



The higher the pressure in blood vessels the harder the heart has to work in order to pump blood

~ Dr Romika Lata

A large observational study found no difference in mortality or CV events and some signals of harm between treated and untreated individuals with hypertension. Picture: www.tctmd.com

Hypertension (HBP)

THE silent killer, a global public health issue.

Blood is carried from the heart to all parts of the body in blood vessels. Each time the heart beats, it pumps blood into the vessels.

Blood pressure is created by the force of blood pushing against the walls of blood vessels (arteries) as it is pumped by the heart.

Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure.

The higher the pressure in blood vessels the harder the heart has to work in order to pump blood.

If left uncontrolled, hypertension can lead to a heart attack, an enlargement of the heart and eventually heart failure. Hypertension can also lead to kidney failure, blindness, rupture of blood vessels and cognitive impairment.

What is hypertension?

Blood pressure is written as two numbers. The first (systolic) number represents the pressure in blood vessels when the heart contracts or beats. The second (diastolic) number represents the pressure in the vessels when the heart rests between beats.

Hypertension is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is ≥ 140 mmHg and/or the diastolic blood pressure readings on both days is ≥ 90 mmHg.

Risk factors

There are many behavioural risk factors for the development of hypertension. These including:

- Consumption of food containing too much salt and fat, and not eating enough fruit and vegetables
- Harmful levels of alcohol use
- Physical inactivity and lack of exercise
- Poor stress management. These be-

havioural risk factors are highly influenced by people's working and living conditions.

In addition, there are several metabolic factors that increase the risk of heart disease, stroke, kidney failure and other complications of hypertension, including diabetes, high cholesterol and being overweight or obese. Tobacco and hypertension interact to further raise the likelihood of cardiovascular disease.

In some cases there is no known specific cause for hypertension. Genetic factors may play a role, and when hypertension develops in people below the age of 40 years it is important to exclude a secondary cause such as kidney disease, endocrine disease and malformations of blood vessels.

Preeclampsia is hypertension that occurs in some women during pregnancy. It usually resolves after the birth but it can sometimes linger, and women who experience preeclampsia are more likely to have hypertension in later life.

Occasionally, when blood pressure is measured it may be higher than it usually is. For some people, the anxiety of visiting a doctor may temporarily raise their blood pressure ("white coat syndrome").

Measuring blood pressure at home instead, using a machine to measure blood pressure several times a day or taking several measurements at the doctor's office, can reveal if this is the case.

What are common symptoms of hypertension?

Hypertension is called a "silent killer". Most people with hypertension are unaware of the problem because it may have no warning signs or symptoms. For this reason, it is essential that blood pressure is measured regularly.

When symptoms do occur, they can include early morning headaches, nose-bleeds, irregular heart rhythms, vision changes, and buzzing in the ears. Severe hypertension can cause fatigue, nausea,

vomiting, confusion, anxiety, chest pain, and muscle tremors.

The only way to detect hypertension is to have a health professional measure blood pressure. Having blood pressure measured is quick and painless. Individuals can also measure their own blood pressure using automated devices, however, an evaluation by a health professional is important for assessment of risk and associated conditions.

Diagnosing hypertension

Blood pressure measurements need to be recorded for several days before a diagnosis of hypertension can be made. Blood pressure is recorded twice daily, ideally in the morning and evening. Two consecutive measurements are taken, at least a minute apart and with the person seated. Measurements taken on the first day are discarded and the average value of all the remaining measurements is taken to confirm a diagnosis of hypertension. Early detection, treatment and self-care of hypertension has significant benefits.

What are the complications of uncontrolled hypertension?

Among other complications, hypertension can cause serious damage to the heart. Excessive pressure can harden arteries, decreasing the flow of blood and oxygen to the heart. This elevated pressure and reduced blood flow can cause:

- Chest pain, also called angina.
- Heart attack, which occurs when the blood supply to the heart is blocked and heart muscle cells die from lack of oxygen. The longer the blood flow is blocked, the greater the damage to the heart.
- Heart failure, which occurs when the heart cannot pump enough blood and oxygen to other vital body organs.
- Irregular heart beat which can lead to a sudden death.
- Hypertension can also burst or block arteries that supply blood and oxygen to

the brain, causing a stroke. In addition, hypertension can cause kidney damage, leading to kidney failure.

How can the burden of hypertension be reduced?

○ Reducing hypertension prevents heart attack, stroke, and kidney damage, as well as other health problems.

Prevention

- Reducing salt intake (to less than 5g daily)
- Eating more fruit and vegetables
- Being physically active on a regular basis
- Avoiding use of tobacco
- Reducing alcohol consumption
- Limiting the intake of foods high in saturated fats
- Eliminating/reducing trans fats in diet

Management

- Reducing and managing mental stress
- Regularly checking blood pressure
- Treating high blood pressure
- Managing other medical condition.

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 ■ Dr Romika Lata is a general practitioner at Oceania Hospitals Pte Ltd.