HYPERTENSION AND HEART DISEASE

What is heart disease?

Heart disease – also known as coronary artery disease – develops when the blood vessels (arteries) supplying your heart become diseased or damaged. Fatty deposits inside the arteries cause them to narrow or become blocked, which decreases the blood flow and results in your heart not getting enough oxygen or nutrients.

Hypertension – also known as high blood pressure – is a risk factor for heart disease. It can damage the walls of your blood vessels, making them less elastic and allowing the fatty deposits to build up, which increases the pressure in your blood vessels.

Other risk factors for heart disease include smoking, drinking excessively and having high cholesterol or diabetes.

What are the symptoms of heart disease?

The main symptoms are:

- Chest pain (angina)
- Shortness of breath
- Pain throughout the body
- Feeling faint
- Feeling sick (nausea)

However, some people won't have any symptoms at all.

What are the possible complications of heart disease?

Serious complications include the following.

Heart attack

If the blood supply to the heart is cut off completely (usually because of a blood clot), the affected part of the heart muscle doesn't receive any oxygen and can become damaged. The extent of the damage depends on how quickly it's treated – the longer your blood flow is blocked, the more damage to your heart.

Heart attack symptoms include:

- Prolonged or severe chest pain or discomfort.
- Feeling nauseous, light-headed or faint, vomiting or breaking out in a cold sweat.
- Feeling short of breath.
- Feeling discomfort in the upper body – in one or both arms (often the left arm), the back, the neck, the jaw or the upper part of the stomach.

Sometimes a heart attack can happen without any apparent warning signs or symptoms.

If you suspect a heart attack, call an ambulance or get someone to drive the patient to hospital.

Heart failure (left ventricular heart failure)

If areas of your heart have been deprived of oxygen and nutrients over a long period of time or if your heart has been damaged by a heart attack, it may become too weak to pump enough blood to meet your body's needs. This is known as heart failure, and it can be a serious condition, though it doesn't mean that your heart is about to stop working.

Enlarged heart: If your blood pressure is very high, the left side of your heart has to work very hard to pump blood around your body so the muscles on the left side become larger in order to cope. At first, this thickening of the muscles protects the heart, but in the long run it makes the other parts of the heart smaller and less able to pump. The heart muscles also become stiffer. An enlarged heart increases your risk of heart attack, heart failure and sudden death.

How is heart disease treated?

It can't be cured, but there are lifestyle changes and treatments that can help manage your symptoms and reduce your risk of having a heart attack.

Diet and lifestyle changes

For information about changes that can help you manage your blood pressure, see Understanding and Managing Hypertension.

Medication

Your healthcare provider may recommend medication to help with your coronary artery disease. The main groups of medication work in different ways:

- Blood thinners: Thin your blood, preventing clots and reducing the risk of heart attack.
- Statins: Remove cholesterol from your blood, reducing the risk of heart attack.
- ACE inhibitors: Help blood vessels to relax, reducing the pressure inside them.
- Diuretics: Sometimes called water pills, they help if water retention has increased blood pressure.
- Angiotensin II receptor blockers (ARBs): Help blood vessels to relax.
- Calcium channel blockers: Lower blood pressure by preventing calcium from entering cells in the heart and arteries. This allows the blood vessels to relax and open more.
- Beta-blockers: Help slow down a rapid heartbeat, which helps to lower blood pressure.
- Nitrates: sometimes used as vasodilators, widening your blood vessels and decreasing the pressure inside them.

Procedures and surgery

If the blood vessels in your heart are narrow as a result of the build-up of fatty deposits, you may need to have a procedure or surgery to open up or bypass the blocked vessels. Possible procedures for blocked arteries include:

- **Coronary angioplasty:** A special type of tiny balloon is inflated inside the coronary artery to push the fatty tissue in the narrowed artery outwards, and allow blood to flow. A tiny wire-mesh tube, called a stent, is usually put in the artery to hold it open. Sometimes stents release medication to stop the artery narrowing again.
- **Coronary bypass (or coronary artery bypass grafting):** When your coronary artery is narrow or blocked, surgeons can take a blood vessel from somewhere else in your body and attach it above and below the blocked area, bypassing the blockage. The number of grafts depends on how severe your heart disease is and how many blood vessels are affected.
- **Coronary angiogram:** To see if you're suitable for angioplasty or bypass surgery, you may have a coronary angiogram. This is a type of x-ray to check your blood vessels.

• **Heart transplant:** Occasionally, when the heart is severely damaged and medication is not effective, or the heart is unable to pump blood around the body, a heart transplant may be needed. This involves replacing the damaged heart with a healthy donor heart.

Heart disease can be serious. However, with the right treatment and lifestyle changes, the symptoms can be reduced and the functioning of your heart improved.

Useful resources: Where to find support

- Southern African Hypertension Society
- Heart and Stroke Foundation of South Africa
- Blood Pressure UK
- American Heart Association