

# Understanding Your Blood Pressure

## UNDERSTANDING YOUR BLOOD PRESSURE

**T**HIS IS FOR YOUR SUNDAY AFTERNOON READING PLEASURE-

High blood pressure or hypertension is often called silent killer. Many people with high blood pressure don't know that they have it because they don't have symptoms and often the first symptoms may be a stroke or a heart attack. Therefore, it is important for everyone to know their blood pressure and bring it down if it is elevated.

Your blood pressure fluctuates, normally during the course of the day in response to things like pain, stress, anxiety, exercise, and salty food. These fluctuations are normal and not necessarily cause for concern. However, if there is sustained elevation in the blood pressure which is called hypertension, is a cause for concern

**BLOOD PRESSURE CATEGORIES** Normal BP is Systolic BP <120 AND diastolic BP <80 ELEVATED BP means systolic BP is 120-139 AND diastolic BP <80 STAGE 1 HYPERTENSION- Systolic BP 130-139 OR diastolic BP of 80-89 STAGE 2 HYPERTENSION- Systolic BP >140 OR diastolic BP >90 HYPERTENSIVE CRISIS- Systolic BP >180 OR Diastolic BP >120

As you can see from the above table, normal blood pressure is less than 120 over less than 80 mm of mercury. Blood pressure is said to be ELEVATED WHEN THE SYSTOLIC NUMBER IS 120-129 millimeters of mercury AND less than 80 mmHg in diastolic number.

As you all know that when the blood pressure is higher than normal.( hypertension.), it is the most significant risk factor for cardiovascular disease. For every 20 points that your blood pressure rises over 120/80 mmHg, the risk of heart attack and strokes doubles.

Some people have higher blood pressure when they are in the doctors office, but their blood pressure becomes normal after leaving the office. This is called white coat hypertension. This is in response to stress. If this happens, you will be advised to take your blood pressure at home with a home blood pressure cuff.

About 15 to 30% of the people with white coat hypertension will develop sustained hypertension at some point. It is well known that white coat hypertension increase the risk of fatal or non-fatal cardiovascular disease. In about 15 to 30% of the people whose blood pressure is normal in doctors office and rises after they leave the office. This is called MASKED HYPERTENSION.

This is particularly dangerous because it is seldom discovered and therefore not gets treated. That's the reason it is important for you to monitor your blood pressure at home.

**SYSOLIC AND DIASTOLIC BLOOD PRESSURES** our heart contracts and relaxes several thousand times each day. Blood pressure is measured both during contraction and relaxation. Systolic blood pressure measures the force of blood against the artery walls when the heart contracts. It is the first and higher of the two numbers.

Diastolic blood pressure is the force of blood when the heart relaxes and refills between the contractions. It is the second and lower number you get in your blood pressure reading. Coronary arteries get their blood supply predominantly during diastole and therefore diastolic blood pressure is also important.

If the diastolic blood pressure is less than 60 mmHg, it may decrease the coronary blood supply, more so if you already have blockage of the arteries.

**AGE AND BLOOD PRESSURE** As we get older, our arteries tend to accumulate fatty plaques from atherosclerosis. And this may make the arteries stiff and may not relax well. When more oxygenated blood is required, our arteries may not be able to relax well. This causes blood pressure to rise. As the arteries becomes stiffer and stiffer overtime, our blood pressure rises gradually.

**CAUSES OF HIGH BLOOD PRESSURE** There are several causes for elevation in the blood pressure. Often heredity and genetics is the cause. Blood pressure also gets elevated in cold weather, pregnancy, anxiety, salty foods, and certain medications.

Regular use of nonsteroidal anti-inflammatory agents, such as ibuprofen or Advil and Aleve can cause high blood pressure, in addition to causing kidney problems and high potassium level.

Overactive Thyroid called hyper thyroidism, narrowing of the kidney arteries.( Renal Artery Stenosis) and over secretion of adrenal hormone called aldosterone ( Hyperaldosteronism) are some of the secondary causes of hypertension.

**SYSTOLIC AND DIASTOLIC HEART FAILURE** Elevated systolic or diastolic pressures can lead to heart failure, which result from inability of the heart to meet the body's need for oxygenated blood. When this occurs from damage to the heart muscle, as a result of heart attack, heart muscle gets weak and could not able to pump adequately . This is called systolic heart failure.

High blood pressure can also damage the heart muscle by making it too stiff and prevents adequate relaxation. This may cause.DIASTOLIC HEART FAILURE. Sometimes, systolic and diastolic heart failures occur together. There are good medications available for treating both these conditions.

**MANAGING YOUR BLOOD PRESSURE** Blood pressure control is very important for all of us to prevent cardiovascular disease. If your blood pressure is above normal or rising, your doctor may put you on anti-hypertensive medications.

He may also recommend certain lifestyle changes, including eating, a healthy, low sodium diet, Regular exercise, avoiding smoking, losing weight, lowering stress and getting 7 to 8 hours of good quality sleep and limiting alcohol intake. Both medications and lifestyle modifications have complementary effect on lowering the blood pressure.

Bottom line is that if your doctor puts you on blood pressure medications, it is important for you to stay on it. You should not stop or decrease the dose of the medication on your own when your blood pressure came down to normal with medications. If you stop the medication on your own, your blood pressure will bounce back to higher level and may increase the risk of cardiovascular disease.

You can change or stop the medications only under your physician's advice

Keshava H Aithal

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**Dr Keshava Aithal**

*MD & Double O*