

# All About Blood Pressure

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Everyone has blood pressure. There are certain levels of blood pressure that are considered healthy and unhealthy. Unfortunately, over 1.7 million people in Kentucky have been diagnosed with high blood pressure, which is also called hypertension. When blood pressure is too high, there can be health problems like heart disease, heart attacks, and stroke.

## What is blood pressure?

Blood pressure is the amount of force caused by blood as it pushes through the blood vessels in the body. This pressure is

created by the pumping action of the heart. Blood vessels are like small tubes with blood constantly flowing through them. In order for blood to flow to all parts of the body from the heart, there has to be enough force behind the blood for it to be pushed all the way down to our toes and all the way up to our brain. This is our blood pressure.

## How do we measure it?

Blood pressure is measured using two different numbers. In order to understand a blood pressure measurement, close your fist and imagine it is your

heart. Now continue to squeeze and relax your fist over and over for several seconds. Systolic blood pressure is the force of blood flow each time you squeeze your fist or when your heart contracts. Diastolic blood pressure is the force of blood flow each time you relax your fist or your heart isn't contracting. Healthy blood pressure levels are below <sup>120</sup>/<sub>80</sub>. This is read as 120 over 80. The first number is your systolic blood pressure and the second number is your diastolic blood pressure. Together, these two numbers make a blood pressure measurement.

Blood pressure should be measured using a blood pressure cuff each time you go to the doctor. The cuff is placed high on the arm and a stethoscope is used to listen for a heartbeat. Some blood pressure measurements can now be done automatically without a nurse, doctor, or pharmacist. There is no pain with a blood pressure measurement, but it may cause tingling in the arm or hand. Regularly checking blood pressure is part of a healthy lifestyle.



## What is high blood pressure (hypertension)?

High blood pressure, also called hypertension, is when the force pushing blood through blood vessels is too high over time and could damage the inside walls of the blood vessels. Elevated blood pressure is when your blood pressure is higher than normal, but not high enough to be diagnosed with high blood pressure. Hypertension is a blood pressure measurement greater than 130/80. If you or a loved one are in the hypertension crisis range, you should see a doctor immediately. See Table 1 for more information.

Children and adults can both have hypertension, but it is much more common in adults. In the United States, one out of every three adults has high blood pressure.

## How is hypertension harmful to the body?

High blood pressure causes the heart to work harder than it should. Over time, this damages the heart and blood vessels. Although health problems associated with high blood pressure are not common in children and youth, uncontrolled blood pressure can begin to negatively impact the body early in life. In adults, hypertension can lead to heart disease, heart attacks, stroke, kidney problems, and vision problems.

## What does it feel like to have hypertension?

If someone is diagnosed with hypertension, they most likely do not have any visible symptoms. This means that you may not feel any different if your blood pressure is high compared to if it was a healthy number. It is very important to

have blood pressure measured regularly, because it is so common not to have any symptoms.

In more serious cases, some symptoms may occur. These include:

- Headache
- Feeling lightheaded
- Kidney problems

## Are certain people more likely to be diagnosed with high blood pressure than others?

Certain factors may make some people more likely to develop high blood pressure than others. Some factors that increase risk can't be controlled and some are related to lifestyle and can be controlled.

### Can't control:

- Age
- Gender
- Certain races/ethnicities
  - African-Americans
- Having a close family member diagnosed

### Can control:

- Overweight/Obesity
- Diets high in processed foods and sodium
- Lack of exercise

**Table 1.** Blood pressure levels.

Category	Systolic (First or Top #)		Diastolic (Second or Bottom #)
Normal	Less than 120	And	Less than 80
Elevated	120-129	Or	Less than 80
Hypertension 1	130-139	Or	80-89
Hypertension 2	Higher than 140	Or	Higher than 90
Hypertension Crisis	Higher than 180	Or	Higher than 120

## Sodium and High Blood Pressure

In the American diet, sodium is most commonly found as salt in packaged and restaurant foods (90 percent). Too much sodium in the diet pulls water into our bloodstream and increases blood pressure. It is highly recommended if blood pressure is too high to reduce the amount of sodium in foods by not using the salt shaker, cutting back on restaurant foods, replacing packaged foods with fresher options, and using spices to flavor food instead of salt.

## What is the Dietary Approach to Stop Hypertension (DASH) diet?

The DASH diet (<https://www.nhlbi.nih.gov/health-topics/dash-eating-plan>) encourages heart-healthy foods like fruits, vegetables, lean proteins, whole grains, and healthy fats, while

avoiding foods high in sodium and added sugar. Research shows the DASH diet is just as effective at lowering blood pressure as common hypertension medications. If you or a family member have hypertension, ask your doctor to refer you to a registered dietitian (RD or RDN). They can help you get started on a special diet to reduce sodium in your diet.

## What other factors affect blood pressure?

There are other factors that could potentially affect blood pressure numbers and should be considered when talking to a doctor or healthcare provider. These include:

**Hydration.** Blood is 80% water. The amount of water you drink or take in with your food will affect the volume of your blood. This will change the pressure created by blood flowing through your blood vessels.

### Unhealthy blood vessels.

If blood vessels are damaged or unhealthy, this can cause changes in blood pressure.

**Stress and anxiety.** Having high levels of stress and anxiety have been shown to increase blood pressure.

**Exercise.** Exercise may have immediate effects on raising blood pressure, but exercising regularly strengthens the heart and helps regulate blood pressure at a healthy level.

## What can you do to prevent or bring high blood pressure to healthy levels?

There are several healthy behaviors that can lower blood pressure or help maintain blood pressure at healthy levels. These include:

**Cut out the sodium.** Reduce the amount of sodium in the diet. When possible, choose fresh fruits and vegetables, limit processed food, look for low-sodium options at the grocery store, or use other spices to flavor food instead of sodium.

**Make healthy choices.** Avoid smoking, drinking any alcohol, and high caffeine intake (more than 100mg caffeine/day).

**Know your numbers.** Regularly check blood pressure levels. No one is too young or too old to know their blood



pressure levels. Keep in mind resting blood pressure and active blood pressure levels will be different.

**Follow the doctor's orders.**

If you are diagnosed with high blood pressure, take prescribed medications for high blood pressure on a regular basis. Follow directions from the doctor to keep blood pressure levels under control, and let the doctor know if there are any changes.

**If my family member has high blood pressure, how can I help them?**

- Encourage them to check their blood pressure level regularly. The most harm is done to the body when blood pressure levels are uncontrolled.
- Remind them how important it is to take their medication just like the doctor says.

- Look for ways to reduce salt and sodium in the foods you eat together. Be creative – replace salt with different herbs and spices when cooking or try something on the menu that may be a bit healthier when dining out.

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