

1) Risk factors for CHD

Coronary heart disease (CHD) manifests itself in two main forms; angina and heart attack, and is the major cause of death in most developed countries. Its development is influenced by a number of risk factors.

Coronary heart disease is more likely:

- 1) with increasing age,
- 2) in men rather than in women before the menopause,
- 3) if close relatives have suffered CHD early in life.

These risk factors cannot be changed. But there are other risk factors that can be modified.

The main modifiable risk factors for CHD are:

- Elevated blood cholesterol
- High triglyceride with low HDL
- Elevated blood pressure
- Diabetes
- Smoking
- Obesity
- Inactivity
- Excessive alcohol
- Excessive stress

When several such risk factors exist together, the risk of CHD is much increased. It is not enough to consider just one risk factor. All aspects of diet and lifestyle should be kept under review.

Blood cholesterol

Cholesterol is vital for healthy cells. It is so important that the body does not rely on a dietary source, it makes its own. If, however, the body accumulates too much, cholesterol will deposit in the walls of arteries, which become damaged and may become blocked. If this happens, a heart attack could result. Many people make too much cholesterol when their diet is rich in saturated fats.

High blood cholesterol may also be inherited, as in Familial Hypercholesterolaemia (FH) and Familial Combined Hyperlipidaemia (FCH). In these conditions there are genetic defects that lead to over-production or accumulation of cholesterol in the blood. To combat this, a rigorous cholesterol-lowering food plan, usually combined with drug treatment, is required to reduce and control blood cholesterol and CHD risk. Even if one's blood cholesterol is not very high, as it is in the inherited disorders FH and FCH, it is sensible to choose carefully the amount and type of dietary fat consumed. Reducing the amount of saturated fat is especially important.

Triglycerides with low HDL

Having too much of another fat in the blood, triglyceride, is often coupled with having too little HDL (high density lipoprotein). This combination is commonly associated with premature coronary heart disease. It may be inherited but also occurs in individuals who are obese. Weight reduction and regular exercise may help to reduce triglyceride levels and increase HDL levels.

A higher level of HDL is useful, as this is the component in the blood which brings excess cholesterol from the tissues to the liver for processing and excretion. Low levels of HDL in the blood appear to be an important predictor for heart disease in European and North American men and women.

Blood Pressure

High blood pressure is harmful to the arteries and increases the risk of heart attack, heart failure and stroke. The condition tends to run in families, but blood pressure is also influenced by lifestyle. To prevent blood pressure from rising, achieve and maintain a healthy body weight, keep alcohol intake moderate, avoid adding or cooking with salt, reduce stress and be physically active. If these measures fail, there are drugs that are effective in reducing elevated blood pressure. Excess alcohol intake seems to be an important contributor to high blood pressure in Britain.

www.bpassoc.org.uk



Risk factors for CHD continued...

Diabetes

Having diabetes puts people with the condition at a much higher risk of CHD. People with diabetes have a two to five fold risk of developing heart disease and have the same risk of developing heart disease as a person who has had a heart attack but who doesn't have diabetes.

Lipid profiles in people with diabetes tend to be characterised by elevated very-low-density lipoproteins, small low-density lipoproteins and low HDLs. This combination is commonly termed diabetic dyslipidaemia and is particularly atherogenic; i.e. the furring up process of arteries is accelerated. People with diabetes and a raised cholesterol level experience an even greater risk of heart disease than people without diabetes with the same level of cholesterol.

It is possible to have undiagnosed diabetes or impaired glucose tolerance without knowing it, which also increases CHD risk.

Diabetes and diabetic tendencies can be managed by a diet, which emphasises complex carbohydrates and is low in fat. Good choices are foods rich in starch and fibre, such as potatoes, bread and other cereal foods, pasta, beans, vegetables and fruit. Be active, maintain a healthy body weight and, above all – do not smoke.

www.diabetes.org.uk

Smoking

Cigarette smoking, even a few a day, increases the risk of heart disease. It can also cause cancer of the lungs and other organs, lung failure, stroke and gangrene. There are thus many health benefits from being a non-smoker. Even after having smoked for many years, stopping smoking now will reduce CHD risk.

**Smoking cessation helpline:
NHS Direct Tel 0800 169 0 169**

Obesity

Being overweight increases the chance of having a heart attack. This is in part because obese individuals are more likely to have high blood pressure, diabetes and high blood fats. Less fat, sugar and alcohol in the diet is helpful for weight control. In order to achieve a healthy body weight it is also important to build regular, moderate exercise into a daily routine.

www.nationalobesityforum.org.uk

Inactivity

Physical inactivity is an important contributor to coronary heart disease. Cardiovascular benefits of regular physical activity include reduced blood pressure and less likelihood of obesity, which help to reduce the risk of developing CHD. At least 30 minutes of steady activity on five or more days a week is recommended. Walking, jogging, swimming, cycling and dancing are all excellent choices. Remember to start slowly and gradually build up your exercise.

www.who.org.uk

Alcohol

Alcohol in moderation may reduce the risk of CHD. However, consuming too much alcohol places one's health at risk in a number of ways. When taken in excess, alcohol is detrimental to the heart and other organs. It can directly damage the heart muscle and cause irregular beating of the heart. Alcohol can contribute to obesity, high triglycerides, high blood pressure, strokes and cancer, not to mention accidents and violence. There are many reasons to keep alcohol consumption within reasonable limits. Men are encouraged to drink no more than 28 units a week and women no more than 21 units. A unit is defined as a half-pint of beer, lager or cider, or a pub measure of wine, sherry or spirits.

Stress

A certain amount of stress may be desirable, in that it keeps people alert and motivated. However, as the stress level builds and, especially if prolonged, it can be counter-productive by being injurious to health. Stress can exacerbate symptoms in people with pre-existing heart disease, and can contribute to high blood pressure.

For those with high cholesterol it can lead to neglect of a healthy lifestyle, such as poor eating habits or not taking prescribed medication.

It is important to find time for relaxation. Simple breathing exercises, sports, music, meditation, reading, engaging in hobbies, taking a walk... there are many ways to reduce stress. Choose those which appeal and make time for them every day.