

# Hypertension

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## Key Points

- Definition of hypertension.
- Risk factors, symptoms & causes.
- Treatment of hypertension.

Hypertension is a major rising problem in Pakistan nowadays. Because of its great incidence and role as a key risk factor for cardiovascular disease and other consequences, hypertension is a major public health issue and an important research topic.

It is defined as abnormally high arterial blood pressure. This actually happens when the blood pressure exerted by the blood on the walls of arteries. It is actually measured in two values. Normal systolic pressure is 180mmHg and normal diastolic pressure is 80mmHg. When these values exceed, the patient is said to be in a state of hypertension.

### Symptoms:

One of the most dangerous things about hypertension is that we might not know if we have it or not. Many normal people usually do not notice this state and that's why it is called "silent killer". However, some most common symptoms that can be observed in hypertension are that the person reports headache, vision problem, irregular heartbeat, fatigue or confusion. Severe situations can cause fatigue, nausea, vomiting, confusion and anxiety.<sup>1</sup>

### Causes:

This can be hereditary or can also occur over the period of time. Obesity, high sodium intake, physiological stress are all factors that can contribute to hypertension. Some other factors which play a key role are smoking, herbal remedies, excessive alcohol drinking. Nowadays, people's lifestyle has brought a rapid rise in the graph too. Everything is

computerized. We just sit and eat with no physical exercise.

### Risk factors:

Hypertension basically is a disease found most commonly in older people but unfortunately, due to our lifestyle it is now a serious issue among teenagers too. Family's history is an important variable influencing the body weight of teenagers. Via obesity and independently, it influences the early development of endothelial damage. It might serve to detect teenagers at risk for appropriate intervention.<sup>2</sup> The high prevalence of hypertension in older persons (nearly one of two subjects aged 60 years and older) suggests that the recognition and treatment should be a priority for physicians. Although diastolic blood pressure is regarded as an important risk factor, it is now clear that isolated systolic hypertension and elevated pulse pressure also play an important role. Although diastolic blood pressure is regarded as an important risk factor, it is now clear that isolated systolic hypertension and elevated pulse pressure also play an important role. Although diastolic blood pressure is regarded as an important risk factor, it is now clear that isolated systolic hypertension and elevated pulse pressure also play an important role in many life risks in older people.<sup>3</sup>

### Consequences:

As it is an increased pressure being exerted by the blood on the heart and walls of arteries so it has a serious effect on the heart. This is Hypertension is

one of the most common cardiovascular disorders, and it occurs 75 percent of the time before heart failure. Hypertensive people are known to suffer metabolic issues throughout their bodies, such as hyperlipidemia, hyperglycemia, impaired insulin sensitivity, and diabetes mellitus. Because myocardial metabolism is highly dependent on hormonal status as well as substrate environment, the aforementioned disruptions may have an impact on the heart's energy generating status. <sup>4</sup>

#### **Treatment:**

For the treatment of hypertension, we need to improve our lifestyle firstly. Exercise training lowers blood pressure (BP) in about 75% of hypertensive people, with systolic and diastolic BP reductions averaging 11 and 8 mm Hg, respectively. Women may gain more from fitness training than males, and middle-aged hypertensive adults may benefit more than younger or older people. In a randomised, double-blind, placebo-controlled study we showed that treatment of hypertensive patients with ascorbic acid lowers blood pressure. Blood pressure can be brought into control by drinking more and more water and reducing the intake of sodium chloride in diet.

#### **Reference:**

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3. Rigaud AS, Forette B. Hypertension in older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*. 2001 Apr 1;56(4):M217-25.
4. Polak-Iwaniuk A, Harasim-Symor E, Golaszewska K, Chabowski A. How hypertension affects heart metabolism. *Frontiers in Physiology*. 2019 Apr 16;10:435.