

Patient information from the BMJ Group

High blood pressure

If you have high blood pressure you probably won't feel ill. But having high blood pressure increases your risk of health problems, including heart attacks and strokes. There are good treatments, and things you can do yourself, to reduce your blood pressure.

We've looked at the best and most up-to-date research to produce this information. You can use it to talk to your doctor and decide which treatments are right for you.

What is high blood pressure?

When doctors take your blood pressure, they measure how hard your blood pushes against your blood vessels as it moves around your body. You need some pressure to keep the blood moving. But if the pressure is too high, over time it can damage your blood vessels. This can cause problems such as heart attacks, strokes, and kidney damage. Your blood pressure may rise and fall slightly throughout the day and night. But when it stays up, it's called high blood pressure. Your doctor may call high blood pressure hypertension.

Doctors measure blood pressure with two numbers. The first number measures your blood pressure when your heart beats. The second number measures your blood pressure when your heart relaxes and fills with blood. Your doctor may describe your blood pressure using these two readings as, for example, '140 over 90'. Usually, your doctor will say you have high blood pressure if either your first blood pressure reading is 140 or higher or your second blood pressure reading is 90 or higher.

You are more likely to have high blood pressure if you are older, have a relative with high blood pressure, are pregnant, are overweight, don't exercise, smoke, have an unhealthy diet, or are under a lot of stress.

British people of black African or Caribbean origin, or South Asian (Indian, Pakistani, or Bangladeshi) origin are more likely to have high blood pressure than other British people. They are also more likely to have strokes and heart attacks.

What are the symptoms?

Most people with high blood pressure don't get any symptoms. You can't feel when your blood pressure goes up, although some people with high blood pressure say they had bad headaches before they were treated. The only way to find out if your blood pressure is high is to have it measured.

Your doctor will measure your blood pressure using an inflatable cuff that goes around your upper arm. You'll probably need to have it measured several times to make sure it's not just a one-off high reading. You should also have it measured in both arms.

High blood pressure

If you have a high reading in the GP surgery, you'll need to wear a blood pressure monitor for a day to confirm that your blood pressure is usually high. That's because blood pressure goes up and down during the day, and some people have abnormally high blood pressure readings when they are nervous, for example when seeing a doctor.

What treatments work?

You may be able to reduce your blood pressure by making changes to your lifestyle. But most people need to take medicines too.

Your doctor will try to reduce your blood pressure to 140 over 90 (140/85/90) or less. If you have diabetes, problems with your kidneys, or have had a heart attack or a stroke, your doctor will aim to bring your blood pressure down slightly further, to 130 over 80 (130/80) or less.

Medicines

There are many different types of medicines that can lower your blood pressure. Most of them work about as well as each other. You may need to take more than one medicine to bring your blood pressure down to a healthy level. Talk to your doctor about which medicines may be best for you to try first. This will depend on lots of things, including whether you have any other medical conditions.

We've listed the main types of medicine (with some examples of their brand names).

- **ACE inhibitors:** captopril (Capoten), enalapril (Innovace), and perindopril (Coversyl Arginine).
- **Alpha-blockers:** doxazosin (Cardura), prazosin (Hypovase), and terazosin (Hytrin).
- **Angiotensin II receptor blockers (ARBs):** candesartan (Amias), losartan (Cozaar), and valsartan (Diovan).
- **Beta-blockers:** atenolol (Tenormin), metoprolol (Lopresor), and propranolol (Inderal).
- **Calcium channel blockers:** nifedipine (Adalat), amlodipine (Istin), diltiazem (Calcicard), and verapamil (Cordilox).
- **Diuretics:** bendroflumethiazide (Aprinox), chlortalidone (Hygroton), and indapamide (Natrilix).

Lots of research has shown that taking one or more of these medicines should reduce your risk of having a heart attack or a stroke, and help you to live longer. They all work in slightly different ways.

The latest research shows that beta-blockers may not work as well as ACE inhibitors, angiotensin II receptor blockers, calcium channel blockers, and diuretics. So doctors are told most people should try these other drugs first.

High blood pressure

These are some of the more common side effects of the different medicines.

- ACE inhibitors: a dry cough, dizziness (especially the first time you take them), and kidney problems.
- Alpha-blockers: fainting (especially the first time you take them), headaches, and swollen ankles.
- ARBs: coughing, dizziness, and sexual problems (such as not being able to get an erection).
- Beta-blockers: tiredness, nausea, sexual problems, cold hands, and cold feet. People taking beta-blockers along with another drug called a diuretic may be more likely to get diabetes.
- Calcium channel blockers: headaches, dizziness, swollen ankles, flushing, and abnormal heartbeat.
- Diuretics: dizziness, nausea, sexual problems, muscle cramps, thirst, and needing to pass urine more often.

You may need regular check-ups to make sure you aren't getting serious side effects, such as diabetes or high levels of potassium in your blood. Talk to your doctor if you are getting side effects. They may give you a different type of medicine, or a lower dose. Don't stop taking the medicines without talking to your doctor.

Things you can do for yourself

There are lots of things you can do yourself to reduce your blood pressure.

Smoking can add 10 points to your blood pressure, because it narrows your blood vessels. So giving up smoking is a good first step. Ask your doctor for help.

If you are overweight, **losing some weight**, even 4 or 5 pounds (a couple of kilograms), may help to bring your blood pressure down. If you are being treated for high blood pressure, losing weight may make the treatment work better and reduce how much of the medicine you need.

Eating a **low-fat diet** that includes lots of fruit and vegetables may help lower your blood pressure. And if you also **cut down on the salt in your diet**, you may lower your blood pressure even further.

A low-fat diet has been shown to lower blood pressure. On this diet you eat less saturated fat (butter, meat, cheese, and cream), lots of fruit and vegetables and small amounts of dairy products. You eat wholegrain products (such as brown rice and wholemeal bread), fish, poultry, and nuts. You avoid red meat, sweets, and sugary drinks.

High blood pressure

Most of us eat more salt than we need. A low-salt diet means eating less than 6 grams (or 1 teaspoon) of salt a day. Many processed food such as bread and breakfast cereal contain a lot of salt. Check the label to find out.

There is a good chance that **taking some exercise** (such as walking, jogging, or cycling) at least three times a week will help to lower your blood pressure. You need to exercise regularly to keep your blood pressure down. If you stop exercising, it may rise again.

Doctors recommend that younger, fit patients should do three sessions of exercise a week where they can feel their heart beating faster (such as jogging). Older people should aim to exercise for 20 minutes each day, say by walking briskly.

If you drink a lot of alcohol, **cutting down on alcohol** can reduce your blood pressure. This means cutting back to the recommended limit of three to four units of alcohol a day for men or two to three units a day for women.

Other treatments

Fish oil supplements contain omega-3 fatty acids. These are the same as the fatty acids found in oily fish. Taking 3 grams of fish oil supplements each day may lower your blood pressure. You might find this unpleasant. Too much fish oil can cause stomach problems and make your mouth taste fishy. Studies have used different mixtures of oils, so we aren't certain if one type of fish oil supplement works better than another.

Taking **potassium supplements** each day might help to lower your blood pressure, but only by a small amount. Foods high in potassium include bananas, grapefruit, oranges, tomatoes, prune juice, and melons. It's important that you don't eat a lot of foods high in potassium if you are taking a potassium supplement. Too much potassium can be dangerous. Talk to your doctor if you're worried about how much of these foods to eat.

What will happen to me?

It's hard to say exactly what will happen to you if you have high blood pressure. It depends on:

- How high your blood pressure is
- How long you've had high blood pressure
- Whether you have other health problems
- Whether you have other risk factors for heart disease (such as high cholesterol).

The main health problems related to high blood pressure are heart attacks, strokes, heart failure, and kidney failure. Not everybody with high blood pressure will get these problems. Your personal risk will depend on whether you have other risk factors. Ask your doctor to explain your personal risk.

High blood pressure

The good news is that the effects of high blood pressure don't happen overnight. They usually take many years to develop. And if you control your high blood pressure you can reduce the chances that they will ever happen.

If you have high blood pressure, there's a good chance that you can lower it by making changes to your lifestyle or taking medicine. If you reduce your blood pressure by about 5 points, then your chances of dying from a stroke drop by about 14 percent, and your chances of dying from heart disease drop about by 9 percent.

Where to get more help

The Blood Pressure Association is a UK charity that provides advice and support to people with high blood pressure. You can visit their website (<http://www.bpassoc.org.uk>) or call their information line between 9 a.m. and noon, Monday to Friday (0845 241 0989).

This information is aimed at a UK patient audience. This information however does not replace medical advice. If you have a medical problem please see your doctor. Please see our full [Conditions of Use](#) for this content.

BMJ^{Group}