

High Blood Pressure (Hypertension)

Overview:

- Hypertension is a common condition. It means that the long-term force of your blood against the artery walls is consistently too high.
- Hypertension has no initial symptoms, but it can lead to serious health problems, such as stroke, heart failure, and kidney failure.
- Hypertension is caused by an increased workload on the heart and blood vessels.
- Hypertension is diagnosed by closely monitoring blood pressure and recording several blood pressure readings.
- It can be managed through leading a healthy lifestyle and taking certain medication (if necessary).

Definition:

Hypertension is a medical condition that occurs when the force of blood flow through the blood vessels is persistently elevated. This makes the heart work harder and increase the pressure of the blood flowing through blood vessels. High blood pressure is a major risk factor for heart disease, stroke, and other serious health problems. Blood pressure is determined by both the amount of blood your heart pumps and your arteries' resistance to blood flow. Hypertension is generally a disease that develops over years, and despite the above, high blood pressure can be detected early and managed effectively.

In order to survive and function properly, tissues and organs need the oxygenated blood that the circulatory system carries throughout the body. When the heart beats, it creates pressure that pushes blood through a network of tube-shaped blood vessels, which include arteries, veins and capillaries. This pressure is the result of two forces:

1. The first force is called systolic pressure, and it occurs as blood pumps out of the heart and is carried to the rest of the body.
2. The second force is called diastolic pressure, and it is created as the heart rests between heart beats.

Each of these two forces is represented with numbers in a blood pressure reading as follows:

Blood Pressure Category	Systolic pressure (upper number) (mm Hg)	Diastolic pressure (lower number) (mm Hg)
Optimal blood pressure	Less than 120	Less than 80
Normal	120 - 129	80 - 84
Prehypertension	130-139	85 - 89
High blood pressure (Stage 1 hypertension)	140 - 159	90 - 99
High blood pressure (Stage 2 hypertension)	160 - 179	100 - 109
High blood pressure (Stage 3 hypertension)	Higher than 180	Higher than 110

When your blood pressure is too high for too long, it damages your blood vessels – and LDL (bad) cholesterol begins to accumulate on your artery walls. This increases the workload on your circulatory system and decreases its efficiency.

Other names:

The silent killer.

Cause:

The primary reason behind high blood pressure is the increased workload on the heart and blood vessels; making them work harder and less efficiently.

There are two types of high blood pressure that develop due to different causes:

- Primary (essential) hypertension (it has no identifiable cause):
This type of high blood pressure is more common and it tends to develop gradually over many years.
- Secondary hypertension (it is caused by other conditions, such as):
 1. Kidney problems or hormonal problems.
 2. Thyroid problems.
 3. Obstructive sleep apnea
 4. Congenital blood vessel abnormalities.
 5. Certain medications.
 6. Taking drugs or alcohol.

Risk factors:

- Genetics.
- Advanced age.
- Gender.
- Obesity.
- Smoking.
- Alcohol consumption.
- Psychological stress.
- Too much salt in your diet.
- Chronic diseases: Such as diabetes and others.
- Sedentary lifestyle and lack of physical activity.

Symptoms:

Most people with high blood pressure show no obvious signs or symptoms to indicate that something is wrong, even if their blood pressure readings are dangerously high, but some people may exhibit certain symptoms such as:

- Headache.
- Shortness of breath.
- Nosebleeds.

However, these signs and symptoms aren't indicative of a specific condition, and they usually don't occur until high blood pressure has reached a severe or a life-threatening stage.

When to see a doctor?

It is advisable to ask your doctor for a blood pressure reading at least once every two years starting at age 18 if any of the risk factors apply to you.

Complications:

- Aneurysm.
- Stroke.
- Heart failure.
- Heart attack.
- Kidney failure.
- Vision Loss (blindness).
- Sexual dysfunction.
- Peripheral arterial disease.
- Trouble with memory or understanding.

Diagnosis:

- Family history.
- Medical history.
- Monitoring and recording several blood pressure readings.
- Laboratory tests.
- Undergoing some tests to rule out any cause or risk factor for high blood pressure.

Treatment:

Based on the diagnosis, a treatment plan will be developed. It will include:

- Lifestyle changes, such as engaging in regular physical activity and maintaining a healthy diet.
- Medication to control high blood pressure.

Prevention:

Leading a healthy lifestyle is one of the most important ways to prevent and control blood pressure; this includes:

- Exercising regularly.
- Maintaining a healthy weight.
- Maintaining a healthy well-balanced diet.
- Managing stress and anxiety.
- Refraining from smoking and consuming alcohol.
- Reducing caffeine intake.

Frequently Asked Questions:

- **Is having high diastolic pressure more serious than high systolic pressure?**

Having high systolic pressure can be more serious than diastolic; since elevated systolic pressure directly affects the performance of the arteries. However, both can be equally dangerous.

- **Can high blood pressure be permanently cured?**

No, hypertension cannot be permanently cured, but medication dosages can be readjusted and reduced after the desired result is achieved (according to your physician's recommendations).

- **Are there any specific guidelines for measuring blood pressure?**

1. Check the accuracy of the device.
2. Measure blood pressure twice a day, repeating the same process twice or more to make sure the results are correct.
3. Don't measure your blood pressure right after you wake up.
4. Avoid food, caffeine, and tobacco for 30 minutes before taking a measurement.
5. Sit quietly five minutes before the monitoring and during it. Choose a comfortable position with your legs and ankles uncrossed and your back supported against a chair. Try not to talk while taking your blood pressure.
6. Make sure your arm is positioned properly.
7. Place the cuff on bare skin, not over clothing.
8. Take a second reading, and write both them down.

Misconceptions:

- **It is okay to stop taking medication when your blood pressure readings are within the normal range.**

Fact: You cannot stop taking medication when your blood pressure is reduced.

- **Eliminating salt from your diet is enough to lower your blood pressure.**

Fact: Besides limiting your salt intake, it is important to take blood pressure medication to lower your blood pressure levels.

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