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This booklet was written by Dr Graham Jackson, Guy's and St Thomas's Hospital, London, with thanks from the British Heart Foundation.
Research shows that most women think breast cancer is a greater threat to their health than coronary heart disease, yet statistically women are four times more likely to die of a heart problem than breast cancer. Heart disease and diseases of the blood vessels together claim twice as many women’s lives as all forms of cancer.
Why we need a booklet on women and heart disease

In the past, many people considered coronary heart disease to be a men's problem, as women tend to get heart disease later in life than men. As one heart patient said:

"...if it had been my husband having the pain, not me, I'm sure someone might have thought of a possible heart attack..."

Karen, Age 40

Women are protected by female hormones until the menopause (see section on The menopause, page 20). It is true that fewer women than men get heart disease before the age of 50, but by 60-70 the gap narrows.

As women live longer than men, and as we are an ageing population, there may soon be more women living with coronary heart disease than men.

By reading about what causes coronary heart disease, you can make lifestyle changes that will cut down the risk of you getting it.

The heart and how it works

The heart is a pump. It is made of a particularly strong kind of muscle. It needs to be robust as it has to cope with the physical and emotional stresses of daily life and because it works 24 hours a day. It beats on average 100,000 times every 24 hours and pumps out between 5 and 20 litres of blood (1 litre is just under 2 pints) every minute depending on your body's needs - it pumps much faster when you are active than when you are resting. It pumps blood - which carries oxygen and nutrients - round the body to every organ and muscle so the body can work efficiently.

Think of the heart as the engine that pumps the blood around your body, normally it is about the size of a clenched fist.
What can go wrong with the coronary arteries

Coronary heart disease is when your arteries narrow. Healthy arteries have a smooth lining called the endothelium, which helps blood flow freely. If the endothelium is damaged, the smooth surface gets rough and irregular. If this happens to your coronary arteries, they will be more likely to become narrower. There is also a risk that blood clots will form and block the artery.

The medical term for this narrowing is atheroma or atherosclerosis. There is a build up of fatty deposits, called plaque, in the artery wall, and the artery gets furred up. (See Figure 2.)

Healthy arteries have a smooth lining called the endothelium, which helps blood flow freely.

(Figure 2)

If the plaque builds up it starts to get in the way and slow down the flow of blood.

Finally, the plaque may break apart, causing a blood clot to form. This may block the artery, stopping the flow of blood and oxygen to the heart muscle, causing a heart attack.
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What happens if you get coronary heart disease

Angina

Angina is a symptom of the problem not a disease in itself. A narrow artery restricts the flow of blood and oxygen to the heart muscle. This may not give you a problem until you exert yourself or get worked up about something, particularly if you get angry. In these situations, the heart needs more blood and oxygen to cope with the exertion, but instead finds its supply restricted. The lack of oxygen to the heart muscle causes pain.

The pain usually begins behind the breastbone and is often felt as a tight or squeezing sensation. You may also feel breathless. Typically you get angina when you exert yourself, for example when you walk uphill or climb stairs. It goes away when you stop or slow down. If you get a pain like this, do not ignore it. Pain can spread to the neck, jaw, left or right arm or both, and sometimes to the stomach or back. Doctors call this a radiating pain. Some women may not have chest pain and may instead just get indigestion-like symptoms, jaw pain or breathlessness on exertion. Angina is also more likely to occur in cold or windy weather and after a meal. Angina rarely happens during sex.

Do not immediately blame chest pain on indigestion or lack of physical fitness. It is tempting to put your family before your own health and ignore the symptoms but if you get chest pain or discomfort on exertion or for no apparent reason see your GP as soon as you can.

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Key points

How might I know I'm experiencing angina?

- Chest tight, squeezing or burning feeling OR dull ache, heaviness in chest
- Hard to breathe, feel restricted
- Pain may spread to arms, jaw, neck, back or stomach
- Pain may only affect arms, jaw, neck, back or stomach
- Pain usually brought on by effort - climbing stairs, walking uphill, carrying shopping, any exercise
- Pain worse in cold weather or when angry
- Pain does not usually last long if exercise stops or you relax. Discomfort should go after 10 minutes
- Women may have pains that cannot be pinned down. Do not ignore them, they may be harmless but see your GP
- Do not ignore unusual symptoms that feel like indigestion.