

HYPERTENSION

(उच्च रक्तचाप)

BRIEF BACKGROUND

Hypertension is a condition when, blood flows through the blood vessels with a force greater than normal. It is also called High blood pressure. Blood pressure may be different at different times of the day. It is usually higher when individuals first wake up, after exercise, or under stress. Having higher blood pressure for short intervals of time is normal. However, when blood pressure stays high for a longer duration, it can cause serious health problems. It can strain the heart, damage blood vessels, and increases the risk of heart attack, stroke, kidney problems, and even lead to death.

HTN is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease (CHD) deaths in India. In an analysis of worldwide data for the global burden of HTN, 20.6% of Indian men and 20.9% of Indian women were suffering from HTN in 2005. The rates for HTN in percentage are projected to go up to 22.9 and 23.6 for Indian men and women, respectively by 2025. Recent studies from India have shown the prevalence of HTN to be 25% in urban and 10% in rural people in India

TYPES OF HYPERTENSION

Based on the etiology, high blood pressure is classified as either primary (essential) hypertension or secondary hypertension.

- **Primary/Essential Hypertension:** Primary or “essential” hypertension **has no known cause**, however many of the lifestyle factors contribute to this condition. About 90–95% of cases of hypertension are categorized as primary hypertension with no obvious underlying cause.
- **Secondary Hypertension:** caused by some other medical conditions/problems or the use of certain medications. Incidence of Secondary hypertension is comparatively very low. The causes of secondary hypertension include: Kidney diseases, (Reno-vascular disease and Chronic renal disease etc.) are the most common secondary cause of Hypertension, Endocrine disorders, Pregnancy, Use of contraceptive pills etc.

SYMPTOMS

- Headache
- Nausea
- Feeling of burning sensation and/or numbness in hands and feet
- Vertigo
- Vomiting
- Feeling of tiredness, restlessness
- Breathlessness
- Loss of appetite
- Pain in chest
- Discomfort
- Bleeding from nose
- Swelling in legs and under eyes
- Irritability
- Haziness of vision

DIAGNOSING HYPERTENSION

| Category | Systolic (Top Number) | Diastolic (Bottom number) |
|--------------------------------------|-----------------------|---------------------------|
| Normo – tensive | < 120 | and < 80 |
| Pre – hypertensive | 120-139 | or 80-89 |
| Hypertensive | | |
| Stage 1 Hypertension (Mild) | 140-159 | or 90-99 |
| Stage 2 Hypertension (Moderate) | ≥ 160 | or ≥ 100 |
| Stage 3 Hypertension (severe) | ≥ 180 | or ≥ 110 |
| Isolated systolic hypertension (ISH) | ≥ 140 | and < 90 |

LABORATORY TESTS

Essential

Desirable

- 24 hours BP monitoring
- Blood Sugar
- Kidney Function Tests
- Lipid profile
- Haemogram
- Serum creatinine
- Serum electrolytes (Sodium, Potassium levels)
- Complete Urine analysis, Electrocardiogram (ECG), X-Ray chest

LINE OF TREATMENT

1. **Nidana Parivarjan** (Avoidance of etiological factors)
2. **Life Style Modifications**
3. **Shamana (Palliative) treatment**

The following drugs (single/compound formulation) are commonly used for prevention and control of Hypertension (to be taken under Ayurvedic medical supervision):

Single Drugs: *Sarpagandha churna, Ashwagandha churna, Jatamamsi churna, Arjuna twaka churna, Rasona ksbeerpaka, Rasona*



Sarpagandha



Ashwagandha



Garlic (Rasona)

Compound Formulations: *Sarpagandha ghana vati, Brahmi vati, Prabbakara vati, Arjunarishta, Pravala pishti, Sveta parpati, Nagarjunabhra rasa, Hridayarnava rasa, Mukta bhasma, Akika pishti*

4. **Samshodhana Chikitsa (Bio-cleansing therapies/Purificatory procedures)**

Samshodhana chikitsa is a specialized therapeutic approach of Ayurveda to eliminate toxins from the body by giving bio-cleansing procedures i.e. *Panchakarma*. It is usually followed by *Shamana Chikitsa* (Palliative therapy). However, it is decided by the physician according to the condition of the patient whether *shodhana* therapy is indicated or not.

- i) *Lekhana Vasti* (a specific variety of medicated enema)
- ii) *Virechana Karma* (Purgation) with *Eranda taila* (Castor oil)
- iii) *Shirodhara* with medicated liquids, *Takra* (*Butter milk*), milk, water, medicated oils as per the specifications/ procedure & severity of *roga*.
- iv) *Rakta mokshan* (Blood-letting)

5. **Rasayana (Rejuvenation therapy):-**

Brahmi Rasayana, Shankhpushpi kalka, Yashtimadhu churna, Guduchi rasa, Mandookparni swarasa

PREVENTIVE MEASURES

- **Regular physical activity:** All patients should be advised to become physically active, as part of a comprehensive plan to control hypertension, regardless of drug treatment.
- **Smoking cessation** may not directly reduce BP, but markedly reduces overall cardiovascular risk. The risk of myocardial infarction and stroke is higher in people who smoke than in non-smokers.
- **Dietary salt restriction: 1 teaspoon/day/person.** Recommend low-salt and reduced-salt foods as part of a healthy eating pattern.
- **Dietary modification:** Eat a heart-healthy diet rich in fruits and vegetables, lean protein and whole grain. Diet which is low in sodium, cholesterol, saturated and total fat, has been shown to

lower high blood pressure. A healthy eating pattern includes mainly plant-based foods e.g. fruits, vegetables, pulses and a wide selection of wholegrain foods, moderate amounts of low-fat or reduced-fat dairy products, moderate amounts of lean unprocessed meats, poultry and fish, moderate amounts of polyunsaturated and monounsaturated fats (e.g. olive oil)

- **Weight reduction:** Reduction in body weight lowers systolic BP. Weight loss of 10 kg can reduce systolic BP by 6–10 mmHg.

Do's (Pathya's)



- Regular blood pressure check-up.
- Lifestyle modifications like timely intake of balanced diet, more use of fruits and green vegetables.
- Regular physical exercise. Daily brisk walking for half an hour.
- Reduce intake of oily, salty, sour and spicy food items.
- Weight reduction

- More use of Barley (*Yava*), Sorghum (*Jowar*), wheat, green gram (*Mudga/Moong dal*), horse gram, moringa (*Shigru*), Bitter gourd (*karela*), Bottle gourd (*Ghia/ Lauki*), Turnip (*Shalgam*), Carrot (*Gajar*), Radish (*Muli*), Indian gooseberry (*Amla*), Cucumber (*Khira*), Black grapes (*Draksha*), Pomegranate (*Anar*), Apple, Pineapple, Cold milk etc.
- Timely sleeping and awakening.
- Regular practice of Yoga, Meditation etc. under the supervision of Yoga expert



Don'ts (Apathya's):

- Excessive intake of salt (sprinkling over salad, curd etc.)
- Excessive use of Butter, Ghee, Chillies (Red-Green), Pickles, Til taila, Bengal gram, Mustard oil, Sour fruits, Curd, Tea, Coffee etc.
- Intake of animal fat, processed/oily food items.
- Alcohol consumption and smoking.
- Practice of day sleeping and awakening at night.



Note:

1. Medication is to be strictly taken under the supervision of a Registered Ayurvedic Physician.
2. Visit National Institutes/CCRAS Research Centres for necessary consultation. (www.ccras.nic.in)

FREQUENTLY ASKED QUESTION (FAQs)

What is Blood Pressure?

Blood pressure is simply the physical pressure of blood in the blood vessels.

What do numbers mean in Blood pressure?

Generally blood pressure is expressed as 120/80 (said as '120 over 80'). There are 2 numbers because the blood pressure varies with the heartbeat. The higher pressure (120) represents the pressure in the arteries when the heart beats, pumping blood into the arteries. This pressure is called **Systolic pressure**. The lower pressure (80) represents the pressure in the arteries when the heart is relaxed between beats. This pressure is called **Diastolic pressure**.

What is the importance of Blood pressure?

Blood pressure is important because it is the driving force for blood to travel around the body to deliver fresh blood with oxygen and nutrients to the organs of the body. However, high blood pressure is important because it leads to increased risk of serious cardiovascular disease, with complications such as heart attack, heart failure, stroke, kidney failure and blindness.

What is Normal & High Blood Pressure?

Blood pressures differ between individuals. Blood pressure measurements are generally classified into several categories:

- **Normal" blood pressure** : less than 120/80 mmHg
- **"Pre-hypertension"** : 120-139/80-89 mmHg
- **Hypertension** : greater than 140/90 mmHg

There are various definitions of high blood pressure, which is also known as hypertension, but most doctors consider blood pressures of 140/90 and greater to be high. The precise values that doctors might interpret as high blood pressure depend to an extent on individual circumstances. For example, in patients with diabetes, the definition of hypertension is considered by some to be pressures greater than 130/80. For the same blood pressure, cardiovascular complications (that is damage to the heart, blood vessels and brain) are more likely in diabetics and blood pressure reduction offers benefit even when a diabetic's blood pressure is not as high as regular definitions of hypertension.

What causes High Blood Pressure?

The cause of high blood pressure in most people remains unclear, but inactivity, poor diet, obesity, older age, and genetics -- can all contribute to the development of hypertension.

How do I know if I have high blood pressure?

High blood pressure doesn't cause any symptoms, so you usually don't feel it. For that reason, high blood pressure must be diagnosed by a health care professional. If your blood pressure is extremely high, you might have unusually:

- Strong headaches,
- Nose bleeds
- Chest Pain
- Difficulty in breathing. If you have any of these symptoms, seek treatment immediately.

How can risk of developing High Blood pressure be lowered?

A healthy lifestyle and a sensible diet are important. One of the most important things is to keep weight under control. Less weight means lower blood pressure, and it also means less diabetes, less stress on muscles and joints and less stress on the heart.

What health problems are associated with high blood pressure (hypertension)?

Several serious health conditions are linked to hypertension such as:

- **Atherosclerosis** - a disease of the arteries caused by a buildup of plaque, can lead to [heart attacks](#) and [strokes](#)
- **Heart disease** includes [heart failure](#) (the heart can't adequately pump blood)
- [Kidney disease](#), hypertension damages the blood vessels and filters in the kidneys
- **Hypertension** can lead to stroke
- **Eye disease** can occur because hypertension damages the very small blood vessels in the retina.

How is high blood pressure treated?

High blood pressure is treated with lifestyle changes and medicines. Treatment can help control blood pressure, but it will not cure high blood pressure, even if blood pressure readings appear normal. If you stop treatment, your blood pressure and risk for related health problems will rise. For a healthy future, one has to follow his/her treatment plan closely.

What lifestyle changes can help me control my blood pressure?

Making some kinds of lifestyle changes can help prevent high blood pressure:

- **Follow a healthy eating plan** that includes fruits, vegetables, fat-free and low-fat milk products, whole grains, fish, poultry and nuts
- Cut down on salt and sodium in the diet.
- Be physically active for at least 2 and one-half hours a week.
- Maintain a healthy weight, and lose weight if you are overweight or obese. Body mass index (BMI) and waist circumference are measures used to determine if someone is overweight or obese.
- Limit alcohol intake
- Quit smoking, or don't start smoking.
- Learn to manage stress. Learn about relaxation techniques that may relieve tension.

What is the major source of the salt, or sodium, in our diets?

Only a small amount of the salt that we eat comes from the salt shaker, and only small amounts occur naturally in food. Most of the salt that we eat comes from processed foods -- for example, canned or processed meat, baked goods, and certain cereals, and foods with soy sauce, seasoned salts, and baking soda. Food from fast food restaurants, frozen foods, and canned foods also tend to be higher in sodium.