



Blood Pressure

WHAT IS BLOOD PRESSURE?

Blood pressure is vital to life. Blood pressure makes it possible for blood to circulate throughout our bodies. With each beat of the heart, blood is pumped out of the heart into our blood vessels. The blood carries oxygen and food to our vital organs — such as the brain, heart, and kidneys — so they can work. Blood pressure is the force (tension) that the blood exerts in our blood vessels.

HOW IS BLOOD PRESSURE MEASURED?

A blood pressure check measures two things, so your blood pressure reading will have two numbers. The first or top number shows systolic pressure. It shows the pressure of blood against the artery walls when your heart contracts and pumps out blood. The second or bottom number shows diastolic pressure. It shows the pressure of blood against the artery walls when your heart rests between pumps and fills with blood. An example of a blood pressure reading is 130/80 (read as “130 over 80”). The systolic pressure is 130. The diastolic pressure is 80.

WHY SHOULD I KNOW MY BLOOD PRESSURE NUMBERS?

You should learn and remember your blood pressure numbers. Blood pressure numbers fall into three ranges. The ranges show if your blood pressure is healthy or if you have a health problem.

WHAT DO THESE NUMBERS MEAN?

It is normal for your blood pressure to fluctuate based on the time of day. With that in mind:

- If your blood pressure is under 120/80 mmHg or is most of the time, it is considered to be normal
- If your blood pressure is over 120/80 mmHg, but below 130/80 mmHg most of the time, it is considered pre-hypertension
- If your blood pressure is 130/80 mmHg or higher most of the time, it is considered high blood pressure or hypertension

BLOOD PRESSURE	SYSTOLIC	DIASTOLIC
Normal	under 120	and under 80
Pre-hypertension	120 to 129	or under 80
Stage 1 hypertension	130 to 139	or 80 to 89
Stage 2 hypertension	140 or over	or 90 or over



RISK FACTORS

There are many factors that affect blood pressure including:

- The amount of sodium and water in your body
- Your hormone levels
- The condition of your kidneys, nervous system, or blood vessels

YOU HAVE A HIGHER RISK OF BLOOD PRESSURE IF YOU:

- Are of African American descent
- Have a family history of high blood pressure
- Have diabetes
- Smoke
- Are overweight or obese
- Drink too much alcohol (more than one drink per day for women; more than two drinks per day for men)
- Consume too much sodium in your diet
- Are often stressed or anxious

WHY IS HIGH BLOOD PRESSURE DANGEROUS?

High blood pressure is dangerous because it puts a strain on your body. It can harm your body in a number of ways. First of all, it adds to your heart's work load. Over time as your heart works harder than normal, it tends to get bigger. A slightly bigger heart may still work well, but a heart that is too enlarged may not be able to meet your body's needs.

High blood pressure also affects your arteries and arterioles, which are the smaller arteries. As we grow older, the arteries harden and become less flexible, even if we don't have high blood pressure. But having high blood pressure tends to speed up this process. Another name for hardening of the arteries is arteriosclerosis.

Sometimes a hardened artery becomes narrowed by a build-up of material called plaque. This is called atherosclerosis. If left unchecked, this can lead to chest pain, heart disease, heart attack, or even death.

When high blood pressure damages the arteries, they may not be able to supply the amount of blood the body needs. When the body's organs don't get enough oxygen and food from the blood, they cannot work properly. High blood pressure may contribute to kidney disease or eye problems, for example.

WHAT CAN I DO ABOUT HIGH BLOOD PRESSURE?

The good news is that high blood pressure is preventable, treatable, and there are many things you can do to control your blood pressure including:

- Eating a heart-healthy diet and drinking plenty of water
- Exercising regularly, reducing stress, and maintaining a healthy body weight
- Limiting your sodium and alcohol intake
- Quitting smoking

If you think you may have, or be at risk for high blood pressure, consult your primary care physician or visit UPMC's Heart and Vascular Institute at [UPMC.com/HVI](https://www.upmc.com/hvi).