

## Heart disease - risk factors explained

Coronary heart disease - disease of the coronary arteries around the heart - leads to heart attacks. Together with the same disease in other arteries, it ultimately leads to the death of nearly half of us.

Most people who develop heart disease have recognised risk factors which contribute to the cause of the disease. The so-called 'major risk factors' include:

- Raised cholesterol level in the blood
- Raised blood pressure
- Smoking.

### **Cholesterol**

A person gets coronary heart disease when cholesterol is deposited in the inner lining of the coronary arteries. These arteries provide the heart with blood. They lie on the surface of the heart and form a crown (corona) around it. As the heart beats, they twist and bend. Cholesterol is deposited where the arteries bend and divide. The higher the cholesterol levels in the blood, the greater the chance that deposits will form at these sites.

### **High blood pressure**

If a person has 'high blood pressure, there is more stress in the places where the arteries bend and divide. This added pressure increases the speed at which cholesterol is deposited along the walls of the arteries.

### **Smoking**

Cigarette smoke contains many chemicals, including nicotine and carbon monoxide. Some of these chemicals, along with the carbon monoxide, damage the inner layer of the arteries. Damage to arteries from smoking causes:

- Cholesterol to enter the artery walls more rapidly
- Blood clots in the arteries which lead to heart attacks.

### **Diabetes**

Diabetes is another risk factor for heart disease. Many diabetics have a high cholesterol level and may also have raised blood pressure. Other biochemical changes in diabetics may also accelerate the development of coronary heart disease.

### **Obesity and excess weight**

A person's weight generally has an impact on their cholesterol level. People who are overweight often have high cholesterol and raised blood pressure. Further, their blood is more likely to clot.

### **Inactivity**

People who are inactive (the 'couch potatoes') are more likely to have heart attacks, heart disease and early death than those who are generally active (moderately active seems to be enough). Inactive people are more likely to:

- Have high cholesterol
- Have raised blood pressure
- Be overweight
- Be smokers.

Even without risk factors like smoking and high blood pressure, people who are not active still have a higher chance of heart disease. The reasons for this are not clear. It might have something to do with blood clotting and the way clots are removed from the body, but there are many other possibilities.

### **Family history**

A person's genetic inheritance forms the background for most diseases. Each person's genetic makeup is different (except in identical twins). We tend to inherit things like:

- Blood pressure levels
- Cholesterol
- Blood glucose
- Clotting tendencies
- Body build
- Response to stress (internal and external).

While a family history of heart disease is a strong marker of risk, you should remember we usually inherit tendencies rather than diseases. You can overcome some inherited tendencies if you have a healthy diet and an active lifestyle. For example, if you have a family history of heart disease, you can gain enormous advantages if you limit your fat intake, don't smoke and have an active, healthy lifestyle.

### **Gender and age**

If you're male, you have a disadvantage when it comes to cholesterol levels and blood pressure. Men are more likely to develop coronary heart disease in middle age. The risk then progressively rises as they get older. The risk for women is much less, until after the menopause. Then hormonal changes, combined with higher blood pressure, cholesterol and increased weight progressively increase the risk of heart disease.

Despite our gender and age, we can reduce our risk levels if we follow a healthy lifestyle.

### **Where to get help**

- Your doctor
- Your local community health centre

### **Things to remember**

- Deposits of cholesterol in your arteries may reduce blood flow to parts of your heart
- Smoking increases your risk of heart disease
- You can reduce your risk of heart disease by having a healthy diet and active lifestyle.

**This page has been produced in consultation with, and approved by:**

Heart Research Centre

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