Normal blood pressure

Blood pressure can fluctuate; however, it remains within a range considered normal. Suppose you check your blood pressure 2 or 3 times in a sitting; you will likely get different readings. That is not a problem as long as it remains within range.

Age determines the normal BP range. The younger a person is, the lower the normal range of blood pressure. As you get older, your arteries gradually start to get stiff. This process of stiffening can progress faster in people that have excess fat deposits in their blood vessels.

Normal diastolic BP in adults is between 60 mmHg and 89 mmHg, while the normal systolic BP is between 90 mmHg and 139 mmHg. An individual has high blood pressure when the systolic or diastolic BP is more elevated than the normal range, or the person is on antihypertensive medications.

A normal BP while on antihypertensive drugs does not mean the person has been cured of hypertension. It only shows that the BP is well controlled with the treatment regimen.

How to Measure Blood Pressure

You can measure your blood pressure with a device called a blood pressure measuring device. A BP measuring device can be either be manual device or digital. To measure your BP with a manual machine, you will need a stethoscope. Checking your BP with a manual device is best done by a healthcare provider or someone trained in its use.

It would be best if you were seated and relaxed with your arm at the same level as your nipples. Then tie the cuff on your upper arm, high enough that you can see your inner elbow. The cuff should not touch your elbow. Let it fit closely but not tight. You do not squeeze your hands when taking a BP measurement.
Once you press the 'on' button of your digital BP device, it will measure your systolic and diastolic BP. The SBP is the 1st number and is higher than the diastolic BP. Most digital BP measurement devices also check your pulse rate, displayed as the third number.

Types of hypertension

Hypertension can be mild or severe (very high). It can result from a combination of factors or a single known cause.

We classify hypertension based on the cause, how high blood pressure rises during heart contraction or relaxation, and how much higher it is than the highest standard level.

The cause may be unknown and is not curable. This is called primary or essential hypertension. On the other hand, the cause can be known and curable once the cause is removed. This is called secondary hypertension.

Primary or Essential hypertension

Essential hypertension is the more common type of hypertension. At least 9 out of 10 adults with hypertension have the primary type. Primary hypertension has no cure, but we can treat it with drugs to control the BP. Controlling BP means maintaining BP within the normal BP range for the age while on antihypertensive treatment.

The cause of primary hypertension is a combination of genes that puts you at risk of developing hypertension and living in an environment that exposes you to circumstances that further increase your risk of hypertension.

Secondary Hypertension

Secondary hypertension is caused by another disease. Therefore hypertension would not occur if the other disease is absent.

This type of hypertension can be cured if the disease that caused it, such as high thyroid hormone levels or kidney disease, is treated. We see secondary hypertension more frequently in young adults than in middle-aged (above 45 years) and elderly (above 65 years).

Systolic Hypertension

Systolic hypertension is when blood pressure during heart contraction is higher than normal. This is usually when the systolic blood pressure reading is higher than 140mmHg and above, while the diastolic is less than 90 mmHg. It is also called isolated systolic hypertension. It requires lifestyle changes and medications to control it.

Diastolic Hypertension

Diastolic hypertension means an elevated BP only when the heart is relaxed. It is also called isolated diastolic hypertension. A diastolic BP of 90 mmHg or more, with a normal systolic BP, is called diastolic hypertension. If persistent, it increases your chances of complications of hypertension. Hence, you would need to control it with lifestyle changes and medications.

Grade 1 Hypertension

The most recent classification system for hypertension is graded depending on the severity of hypertension. Grade 1 is a BP of 140 to 159/ 90 to 99 mmHg.

Grade 2 Hypertension

The International Society of Hypertension (ISH) classified systolic BP of 160 mmHg or more and diastolic blood pressure of 100 mmHg and above as grade 2 hypertension.

How common is hypertension?

Is hypertension rare or common?

Worldwide, there has been a steady increase in the number of people with hypertension. 1 out of 4 adults has hypertension. The number of persons who have hypertension is highest in low-income and middle-income countries when compared with high-income countries. This disproportionate increase is attributable to increased exposure to the risk factors for hypertension in these regions. Subsequent modules would discuss the risk factors for hypertension.

Hypertension is more common in some ethnic groups

Africa has the highest number of persons living with hypertension. The WHO estimates up to 27 per cent of the African population has hypertension.

Is hypertension hereditary?

The majority of people who have hypertension also have family members with the disease. Different genes associated with abnormal blood pressure regulation have been identified in families with hypertension. However, the exact process by which the gene associations can cause hypertension is unclear.
Furthermore, people from the same families are more likely to eat the same meals, be in the same environment, and have similar habits that make them more likely to develop hypertension.

Even though almost every family member has hypertension, you can still reduce your risk before being diagnosed. You can achieve this by changing your lifestyle.

Does hypertension kill?

Complications of hypertension, such as stroke, heart attack, and kidney failure, can lead to death.