

Controlling High Blood Pressure

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High blood pressure is one of the biggest health risks that India faces. Almost 30 % of the Indian population is suffering from hypertension which can be of two types. Primary hypertension, where there is no discernible cause of high blood pressure, tends to develop slowly and gradually over many years. Secondary hypertension is usually symptomatic, caused by an existing underlying problem such as kidney or thyroid problems, sleep apnea, adrenal gland tumors, and chronic alcohol and drug abuse. Hypertension can be a qualifying factor to major health issues such as stroke and heart disease.

What is Blood Pressure?

The measurement of the pressure of our arteries during the active and resting stages of each of our heartbeats is what is known as blood pressure. The two numbers we are given in the blood pressure reading are the systolic and diastolic pressures. Current standards recognise normal blood pressure as 120/80 mm Hg.

The first number (systolic pressure) is the amount of pressure the heart generates when pumping blood through your arteries to the rest of the body. The second number (diastolic pressure) signifies the amount of pressure in the arteries when the heart is at rest between beats.

Risk Factors for High BP

High blood pressure has many risk factors:

- **Age:** As age increases the risk of high BP also increases. It is more common in men through early middle age, or about age 45, while women are more likely to develop high BP after age 65.
- **Family History:** High blood pressure tends to run in families with family history being a major risk factor.
- **Obesity:** Obesity is a significant factor as the more one weighs the more blood is needed to supply oxygen and nutrients to body tissues. As a result of the increased volume of blood being circulated through the blood vessels, the pressure on the artery walls also increases.
- **Lack of Exercise:** People who are physically inactive tend to have higher heart rates. This means that the heart must work harder with each contraction and the stronger the force on the arteries. The lack of physical exercise also increases the risk of being overweight.
- **Tobacco:** Smoking or chewing tobacco are major risk factors as tobacco immediately raises BP temporarily, while the chemicals in tobacco lead to damage of the lining of artery walls. This damage can cause narrowing of the arteries which could lead to an increase in BP.
- **Excess Salt:** Too much salt or sodium in your diet causes the body to retain fluids which leads to an increase in BP.
- **Potassium deficiency:** Potassium plays a key role in balancing the amount of sodium in the body. A lack of potassium in the diet could cause accumulation of too much sodium in the blood thereby leading to increased BP.

- Alcohol and substance abuse: Excess drinking over time could lead to damage of the heart, affecting BP.
- Stress: High stress levels can lead to a temporary increase in blood pressure.
- Certain chronic conditions: Kidney disease, diabetes and sleep apnea are all chronic problems which may increase the risk of high BP.

Dietary Modifications

The DASH (Dietary Approaches to Stop Hypertension) diet is a lifelong approach to a healthy and nutritious diet to control high BP. It has been observed that people who followed the DASH diet had significant reductions in BP levels after a few weeks. The main features of the DASH diet are that it is low in sodium, reducing the intake to 1,500 milligrams daily, which is approximately about 2/3 teaspoon of salt. It also includes fruits, vegetables, whole grains, fish, poultry, nuts, legumes, and low fat dairy products which are high in key nutrients such as potassium, magnesium, calcium, fibre, and protein. Fruits and vegetables such as sweet potatoes, carrots, tomatoes, orange juice, potatoes, bananas, peas, and prunes and raisins should also be included.

Controlling high blood pressure is largely dependent on diet and lifestyle modifications. Salt intake reduction along with decreased alcohol, tobacco and caffeine consumption is key to regulating high BP. Some important foods are:

- Bananas are rich in potassium and low in sodium, therefore being the ideal fruit.
- Spinach or Palak is high in fibre, low in calories and contains essential nutrients such as potassium, folate and magnesium – all of which are important for maintaining BP levels.
- Celery contains phytochemicals that help relax the muscle tissue in the artery walls, enabling blood flow which then helps in lowering the BP.
- Oats are low in sodium, and high in fibre which help in maintain both systolic and diastolic pressures.
- Watermelon contain amino acids which have been proven to lower BP. They also contain lycopenes, Vitamin A and potassium along with being fibre rich.
- Beets and beetroot are rich in nitrates which are known to relax blood vessels and improve blood flow.
- Sunflower seeds are rich in vitamin E, folic acid, protein and fibre as well as a rich source of magnesium.
- Oranges and carrots are both rich in Vitamin C and fibre. Carrots are also good sources of potassium and beta-carotene and help maintaining normal BP by regulating heart and kidney functions.