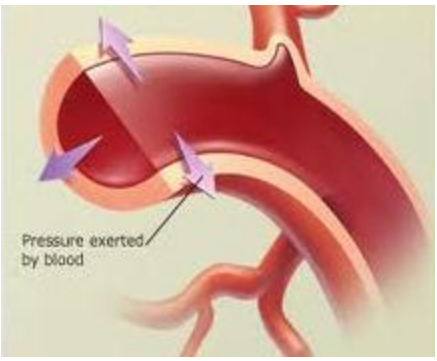
Blood Pressure

The force that the blood applies to the walls of the blood vessel is known as blood pressure. Like many other physical conditions in the human body, blood pressure varies from time to time. For example, it changes in relation to one's activity or stress level.



Blood pressure also varies throughout the cardiovascular system, being the highest in the aorta, and the lowest in the veins.

High blood pressure risk factors:

Age
Being older than age 55 is an important risk factor. Simply stated, the odds of developing high blood pressure increase as we get older.

Gender
At younger ages, women are less likely to develop high blood pressure than men. This risk equalizes later in life, but statistically, women are still less likely to develop high blood pressure, overall.

Family History
Having a family history of high blood pressure places you in a higher risk category than someone with no family history of high blood pressure.

Smoking
Smoking is the number 1 risk factor over which you have control. Smoking is such a powerful risk factor for so many different human diseases that doctors are encouraged to ask every patient who smokes if they would like to quit - every time they visit the office! Quitting smoking is the best thing you can do for your health.

Activity Level / Exercise
A low exercise lifestyle leads to a weak heart, poor exercise tolerance, and obesity. All of which have been implicated in the development of high blood pressure.

Diet
While there is evidence that specific items, such as salt, can worsen high blood pressure in certain individuals, the main impact that diet plays in high blood pressure risk is that it is a big factor in how much you weigh.

Blood pressure is measured by using an inflatable device named **sphygmomanometer**.

- The cuff is first wrapped around the upper arm
- A stethoscope is positioned over the artery just below the cuff
- Air is pumped into the cuff until the pressure stops the flow of blood in the artery
- The pressure in the cuff is gradually reduced as air is released.
- When the blood pressure in the artery exceeds the external pressure of the cuff, the blood starts to flow through the vessel once again. (*This point represents the **systolic pressure**)*

Systolic Pressure: The peak pressure at the moment the ventricles contract. This is the higher number of the two in a blood pressure reading. Normal systolic pressure for a young adult is said to be approx 120 mm Hg.

Diastolic Pressure: The pressure at the moment the heart relaxes to let the heart ventricles fill again. This is the lower number of the tow in a blood pressure reading. Normal diastolic pressure for a young adult is said to be between 70 and 80 mm Hg.

- This is determined by continuing to release air from the cuff until no arterial pulsation is audible.

Hypertension

Hypertension is a prolonged elevation in blood pressure. In this case, blood vessels are often weakened and are at risk or rupturing.

Symptoms are often not recognizable until the condition becomes very serious. Often the first signs that there is something wrong is a heart attack or a stroke.

Risk factors for hypertension:

1. Diet high in salt
2. Obesity
3. Genetic disposition
4. Kidney disease