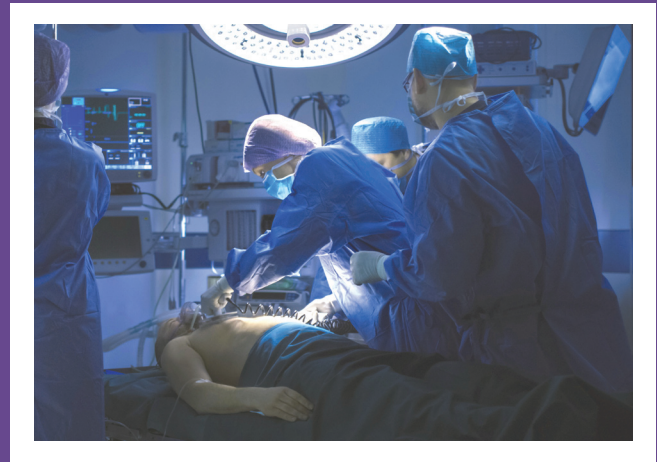


PUTTING IT ALL TOGETHER:

How are Heart Disease, Hypertension, and Stroke connected?



Without treatment, hypertension can increase the risk of developing heart disease or stroke. This is due to high blood pressure damaging the lining of the arteries. Plaque can build up as a consequence, causing the arteries to narrow.

This will provide a definition of each condition and describe how they are connected to your heart and health...

We will look at the symptoms, treatment options, prevention methods, and how a person can monitor their blood pressure.

How are these conditions connected?

The Centers for Disease Control and Prevention (CDC) states that a person living with hypertension has an increased risk of developing heart disease and stroke.

High blood pressure causes damage to the artery walls. The damage can make the arteries more susceptible to the buildup of plaque, which can cause a blockage or reduced blood flow.

If the blockage occurs near the brain or heart, it can lead to either a stroke or heart attack, respectively.



According to the [CDC](#), 7 in 10 people who experience a first heart attack and 8 in 10 people who experience a first stroke also have [high blood pressure](#).

What are they?

Hypertension, heart disease, and stroke are three different conditions.

Hypertension

Hypertension, or high blood pressure, takes place when the pressure of blood pushing against a person's arteries is higher than normal.

While a person's blood pressure can rise and fall throughout the day, chronically high blood pressure can lead to several health concerns.

Blood pressure [incorporates](#) two numbers: systolic and diastolic. A normal blood pressure reading is less than 120 millimeters of mercury (mmHg) systolic and less than 80 mmHg diastolic.

The following readings can indicate a person has elevated or high blood pressure:

- ➔ **Elevated:** A systolic blood pressure of 120–129 mmHg and a diastolic blood pressure of less than 80 mmHg.
- ➔ **Hypertension Stage 1:** A systolic blood pressure of 130–139 mmHg or a diastolic blood pressure of 80–89 mmHg.
- ➔ **Hypertension Stage 2:** A systolic blood pressure of 140 mmHg or higher, or a diastolic blood pressure or 90 mmHg or higher.

The [CDC](#) states that high blood pressure affects 47% of adults in the United States, and only 1 in 4 of these people have their hypertension under control.

Heart disease

Heart disease attributes several different conditions that affect a person's heart.

There are different types of heart disease, including:

- ➔ [coronary artery disease](#)
- ➔ **heart attack**
- ➔ [heart failure](#)

According to the [CDC](#), the most common form of heart disease is coronary artery disease (CAD). CAD can affect

blood flow to the heart. If the heart does not get enough blood, a person can have a heart attack.

Each year, approximately [659,000](#) people in the U.S. die from heart disease.

Stroke

A stroke occurs when the arteries leading to the brain burst or become blocked. When the brain no longer receives oxygen-rich blood, it can cause brain cells and the arteries to die.

According to the [American Heart Association](#), stroke is the fifth leading cause of death and the leading cause of disability in the U.S.

Symptoms

High blood pressure and heart disease may not be present with any symptoms. If a person experiences symptoms of a stroke, they will require urgent medical attention.

Hypertension

According to the [CDC](#), a person will likely never show symptoms or signs of high blood pressure. A person will need to measure their blood pressure to know if they have hypertension.

If they do have symptoms, they will likely experience the following:

- ➔ [early morning headaches](#)
- ➔ [nosebleeds](#)
- ➔ **irregular heart rhythms**
- ➔ **vision changes**
- ➔ **buzzing in the ears**

Severe hypertension can cause:

- ➔ [fatigue](#)
- ➔ [nausea](#)
- ➔ [vomiting](#)
- ➔ [confusion](#)
- ➔ [anxiety](#)
- ➔ [chest pain](#)
- ➔ [muscle tremors](#)





Heart disease

A person with heart disease may not experience any symptoms until they have a heart attack, heart failure, or arrhythmia.

The symptoms of these include:

- **heart attack:** A person may experience:
 - > upper back or neck pain
 - > nausea
 - > dizziness
 - > indigestion
 - > heartburn
 - > chest pain
 - > vomiting
 - > extreme fatigue
 - > shortness of breath
 - > discomfort in the upper chest
- **arrhythmia:** A person may experience a feeling of fluttering in the chest, also known as palpitations.
- **heart failure:** A person with heart failure may experience:
 - > fatigue
 - > shortness of breath
 - > swelling in the feet, legs, ankles, abdomen, or veins of the neck

Stroke

When a person experiences a stroke, they may have one or more of the following symptoms:

- sudden severe headache with no known cause
- sudden confusion, trouble understanding speech, or trouble speaking
- sudden weakness or numbness in the arm, leg, or face, particularly on one side of the body
- sudden dizziness, loss of balance, difficulty walking, or loss of coordination
- sudden trouble seeing in one or both eyes

Risk factors

Each condition shares some similar risk factors, including:

- a lack of exercise or activity

- a diet that includes high amounts of salt
- having obesity
- smoking
- having diabetes

Hypertension is also a risk factor for both stroke and heart disease.

Treatment and prevention

Treatment for high blood pressure can help prevent both heart disease and stroke.

A healthcare professional may propose taking medications to lower a person's blood pressure.

There are multiple types of medications that have slightly different effects on a person's blood pressure and heart. Some medications a doctor may prescribe include:

- ACE inhibitors
- diuretics
- vasodilators
- calcium channel blockers
- beta-blockers
- **alpha-blockers**
- **angiotensin II receptor blockers**

Blood pressure medications work by:

- relaxing the blood vessels
- blocking nerve activity that restricts the blood vessels
- helping the heart to beat with less force
- helping the body to remove water, which helps lower the water and salt levels in the body

A person can also make lifestyle changes, which include:

- exercising regularly, for at least 150 minutes per week
- eating a healthy diet with lots of fruits and vegetables
- maintaining a healthy body mass index (BMI)
- avoiding or quitting smoking
- eating a low sodium diet
- avoiding alcohol
- managing stress, if possible
- getting enough sleep

Taking the above steps may also help a person lower their risk of developing high blood pressure, heart disease, or stroke.

A person who experiences a heart attack or stroke should seek emergency medical services or call 911. If a person has had a stroke, medical professionals will prescribe medication or perform surgery to stop the bleeding in order to save the brain tissue.

Treatment for a heart attack will also involve medications and surgery.

Learn more:
about the treatment options
for heart disease, heart failure,
and stroke:

- [heart disease](#)
- [heart failure](#)
- [stroke](#)



Measuring blood pressure

A person can keep track of their blood pressure at home and with regular visits to a doctor. They may visit a pharmacy with a digital blood pressure measurement machine.

Regular blood pressure checks can help ensure that the treatment is working and help guide decisions on other methods that may help.

Several at-home devices can measure blood pressure. Before using a machine, a person should calibrate it with a doctor.

People who don't want or can't get a home blood pressure cuff should visit their doctor regularly to measure their blood pressure.

When to contact a doctor

People living with hypertension should regularly consult their doctor to see how medication and lifestyle changes affect their blood pressure.

A person can make adjustments in consultation with their doctor as needed based on how their blood pressure is responding.

A person should contact emergency services or call **911** immediately if they experience signs or symptoms of a heart attack or stroke.

Summary

Hypertension increases a person's risk of having a stroke or developing heart disease due to damage to the arteries.

A person can take steps to decrease their risk for any of these conditions, including regular exercise, a healthy diet, avoiding smoking, and reducing stress.

In some cases, a person may need to take blood pressure medications to help prevent high blood pressure and reduce their risk of developing heart disease or stroke.

Learn more:
about checking blood pressure
with these articles:

- [how to check blood pressure](#)
- [five of the best wrist blood pressure monitors](#)
- [five of the best blood pressure monitors](#)