Blood pressure

Blood pressure is a measure of force that the blood applies to the walls of the arteries as it flows through them. It's normal for blood pressure to increase when you exert yourself, or when you feel stressed or anxious, but if your blood pressure is consistently higher than normal at rest, this is high blood pressure.

Blood is pumped around the body by the heart carrying oxygen and nutrients. As a result of the pumping action of the heart and the size and flexibility of the arteries that carry blood, the blood is under pressure. This blood pressure is an essential and normal part of the way the body works.

High blood pressure develops if:

- the walls of your larger arteries lose their elasticity and become rigid
- the small blood vessels become narrower

Measuring blood pressure

Blood pressure is measured with a monitor called a sphygmomanometer. The cuff is placed around the upper arm and inflated to a certain level, then deflated slowly. A sensor in the cuff provides the result is expressed as two numbers, such as 120/80mmHG (millimetres of mercury).

- The top figure - the systolic blood pressure - is a measure of the pressure when your heart muscle is contracting and pumping blood. This is the maximum pressure in your blood system.
- The bottom figure - the diastolic blood pressure - is the pressure between heart beats when the heart is resting and filling with blood. This is the minimum pressure in your blood system.

In the UK, high blood pressure is defined as a consistently increased systolic blood pressure of 140 or over and/or a diastolic blood pressure of 85 or over.
If you suffer from diabetes, it is even more important that your blood pressure is lower than this - ideally less than 130/80.

Symptoms

Most people with high blood pressure don't have any symptoms. People with severe high blood pressure may also experience headaches, blurred or impaired vision, fits or black-outs.

Complications

People with high blood pressure have an increased risk of major illnesses including:

- cardiovascular disease such as angina, stroke, heart attack or atrial fibrillation
- kidney damage
- damaged sight

Lifestyle changes

First, your doctor or nurse is likely to discuss lifestyle changes which might help lower your blood pressure. He or she might, for example, advise you to:

- Stop smoking
- Change your diet to a low fat, low salt diet that includes fruit and vegetables
- Cut down on alcohol
- Get some regular moderate exercise
- Lose any excess weight

It may also help to try to reduce the stress in your life to avoid short-term rises in blood pressure - try relaxation techniques, meditation, yoga or pilates.