



HIGH BLOOD PRESSURE

Know your numbers and what they mean



If you have diabetes, talk with your doctor about appropriate blood pressure levels.

WHAT IS BLOOD PRESSURE?

Blood pressure is the force of blood pushing against the walls of your arteries as your heart pumps blood through them. The narrower an artery, the greater the force needed to push the blood through it. Blood pressure is measured with a cuff your health care worker places around your arm. The pressure reading is given as two values e.g. 120/80. The higher value is referred to as the systolic pressure (when the heart beats), the lower value as the diastolic pressure (when the heart rests between beats).

WHAT IS HIGH BLOOD PRESSURE?

High blood pressure (or hypertension) refers to blood pressure that is high enough to damage the blood vessels and organs in the body, eventually leading to health problems such as heart disease.

WHAT CAUSES HIGH BLOOD PRESSURE?

There are two types of high blood pressure:

1. Primary (essential) hypertension

This is the common type of high blood pressure. The cause of primary hypertension is not clear. It affects adults and usually develops gradually over many years.

2. Secondary hypertension

This is high blood pressure for which there is an identifiable cause. It tends to appear suddenly, causing very high blood pressure readings. Causes include:

- kidney problems
- tumours of the adrenal glands
- abnormalities of the blood vessels that some people are born with (congenital)
- certain medications
- certain recreational drugs, e.g. cocaine and amphetamines.

WHAT ARE SOME OF THE RISK FACTORS FOR DEVELOPING HIGH BLOOD PRESSURE?

- **Age**
The risk increases with age
- **Race**
It is more common among black people than white people.
- **Family history**
High blood pressure tends to run in families
- **Using tobacco**
Smoking or chewing tobacco raises your blood pressure and the chemicals damage the lining of your artery walls. This can cause your arteries to narrow, increasing your blood pressure. Second-hand smoke also can increase your blood pressure.
- **Being overweight**
As you gain weight, the body uses more blood to transport oxygen and nutrients to your organs, muscles and other tissue. The added volume of blood creates even more pressure within your arteries.
- **Lack of exercise**
Inactivity increases your heart rate, making it work harder and increasing the force of blood flow.
- **Too much salt (sodium) in your diet**
Too much salt can cause your body to retain fluid, which increases blood pressure.
- **Too little potassium in your diet**
Potassium helps to balance the amount of sodium in your cells.
- **Drinking too much alcohol**
Over time, heavy drinking can damage your heart. Having more than two drinks a day can raise your blood pressure



- **Stress**
High levels of stress can lead to a temporary increase in blood pressure.
- **Certain chronic conditions**
These include high cholesterol, diabetes, kidney disease and sleep apnoea.

Some women can develop high blood pressure during pregnancy.

WHAT ARE THE SYMPTOMS OF HIGH BLOOD PRESSURE?

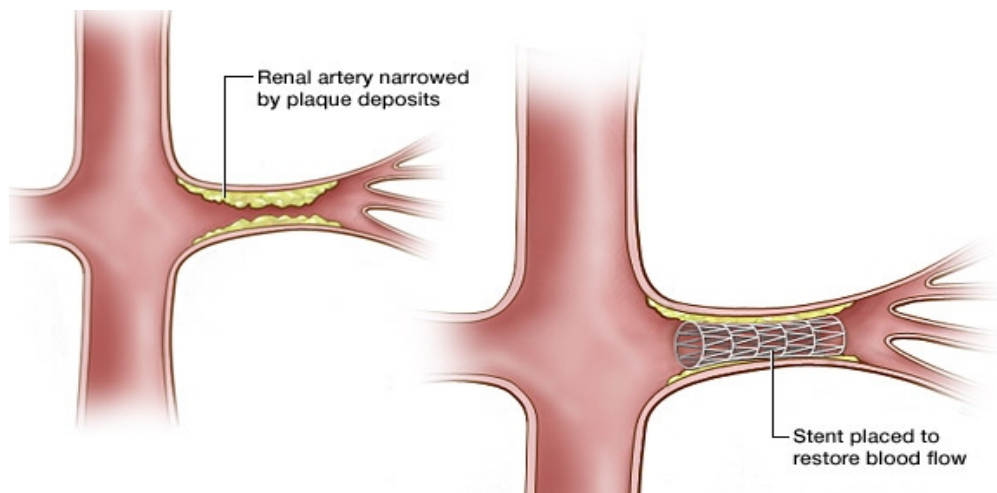
Most people with high blood pressure do not have any symptoms until they start to develop complications. Some people may have headaches or dizziness. For this reason you should have your blood pressure checked regularly, at least once a year.

WHAT ARE THE LONG-TERM EFFECTS OF HYPERTENSION?

The higher your blood pressure and the longer it is uncontrolled, the greater the damage to your body.

Long-term effects include:

- **heart attack or stroke**
High blood pressure leads to hardening and thickening of the arteries to the brain and heart. With time the blood vessels may become blocked or may burst, affecting the oxygen supply to the heart muscle or a part of the brain.
- **aneurysm**
An aneurysm refers to a bulge through a weakness in the wall of an artery. If the aneurysm bursts, it can be fatal.
- **heart failure**
Pumping against increased pressure causes the heart muscle to thicken. With time, it becomes more and more difficult for the thickened muscle to pump adequately.



- **kidney failure**

Thickening and narrowing of the blood vessels to the kidney eventually prevents it from functioning properly.

- **loss of vision**

This is due to damage to the blood vessels going to the eye.

How is Hypertension diagnosed?

The diagnosis should be based on two or three high readings taken on different days.

- **Normal blood pressure:**

Blood pressure below 120/80 is considered to be normal.

- **Prehypertension:**

Systolic pressure 120-139, diastolic pressure 80-89

- **Stage 1 hypertension**

Systolic pressure 140-159, diastolic pressure 90-99

- **Stage 2 hypertension**

Systolic pressure of 160 or higher, diastolic pressure of 100 or higher

If you have high blood pressure, your health care worker may recommend a urine test, blood tests and an ECG.

How can my Hypertension be managed?

The following lifestyle changes are important:

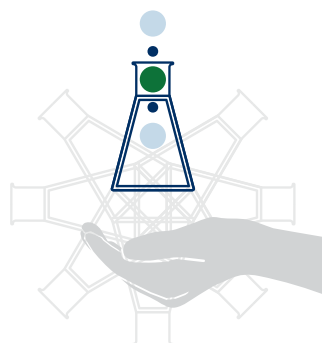
- eat healthy foods
- decrease the amount of salt in your diet
- maintain a healthy weight
- increase physical activity

- limit alcohol
- don't smoke
- manage stress
- monitor your blood pressure at home
- find time to relax

A number of types of medication manage high blood pressure. Your doctor will choose the one that suits you best. If you have hypertension that is difficult to treat, your doctor may need to give you a combination of drugs to bring your blood pressure down to safe levels. It can take time to get the right combination, so be sure to check your blood pressure frequently and visit your doctor regularly.

Reference:

<http://www.mayoclinic.com/health/high-blood-pressure/DS00100/>



HEAD OFFICE

Lancet Corner, Ground Floor, Cnr Menton and Stanley Roads,
Richmond, Johannesburg, South-Africa
(011) 358 0800
24-hour emergency service

PRETORIA MAIN LABORATORY

1st Floor Pencardia Building, 509 Pretorius Street, Arcadia,
South-Africa
(012) 483 0100

DURBAN MAIN LABORATORY

102 Lancet Medical Centre, 102 Ismail C Meer Street, Durban,
South Africa
(031) 308 6500

Follow us on twitter

www.lancet.co.za



@LancetLab