- if you smoke
- if you have high blood pressure
- if you have diabetes, and
- your genes.

Although at first the coronary arteries adapt to plaque, they eventually narrow as the fatty plaque grows bigger. This plaque has a fibrous cap which can rupture or ulcerate. Blood will clot at this site to try to seal the ulcer or the tear. This could result in more narrowing of the artery and can even block the artery causing further reduction in the blood supply or a heart attack when it is blocked completely.



Blood flow

Build up of fatty deposits

Blocked artery

How do I know I have angina?

What are the symptoms of angina?

- The symptoms of angina vary among different people.
- The discomfort ranges from a tight feeling in your chest to severe pain.
- It may develop anywhere from your belly button up to the top of your jaw and down both arms. The discomfort often starts in your chest and spreads to your arms or your hands and even up to your neck or jaw. Sometimes it spreads around your back.
- The pain or discomfort is usually continuous. Sharp, stabbing pains are not normally angina.
- You will usually get angina pain or discomfort when you are walking or doing something that takes some effort. It lasts longer than a few seconds and gets better when you rest.
- Stress can also cause angina.
- Normally, angina pain will not change with breathing or if you change position as would be the case with problems in your lungs or chest wall.
- Angina usually gets worse if you continue to do exercise. If you have chest pain but can still run around and do physical activity, you are unlikely to have angina.

Some conditions and activities make angina happen more often because they cause your heart to need more blood or they reduce the supply of blood. These include:

- high blood pressure
- lack of blood (anaemia)
- cold weather
- eating heavy meals
- smoking
- being overweight, and
- carrying heavy loads.

What brings on an angina attack?

An angina attack is brought on when your heart is not getting enough oxygen. This can happen if you ask your heart to do a lot of extra work and the coronary arteries can't bring enough blood to the heart muscle. Blood carries fuel (oxygen and an energy source) to your heart muscle through your coronary arteries. If these arteries are narrowed or if the amount of fuel in the blood is not enough (due to the lack of oxygen or red cells that carry it around), your heart muscle will not have enough energy to do its work. It will then complain by giving you angina.

- An example of bringing on angina would be a person who has a narrowed coronary artery walking up a hill. Going up the hill will make the person's heart go faster and their blood pressure will increase, causing the heart to need more blood than their narrowed arteries can deliver.
- You may find that you get angina in cold weather. The reason for this is that cold weather, particularly on your face, makes the coronary arteries tighten up and so less blood can get to your heart muscle.
- Exercising soon after a meal can bring on angina. After a meal a lot of blood goes to your stomach to help it digest your food, which means that your heart has to do more work in pumping the blood around your body.
- Smoking reduces the amount of oxygen in your blood and increases your blood pressure and can bring on an angina attack. If you have angina, it is very important that you stop smoking.

Diagnosing angina

What questions will my doctor ask?

Your doctor will ask you a lot of different questions to try and find out the cause of your chest pain. Your chest has a lot of parts that can cause pain and it is often difficult to know exactly what part of your chest is causing the pain.

- Your doctor will ask you questions about the type of pain you have, how long it lasts and how bad it feels.
- He or she will ask you what you do that brings on the pain or what you do when you have the pain. It is unusual for people with angina pains to be able to carry on doing activities without the discomfort getting worse.
- Your doctor may also ask you questions about any medication you take, if you have lost blood or have symptoms of a chest infection.

What will my doctor look for during my examination?

In many people with angina there is very little to find from a general examination.

Your doctor will:

- look at your overall appearance to see if you are pale (anaemic), are blue (cyanosed), have signs of being a smoker or are overweight
- look around your eyes for signs of having a high cholesterol level
- check your pulse and blood pressure and listen to your heart, and
- listen to the carotid arteries in your neck and feel the pulses in your legs if they feel this is necessary.

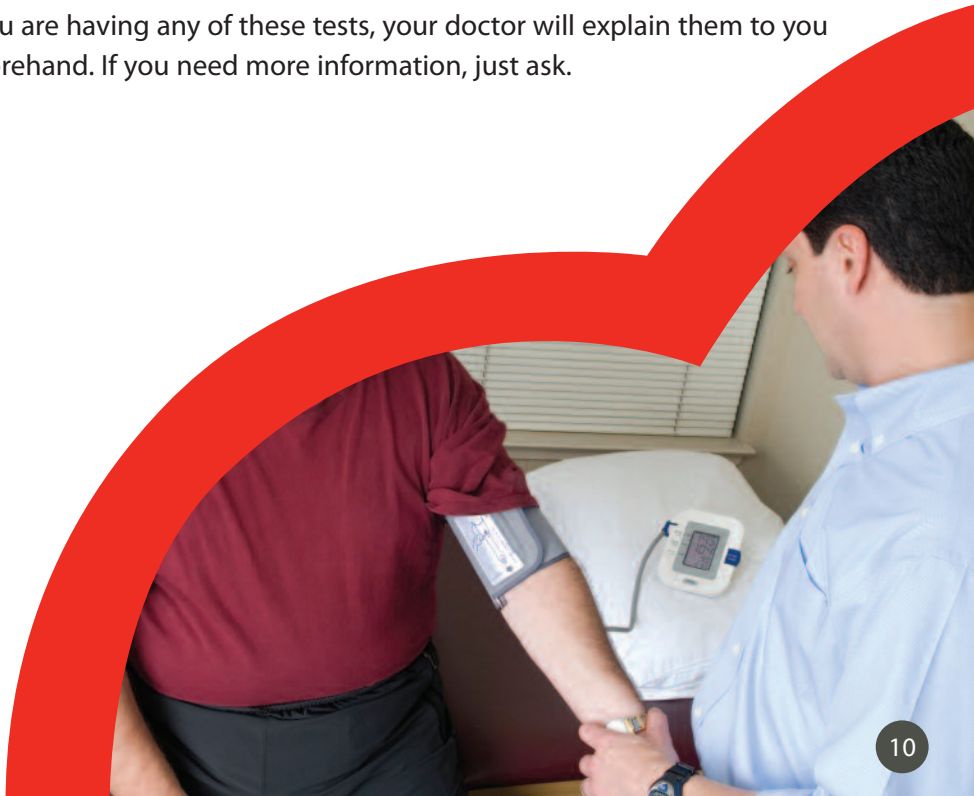
What tests will my doctor carry out?

Angina is a sign that your heart cannot get enough blood to do its work. Your doctor will have to find out if this is happening. In many cases they will be able to find out by asking you about your symptoms. They may also carry out some tests to help find out if you have angina and how severe it is.

- You will have an electrocardiogram (ECG) done while you are resting, and you may also have an ECG while you are exercising to see how your heart reacts to exercise.
- If you can't walk on the exercise machine, you might be referred for a Dobutamine Stress Echo. During this test you will be given a drug to speed up your heart rate instead. An Echo scan of your heart and an ECG will be performed and your blood pressure checked at this faster heart rate.
- An x-ray of the heart is also useful.

These tests are often all that is needed. However, you may need more complicated tests. The most common of these is an x-ray of the arteries of your heart. This is called an angiogram or cardiac catheterization. (See our booklet: ***Step by step through cardiac catheterization and angioplasty*** for more information). Sometimes a CT angiogram might be done instead of the more invasive coronary angiogram.

If you are having any of these tests, your doctor will explain them to you beforehand. If you need more information, just ask.



One of the most important parts of the investigation is finding out about your risk factors for heart disease.

- Do you have high blood fats? If so, is it because you are eating too much fat?
- Have you got high blood pressure?
- Do you smoke?
- Do you have diabetes?
- Is there a family history of heart problems?

The answers to these questions will help the doctor to treat you and to advise you about things you can do to help yourself.

If I have angina, is my family at risk?

One in three Irish people have a parent, brother or sister with heart disease. If you suffer from angina, it is very important that your close family relatives are checked for heart disease risk factors. These include high cholesterol, smoking, high blood pressure, diabetes and being overweight.

If you suffer from angina, it is important that your close family relatives are checked for heart disease risk factors.

Types of angina

Do I have mild or severe angina?

Although you may feel that having angina is the same for everyone, there are important differences.

- Some people only get angina if they do a lot of strenuous activity. In these people, it is likely that the narrowing in their arteries is not very severe or that the narrowing is in a place that supplies only a small amount of heart muscle.
- Other people may suffer angina when they do very little activity. These people may have a severe narrowing in one or more of their coronary arteries or the narrowing is in an area that supplies a very large amount of heart muscle.

However, in many situations, there is more to getting mild or severe angina than just how narrow the artery has become. It all depends on the balance between your blood supply and the demands placed on your heart. Some people's angina gets worse, not because of a change in the narrowing in their arteries but because there is an increased demand for oxygen or a reduced supply of blood to their heart. This can happen, for example, if you:

- develop very high blood pressure which puts a big demand on your heart, or
- become anaemic (have a low blood count), or
- have a chest infection that leaves you with less oxygen in your blood.

In this situation you may get angina more easily because there is less blood carrying oxygen to meet the needs of your heart.

Correcting the blood pressure, anaemia or chest infection may get rid of the angina in this instance.

What is unstable angina?

Unstable angina is when you get the symptoms of angina when you are resting or not doing anything very strenuous.

- If you previously suffered angina symptoms, but now find that they are happening more often and with less and less activity, you have unstable angina.
- Unstable angina is caused when your coronary arteries have become severely narrowed in a short time. This is often due to the fact that plaque in the artery wall tears and a clot forms in this area. This greatly reduces the amount of blood supplied to the heart.

This is a serious condition. If your angina symptoms change or happen more often, you should tell your doctor immediately. You may need to go to hospital for more treatment and further tests.

What is variant angina pectoris (Prinzmetal's angina)?

Variant angina pectoris is also called Prinzmetal's angina. It is different to the usual type of angina.

- It almost always happens when a person is resting.
- It doesn't usually follow a period of exercise.
- Attacks can be very painful and in the same areas as regular angina.
- This type of angina is caused by spasms (sudden narrowing) in the coronary arteries.
- It may be linked to the following problems if the spasm lasts a long time:
  - Heart attack (acute myocardial infarction)
  - Abnormal heart rhythm (called an arrhythmia)
- This type of angina could also lead to sudden death.

A spasm in the coronary artery is the usual reason for variant angina. About two-thirds of people who experience spasms in the coronary arteries have severe atherosclerosis in at least one of the major coronary arteries.

People who develop serious disturbances to their heart rhythm (arrhythmias) when they have painful spasms are at greater risk of sudden death.

Treating blood pressure and cholesterol can reduce the risk of spasm in the coronary artery. It is important to avoid drugs such as beta blockers as they can make the spasms worse. Calcium channel blockers and nitrates are the drugs which are usually used.

Does angina mean I am going to get a heart attack?

It is not the case that if you have angina you will definitely have a heart attack. However, people who suffer angina are more likely than others to have a heart attack. Remember angina is the way your heart tells you that it is lacking oxygen when you are doing an activity or are stressed. If you are having continuous pain while you are not doing much activity, you may have unstable angina. This could lead to a heart attack if not treated. Many people have angina, but it can be prevented if it is recognised and the correct action is taken.

More importantly, the disease causing this symptom may be reversed or at least stabilised. It is very important that everyone who has angina receives treatment for their symptoms and works towards reducing their risk of having a heart attack.

What is the different between angina and a heart attack?

Angina is pain or discomfort you feel when your heart muscle cannot get enough blood because you have narrowed coronary arteries.

A heart attack is when a narrowed coronary artery that supplies blood to your heart becomes completely blocked by a blood clot. If your blood supply is cut off for more than about 20 minutes, heart muscle cells can die and your heart will be permanently damaged.

- The pain you feel with a heart attack is usually a crushing pain.
- Sometimes the pain is much worse than angina pain and lasts longer.
- You may feel sweaty or sick.
- Some people feel light-headed or faint.
- If you think someone is having a heart attack, you should dial 999 (or 112) for an ambulance.

Angina is usually treated with a combination of medicine and changes to your lifestyle.

How do I manage my angina?

There are two aims in treating angina. These are to:
1. allow you to lead a normal, symptom-free, healthy life and
2. stop your heart disease from getting worse.

Angina is usually treated with a combination of medicine and changes to your lifestyle. If medicine is not controlling your symptoms or if the narrowing in your coronary arteries is very severe, angioplasty and bypass surgery are other treatment options your doctor may consider.

What medicines are used and how do they work?

Many drugs are used to treat angina. The main drugs used are called nitrates, beta blockers and calcium channel blockers.

Nitrates relax the muscles in the walls of your veins and arteries (including coronary arteries) and make them wider. This improves blood flow to your heart. The oxygen in the blood helps to either prevent or treat angina.

The problem with taking these medicines is that they can give you a headache and you may feel flushed. This is because your brain and skin may also get more blood. You may also feel light-headed if your blood pressure falls a little.

There are short-acting and long-acting types of nitrates. The short-acting glycerine tri-nitrate (GTN) can be given in a small tablet that you put under your tongue. There is also a short-acting form of GTN that comes in a spray. You should spray this under your tongue. It is best to use these short-acting forms of nitrates before you do any activity such as walking, climbing, having sex, carrying bags or getting into what you know will be a stressful situation.

The longer-acting nitrates will help you avoid angina during your daily activities. These are tablets which you may swallow or keep inside your mouth between your cheek and teeth. Nitrates are also available in patches that you stick to your skin. Your doctor will advise if these are suitable for you.

Many people will be prescribed both short and long-acting nitrates. Always carry your tablets or spray with you in your pocket. And check the expiry date (do not take them if they are out of date).

Beta blockers are anti-angina drugs that work to make your heart go slower. They also lower your blood pressure and reduce the amount of oxygen your heart needs. They are very effective in treating angina. However, some people taking beta blockers may find that they get cold hands and feet. They may also find that they have less energy. And, some men may have difficulty maintaining an erection. Beta blockers can also make asthma worse or, for people with diseased arteries in their legs, they can cause pain in the calves.

You should discuss these problems with your doctor. There are a number of different beta blockers and your doctor will let you know which one is suitable for you. He or she will also adjust the dose of these drugs so that you do not have side effects.

Calcium channel blockers are commonly used to treat angina. They open up arteries and also reduce the workload of your heart. There are many different types of these drugs and they differ in how they work. Some are better at slowing heart rates, and others work better in reducing blood pressure.

Some people who take these medicines develop swelling in their feet. This is not a major problem but you should discuss this with your doctor if starts to bother you.

There are also other newer drugs used to treat angina which help the cells in the heart muscle work better when the oxygen supply is poor. They are usually added on as part of your treatment if the other drugs mentioned above are not relieving your angina well enough.

There are other drugs that may be prescribed, such as aspirin and statins. See our booklet ***Step by step through heart medicines*** for more information.

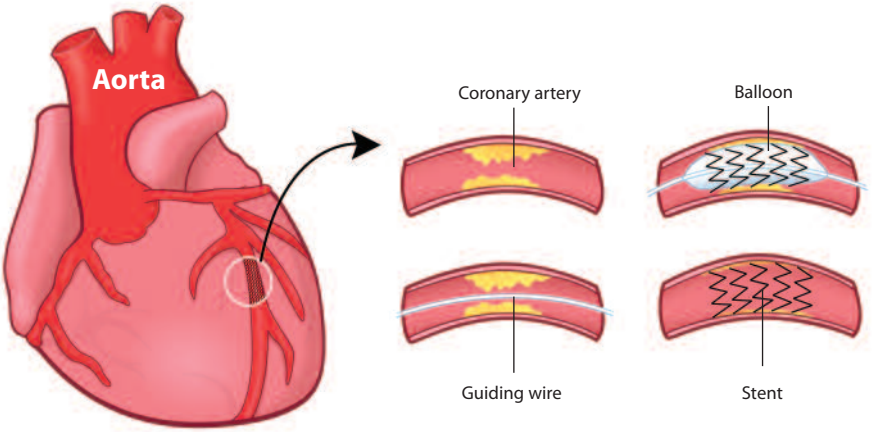
Is it safe to drink alcohol if I am taking heart medicines?

There are very few heart drugs where you cannot drink a small to moderate amount of alcohol. However, too much alcohol is very damaging to your heart as it weakens the heart muscle and puts the heart into abnormal rhythms. Too much alcohol will also increase your blood pressure and give you abnormal fats in the blood so it may have a long-term harmful effect on your heart's arteries. It is not safe to have too much alcohol if you take the drug warfarin.

Angioplasty and stents

Your doctor will tell you if you need an angioplasty or stent. The usual sign that you need this procedure is when your angina is not controlled with medicines alone. However, sometimes your doctor may feel that the disease in your arteries is quite severe and you need an angioplasty, even though your angina may not feel so bad.

An angioplasty involves inserting a balloon into the narrowed section in your artery and inflating it. This squashes the plaque against the walls of the artery so that the narrowing is removed. A stent is a little metal cage that can be expanded inside the artery to keep the plaque out of the central channel in the blood vessel so that blood can get to the heart muscle.



Coronary artery bypass surgery

Bypass surgery involves taking veins from your legs or arteries from your arm or chest and using them as a new channel (graft) to bring blood around the narrowed areas in your artery. (See our booklet: ***Step by step through heart surgery*** for more information.) If your angina is not controlled with medicines alone and you have severe narrowing in your coronary arteries, bypass surgery may be the best treatment option for you. This is major surgery and your doctor will discuss this with you if this is the best option.

Living with angina

What can I do to reduce my angina?

It is often very easy to think that you cannot control your health and that only your doctor and some medicine are going to keep you well. This is certainly not true. There are many things you can do to reduce the number of angina attacks you may get. There are also important things to do to improve the state of your arteries.

Remember, angina is caused because the heart is not getting enough oxygen. There is a balance between supply and demand, which has been upset. However, there are simple things you can do to reduce the demands on your heart.

- Do not exercise for at least two hours after a meal.
- Avoid eating heavy or large meals.
- Do not carry loads that are too heavy or wear heavy clothing.
- If you are walking outdoors in cold weather, always wear a hat and make sure you cover your face with a scarf. The reason for this is that cold air on your face tightens up your arteries.
- Use your GTN spray before doing any moderate activity.
- If you smoke, you must stop. It causes your arteries to tighten up and it reduces the amount of oxygen in your blood.
- Regular walking will have a beneficial effect on your weight, blood pressure and cholesterol, and will reduce your angina.
- Eat a healthy diet containing fruits and vegetables and avoid foods which are high in fat.
- Drink alcohol in moderation. Too much alcohol increases your blood pressure and weight.
- If you suffer from high blood pressure, reduce the amount of salt in your diet. Use black pepper or herbs for flavour instead.
- Keep a careful angina diary (see the back of this book). You may identify some things that tend to bring on your attacks.
- Keep a lifestyle diary to see how you are improving.

What are my risk factors and how can I reduce them?

Stop smoking

Smoking brings on angina attacks and increases your risk of having a heart attack. Smokers get almost three times as many heart attacks as people who do not smoke. People who continue to smoke after a heart attack are twice as likely to die as people who stop smoking. No matter how long you have been smoking, your health will benefit if you stop. There is almost no such thing as 'too late to stop now'.

Giving up smoking is the single most effective thing you can do. You can save a small fortune, have the holiday you needed, feel healthier and have less angina pain. But it is not easy to do.

However, if you know that smokers are more likely to have bigger heart attacks and die more often from heart attacks, you may be more determined to quit.

There are many medicines available to help you stop smoking. These include nicotine replacement therapy, which allows you to get rid of your urge to smoke while you are learning to avoid the bad habit.

However, you should use these medicines with care when you have angina. You should consult your doctor before you have any treatment. There are also newer medicines that work on your brain to switch off your desire to smoke and these have been shown to be quite useful. But, again you should consult your doctor about this form of treatment. (See the Irish Heart Foundation booklet, ***Quit smoking*** for more information)

Manage your blood pressure

If your blood pressure is high, you have a greater risk of having a heart attack or a stroke. People who also smoke and have high cholesterol are at greater risk. Many people don't know they have high blood pressure because it doesn't cause any discomfort.

Your heart has to work harder when you have high blood pressure. Many people find that their angina is worse when their blood pressure is high. It is very important to control your blood pressure if you have angina because it will reduce the amount of angina you have. While many people will have to take medicine to lower their blood pressure, there are also a lot of things you can do to bring down your own blood pressure.

- Cutting down the amount of salt you eat and reducing your weight (if you are overweight) will help.
- So will eating fewer fatty foods and more fruit and vegetables.
- You should avoid drinking too much alcohol. The rules about 17 units for men and 11 units for women do not apply to people who suffer from high blood pressure. You should avoid alcohol or drink less than 10 units a week.
- Being more physically active can help reduce your blood pressure over time.

(For more information the Irish Heart Foundation booklets: ***Manage your blood pressure*** and ***Time to cut down on salt***).

Have you had your blood pressure checked recently? How about the rest of your family? It will only take your doctor a few minutes to check it.

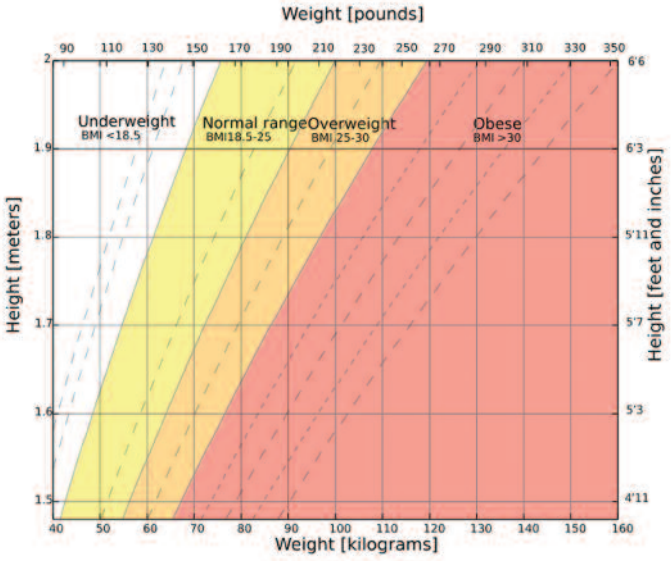
Know your cholesterol and keep it down

Cholesterol is a type of fat found in your blood. You need a certain amount of cholesterol for all your body cells and to produce important hormones. However, if there is too much cholesterol in your blood, it sticks to the inner lining of your arteries or blood vessels to form fatty plaque called atheroma.

If you have angina, your doctor will have checked your cholesterol. Eating more healthily can help you reduce your cholesterol. Eat fewer fatty foods and more starchy foods such as potatoes, bread and pasta. You may have to take medicine to lower your cholesterol. If you have high cholesterol, bringing it down will reduce your risk of having a heart attack. (See the Irish Heart Foundation booklet: ***A healthy cholesterol***, for more information).

Be a healthy weight

By being within the recommended weight range for your height, you will be helping yourself to keep your blood pressure down. Check the chart below to see if you are a healthy weight. If you need to lose weight, take a look at the Irish Heart Foundation booklets: ***Healthy eating*** and ***Lose weight***.



Be more active

If you have angina, it is important to be physically active. For example, regular walking will help you lose weight and lower your blood pressure and cholesterol. But only do as much as your angina lets you. Talk to your doctor about the type and amount of physical activity that is best for you. Your doctor may put together an exercise plan for you. Activities such as walking, swimming and cycling are usually suitable for people with angina. If an activity makes you breathless or causes you to have angina pain or discomfort, you are doing too much. Always tell your doctor before taking up a new type of physical activity. (See the Irish Heart Foundation booklet, ***Be active*** for more information).

Manage your stress levels

Stress can bring on an angina attack. Try to avoid stressful situations and learn how to manage your stress levels. Our booklet on managing stress has some good techniques to help you reduce your stress levels.

Diabetes

Having diabetes increases your risk of atherosclerosis by three times. It has been shown that if your diabetes is controlled well, it will reduce your risk of a heart attack. However, if you have diabetes, it is very important that you never smoke and that you keep your cholesterol very low and have your blood pressure controlled, preferably with an ACE inhibitor (a special drug for treating high blood pressure).

Can I work?

Once their angina has been controlled, most people can live a near normal life. However, if you have a very stressful or physically demanding job, you may need to change your job or change how you work. Talk to your doctor about your job and how it is likely to affect your angina.

Can I drive?

If you drive, your licence should not be affected once your angina is controlled. However, it is important to tell your insurance company that you have angina. You may need to get a letter from your doctor confirming that you are fit to drive.

If you drive a heavy goods vehicle or a bus, you will need to tell your employer and the driving licensing authority.

If you have an angina attack while you are driving, pull over and stop until your symptoms have gone completely.

Is it safe to have sex?

Having sex shouldn't put too many demands on your heart. You should not be afraid to have sex if you have angina. However, if you find that sex brings on angina pains, you should stop and rest. It is important to consult your doctor so that they can arrange for you to have a stress test to see how much activity your heart can cope with.

You should use your GTN before having sex as this will help reduce angina symptoms.

Men often have impotence or some problems maintaining erections once they are diagnosed with heart disease. This may be due to emotional upset rather than having a medical problem. They may become depressed or anxious and this is the problem rather than impotence caused by medical factors.

Sometimes the problem can be related to medicines. Beta blockers often cause this problem and your doctor may adjust your medicines if this is the cause. In some situations, you may need to use a drug like Viagra. This has been shown to be successful in many cases. However if you are taking nitrates there is a risk of you becoming unwell or collapsing, so you shouldn't use Viagra. This is because, when taken together, both drugs can lower your blood pressure. This would be dangerous for your heart. You should discuss using Viagra with your doctor, as it may be possible to change your anti-angina medicines so that you do not take nitrates.

Can I go on holiday?

The stress of airports and the work involved in carrying heavy suitcases, walking a long distance to the departure gate and generally rushing around could bring on an angina attack. It is a good idea to plan your holiday well and to give yourself plenty of extra time. Get to the airport early, use a suitcase with wheels or an airport trolley. Give yourself plenty of time to rest. Remember to bring enough medicine for your holiday and to carry it in your hand luggage. If you think the stress and activity of the airport could bring on an angina attack, ask your airline or travel agent to organise a wheelchair for you at the airport. If you are not sure, ask your doctor if you are fit enough to travel.

You should have travel insurance. It is possible to buy travel insurance if you have a heart condition as a small number of specialist insurance companies offer cover. However, you may have to pay a higher premium. You can find up-to-date information on travel insurance on our website at www.irishheart.ie, or you can call the National Heart and Stroke Helpline on 1890 432 787.

Summary

Angina is a message from your heart to tell you that it is suffering from a lack of blood carrying oxygen. This is usually due to a narrowing in your coronary arteries supplying blood to your heart muscle. There is an important balance between the amount of blood your heart muscle demands and the ability of the coronary arteries to supply that blood. The demands on your heart are increased by exercise, high blood pressure, infections, a low blood count (anaemia) or lack of oxygen. Correcting this imbalance allows you to live your life without pain from angina. You can do this by making changes to your lifestyle and using anti-angina drugs. However, the other important part of treating angina is to prevent the disease in the arteries getting worse. This is the best long-term strategy and you can achieve it by reducing your cholesterol and blood pressure, giving up smoking, losing weight and becoming more active.

Angina is a message from your heart to tell you that it is suffering from a lack of blood carrying oxygen.

An explanation of medical terms used in this booklet

Anaemia
Anaemia means that you have less oxygen in your blood than normal. Oxygen is carried in your red blood cells. If you are anaemic, you have fewer red blood cells than normal or these blood cells are carrying less oxygen than normal.

Angina
Angina is chest pain or chest discomfort. It happens when not enough oxygen-rich blood gets to your heart muscle.

Angiogram
This is another name for cardiac catheterization. An angiogram is a test using dye and x-ray to see if you have any problems in your arteries, valves or the chambers of your heart.

Angioplasty
Angioplasty is a treatment to unblock your arteries and increase the blood flow to your heart muscle. A small device like a balloon is put into your artery and inflated to flatten the blockage against your artery wall.

Arrhythmia
Arrhythmia is an irregular heart rhythm.

Atherosclerosis
Atherosclerosis is a condition where fatty material builds up on the inside wall of your coronary arteries. This hardens to make atherosclerotic plaque, which is also called atheroma. This plaque narrows your arteries and reduces blood flow to your heart muscle.

Beta blocker
This is a drug that slows your heart rate.

Blood pressure
Blood pressure shows the amount of work that your heart has to do to pump blood around the body. The two numbers in your reading show the level of your blood pressure. One number records blood pressure when the pressure is at its highest as the heart muscle squeezes out the blood from the heart - this is called systolic pressure. Then the heart relaxes, which allows the blood to flow back into the heart - this is called diastolic pressure.

The normal level of blood pressure is usually about 120 (systolic) over 80 (diastolic). If you have been told that your blood pressure is higher than 140 over 90, you should discuss this with your family doctor.

Calcium channel blocker
This is a drug that helps to widen your blood vessels.

Cholesterol
Cholesterol is a fatty substance made in the body mainly by the liver. This is often called blood cholesterol. The body can produce all the cholesterol it needs to carry out its many functions and can usually maintain a healthy level of blood cholesterol. However, sometimes the balance goes wrong and there is an increase in blood cholesterol. This may be due to inherited problems or from eating too much saturated fat or too many foods from the top shelf of the food pyramid such as biscuits and cakes. (See our leaflet: ***Healthy Eating***)

Electrocardiogram (ECG)
An ECG test measures the rhythm and electrical activity of your heart. Small sticky pads are put on your body connected to wires that link up to the ECG machine. The machine reads and records the electrical signals from your heart.

GTN
This is a type of drug known as a nitrate. It widens your blood vessels. It is available as a spray, tablets or a patch.

Myocardial infarction (MI)
This is the medical term for a heart attack. A heart attack is when blood cannot get to part of your heart muscle and the muscle dies or is permanently damaged.

Stent
A stent is a piece of wire mesh used to keep open part of your coronary artery. Some stents release medicine into your bloodstream to prevent clots forming on the stent. These are called drug-eluting stents.

Unstable angina
Unstable angina is when you get the symptoms of angina when you are resting or not doing anything very strenuous.

Variant angina pectoris
Variant angina pectoris is also called Prinzmetal's angina. This type of angina is caused by spasms (sudden narrowing) in your coronary arteries. Attacks usually happen when you are resting and can be very painful.

My risk factors and targets

Date									Target
Number of cigarettes smoked									Zero
Weight									
Height									
Body mass index (BMI)= weights (kilograms) + height (metres squared)									BMI = between 20 and 25
Blood Pressure									135/85
Exercise									30 minutes of exercise most days
Alcohol									Each week No more than 11 units (women) No more than 17 units (men) No more than 10 units - if you have high blood pressure
Diabetes									HbAic less than 7.0%
Total cholesterol									Less than 4.5 mmol/L
Triglycerides									Less than 1.5 mmol/L
LDL cholesterol									Less than 2.6 mmol/L
HDL cholesterol									More than 1.2 mmol/L (men) More than 1.4 mmol/L (women)

Medicines prescribed by my doctor

Name of Medicine	Dose	Times each day

Warning

Use only the medicine prescribed for you. Always tell your doctor if you are on any other medicine prescribed by another doctor. Some drugs do not mix well and can change the action of other drugs.

My angina diary

Date	Time	Site of pain (e.g. arm chest etc)	What you were doing when you got the pain	How often you feel the pain	How long the pain lasts	Did you use GTN?	Did GTN work?

More information

Useful websites:
www.irishheart.ie
www.stroke.ie
www.hse.ie
www.bhf.org.uk
www.heart.org

Other Irish Heart Foundation publications:

Step by step through stroke
Step by step through heart surgery
Step by step through heart medicines
Step by step through inherited heart disease
Step by step through heart failure
Step by step through cardiac catheterization
AF and you, information for people living with atrial fibrillation
Step by step through heart attack
Manage your stress
All about your heart and stroke
Time to cut down on salt
Manage your blood pressure
A healthy cholesterol
Healthy eating
Be active
Quit smoking
Lose weight

Heart and Stroke Helpline:
Locall 1890 432 787
Monday to Friday 10am to 5pm

www.irishheart.ie

Please make a donation today

IRISH HEART FOUNDATION
Fighting Heart Disease & Stroke

The Irish Heart Foundation is Ireland's national charity dedicated to the reduction of death and disability from heart disease and stroke. Over 90% of our funding comes from public and business donations. We depend on your goodwill and generosity to continue our work.

If you found this booklet useful, please help our charity to continue to provide heart & stroke information by donating today.

You can make your donation today:

By post: Irish Heart Foundation, 50 Ringsend Road, Dublin 4
Online: www.irishheart.ie
By phone: 01 6685001

Personal Details

Name: _____

Address: _____

_____

_____

Email: _____

Phone: _____ Mobile: _____

Credit or debit card (one off donation)

Amount: ☐ €250* ☐ €100 ☐ €50 ☐ €25 ☐ Other € _____

Card Number: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Exp Date: ☐☐ / ☐☐ Security Code**: ☐☐☐

Signature: _____ Date: ___ / ___ / ___

* If you donate €250 in one year (or €21 per month) we can claim tax back at no cost to you.
** Last 3 digits on the signature strip on the reverse of your card.

The Irish Heart Foundation is committed to best practice in fundraising and adheres to the **statement of guiding principles for fundraising** promoting transparency, honesty and accountability. Any personal information you provide will be held in accordance with the Data Protection Acts 1988 and 2003.

SEPA Direct Debit Mandate

Unique Mandate Reference:

Creditor Identifier: **IE02ZZZ306322**

By signing this mandate form, you authorise (A) the Irish Heart Foundation to send instructions to your bank to debit your account and (B) your bank to debit your account in accordance with the instruction from the Irish Heart Foundation.

As part of your rights, you are entitled to a refund from your bank under the terms and conditions of your agreement with your bank. A refund must be claimed within 8 weeks starting from the date on which you account was debited. Your rights are explained in a statement that you can obtain from your bank.

Please complete all the fields below marked*

*Bank Name: _____

*Address: _____

*Account number (IBAN): _____

* Swift BIC: _____

Creditor Name: **IRISH HEART FOUNDATION**

Creditor Address: **50 RINGSEND ROAD, DUBLIN 4, IRELAND**

*Type of Payment: ☑ Recurrent (Monthly) ☐ One-off Payment

* Signature: _____ *Date Signed: _____

Please return completed form to the Irish Heart Foundation.

My monthly instalment amount is: ☐ €21* ☐ €18 ☐ €15 ☐ €10

☐ Other € _____ *per month*

*A regular gift of €21 per month could be worth an additional €9 from the Revenue Commissioners per month at no extra cost to you.

Your first contribution will be taken on either the 2nd or the 20th of the next available month. Please select which date you prefer. ☐ 2nd ☐ 20th

You will be notified in writing ten days in advance of your first direct debit. If you wish to cancel within 7 days of a direct debit payment please contact your own bank.

Preferences

I would like to hear about other IHF events, activities, awareness campaigns and appeals.

☐ Yes

Do you need a postal receipt: ☐ Yes ☐ No

Registered Charity Number: CHY 5507
Source Code: APP00248

The Irish Heart Foundation is the national charity fighting heart disease and stroke.

IRISH HEART FOUNDATION
Fighting Heart Disease & Stroke

Irish Heart Foundation,
50 Ringsend Road,
Dublin 4

T: +353 1 668 5001
F: +353 1 668 5896
Email: info@irishheart.ie

Heart and Stroke Helpline:
Locall 1890 432 787
Monday to Friday 10am to 5pm

Web:
www.irishheart.ie
www.stroke.ie

Registered Charity
Number CHY 5507

2011

The information provided in this booklet was correct and accurate at the time of publication to the best of the Irish Heart Foundation's knowledge.