Cigna®

GUIDE TO

A HEALTHY HEART

Introduction

The heart is a highly complex organ – in fact, it's the principal organ that keeps you alive. It is roughly the size of your fist and located in the middle of your chest, tilting slightly to the left.

It's basically a pump made out of muscle that has two chambers, two valves and a powerful electrical conduction system that keeps it beating and doing its job.

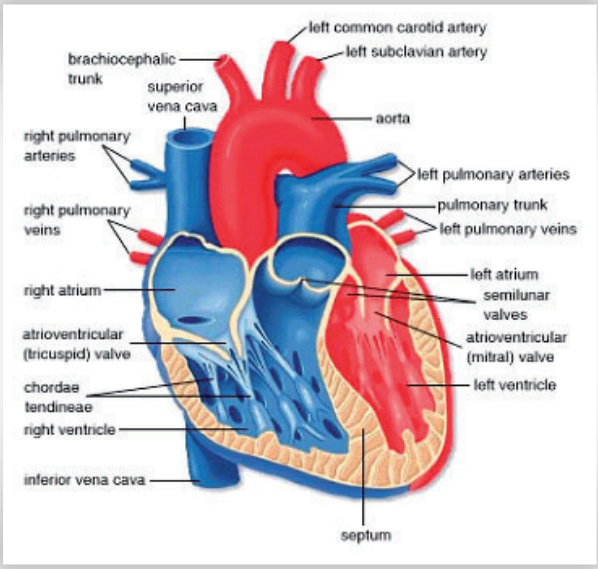
When your body is at rest, the heart beats approximately 70 times a minute, pumping blood all around your body. When it's working properly, you don't give much thought to it. But because of its complex structure and its critical importance, when it functions poorly the consequences are usually serious and sometimes even life-threatening.

How the heart works

Your heart is divided into four hollow chambers. The upper two chambers are called atria and they are joined to two lower chambers called ventricles. These are the pumps of your heart.

One-way valves between the chambers keep blood flowing through your heart in the right direction. As blood flows through a valve from one chamber into another the valve closes, preventing blood flowing backwards. As the valves snap shut, they make a thumping, 'heart beat' noise.

The heart wall is made up of a special muscle called the myocardium which needs a constant supply of blood. When this supply is reduced it can cause chest pain (angina) or when this supply is stopped for any period of time it can cause chest pain and death of a part of the myocardium (heart attack).



Heart disease

One of the most common diseases to affect the heart is **coronary heart disease (CHD)**. The blood supply that takes oxygen and nutrients to your heart is provided by a network of blood vessels on the surface of your heart called coronary arteries. Coronary heart disease is the term that describes what happens when your heart's blood supply is blocked or interrupted by a build up of fatty substances in these arteries.

Over time, the walls of your arteries can become furred up with fatty deposits. This process is known as atherosclerosis and the fatty deposits are called atheroma. If your coronary arteries become narrow, due to a build up of atheroma, the blood supply to your heart will be restricted. This can cause angina. If a coronary artery becomes completely blocked, it can lead to myocardial infarction - commonly known as a heart attack.

Angina

Angina is the main symptom of CHD, caused by insufficient oxygen reaching the heart muscle because of reduced blood flow. It can be a mild, uncomfortable feeling that is similar to indigestion.

However, a severe angina attack can cause a feeling of heaviness or tightness, usually in the centre of the chest, which may spread to the arms, neck, jaw, back or stomach. Angina is often triggered by physical activity or emotionally stressful situations.

The symptoms usually pass within about 10-15 minutes and can be relieved by resting or using a nitrate tablet or spray.

Heart attack

Unfortunately, for many people the first indication that something is wrong is a heart attack. This happens when the blood supply to a part of the heart muscle is completely interrupted or stops, usually when a blood clot forms in a diseased coronary artery that's already become narrowed by atherosclerosis.

Sometimes the pain of a heart attack can be mild and symptoms can be similar to that caused by indigestion. Some people can even have a heart attack without experiencing pain. However, in most cases the pain of a heart attack is severe. Unlike angina, the pain doesn't subside when you rest and symptoms can't be relieved using a nitrate tablet or spray.

Other heart attack symptoms include sweating, light-headedness, nausea and breathlessness.

Causes of coronary heart disease

As discussed, the most common cause of CHD is atherosclerosis - a build up of fatty deposits on the walls of the coronary arteries. Your risk of developing atherosclerosis is significantly increased if you:

- smoke
- eat an unhealthy diet
- are overweight
- do not take regular exercise
- have high blood pressure
- have a high blood cholesterol
- have diabetes.

Some people have a family history of the disease and are predisposed towards developing atherosclerosis due to inherited genetic factors.

However, the good news is that, in all cases, by making the right lifestyle choices you can minimise the risk factors and reduce your chance of developing heart disease.

Quick fact

Heart disease, stroke and other types of cardiovascular diseases are the biggest killer in the UK and a major cause of ill health. [1]

Choose to have a healthy heart

Don't smoke
Smoking is a major risk factor for developing atherosclerosis. By stopping smoking and avoiding smoky environments, you will dramatically reduce your risk of developing coronary heart disease.

There are over 4000 chemicals in each cigarette. Many of these are poisonous and some are particularly harmful to your heart. Smokers younger than 50 are five times more likely than non-smokers to die of coronary heart disease and by quitting, you not only lower your risk of heart disease but also help reduce your risk of lung diseases such as cancer and chronic obstructive pulmonary disease (COPD).

Despite the weight of evidence outlining the ill health effects of smoking, most smokers find it very difficult to give up. Don't forget that nicotine is addictive and quitting smoking is often hard. The important thing is that you try and keep trying until you succeed.

Be more physically active
Prevention is always better than cure and being active is absolutely essential for a healthy heart. Even if you've already been diagnosed with heart disease, making lifestyle changes can help you live a longer, healthier and more enjoyable life.

Making your heart beat faster, so that you're left feeling slightly out of breath and warm, will boost your heart's health. It can lower your blood pressure, blood cholesterol levels, weight and risk of developing diabetes.

Becoming more active will also improve the ability of your body's tissues to extract oxygen from your blood, help you maintain healthy levels of blood fats and speed up your metabolism.

Aerobic or cardiovascular exercise is particularly important to prevent coronary heart disease. This includes any kind of activity that increases your breathing rate and gets you breathing more deeply.

These activities include walking, running, swimming, dancing or any of the aerobic (cardiovascular) machines at the gym such as the rowing machine, treadmill, stepper or elliptical trainer. It will take less than you think.

Only 30 minutes a day for 5 days of the week is required and you don't have to do it all in one session. So, what are you waiting for?

Eat a healthy diet

High cholesterol levels in the blood increase the risk of developing CHD by causing the build up of fatty plaque in the artery walls that can harden and narrow the arteries. Nearly half of all deaths from CHD in the UK are thought to be caused by raised blood cholesterol.

High cholesterol can be caused by a number of things such as smoking and physical inactivity. However, the key influence is diet and, in particular, the intake of saturated fats. Making a few simple changes to your diet can dramatically affect your cholesterol levels and heart health.

The key to a healthy diet is to eat a wide variety of foods, in the right quantities, to match your body's need for energy and nutrients. A third of the food you eat should be fruit and vegetables.

Another third should be starchy foods such as bread, cereals, pasta, rice and potatoes – wholegrain and wholemeal varieties are best because of their fibre content.

And the remaining third should include a moderate amount of dairy food, meat, fish and vegetarian alternatives and small amounts of foods containing fats and sugar.

Quick fact

On average a heart pumps 100,000 times every day pumping a total of 7,200 litres of blood over 19,000km! [2]

Make your diet a heart-healthy one with two small but significant steps:

Fat
Reduce the total amount you eat and avoid saturated and modified fats as much as possible. These fats lead to blood cholesterol levels that are unhealthy for your heart and arteries. Replace saturates with mono-unsaturated fats and choose foods containing omega-3 fatty acids - these types of fat are beneficial to your heart and arteries.

Salt
Our bodies do need small amounts of salt but eating too much is linked to high blood pressure, one of the risk factors for heart disease. Adults should have 6 grams of salt per day which equates to roughly a teaspoon. This is reached very quickly because there is so much salt in the foods we buy. In fact, a staggering 75% of the salt we eat comes from processed foods alone. Cutting down on your salt intake is easy. Try to avoid adding salt whilst cooking and then again at the dinner table and check food labels when you're at the supermarket.

Treatment

Coronary heart disease cannot be cured but recent progress in the research and development of new medicines and significant improvements in surgical procedures have meant that the condition can now be managed more effectively. With the right treatment, the symptoms of coronary heart disease can be reduced and the functioning of the heart improved.

Generally, treatments for heart disease aim to do one or more things:

- Improve blood flow through the coronary arteries.
- Reduce the build up of atherosclerosis.
- Help the heart muscle to work better, allowing the heart to act more efficiently as a pump.
- Change the electrical control of the heart, to influence its the rhythm. For example by slowing the heart when it beats too fast, or preventing abnormal rhythms such as atrial fibrillation.
- Thin the blood to improve flow to stop clots from forming and prevent a heart attack.
- Reduce the strain on the heart, for example by controlling blood pressure.

There are a range of drugs doctors can use to treat heart disease. Many people will find that they're advised to take several different medicines together, depending on the nature of their heart problem and whether they have risk factors such as high blood pressure. As with any medication, side-effects can be a problem. However, as there are usually different versions of any particular type of drug, your doctor may be able to prescribe an alternative if a drug doesn't suit you.

If you have any concerns about heart disease or want to find out more, please consult your GP.

Quick fact

Thanks to medical advancements there are many more people living with CHD than dying from it each year. [1]

Useful Links

You can also obtain more information from the following websites:

www.bbc.co.uk

www.bhf.org.uk

www.patient.co.uk

www.takeheart.co.uk

www.nhsdirect.nhs.uk

References

1 Steven Allender, Viv Peto, Peter Scarborough, Asha Kaur and Mike Rayner (2008) Coronary heart disease statistics. BHF: London

2 http://www.bhf.org.uk/living_with_a_ heart_ condition/default.aspx

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