Chest Heart & Stroke Scotland

HIGH BLOOD PRESSURE

ESSENTIAL GUIDE

This Essential Guide is about living with high blood pressure.

It explains:

- What blood pressure is.
- What causes high blood pressure.
- How high blood pressure can affect you.
- How to manage high blood pressure.

What is blood pressure?

Your blood carries oxygen and nutrients all through your body, and is carried in tubes called arteries and veins. When your heart contracts, it pushes the blood out into these tubes, and all around the body. When it relaxes, this allows the heart to refill.

Blood pressure is a measure of how much pressure your blood is under as it moves through your body.

Blood pressure is measured with two numbers: **systolic pressure** and **diastolic pressure**. Systolic pressure is the pressure when your heart has just beat, pushing blood into the system. It is higher than diastolic pressure, which is the pressure when your heart is relaxing between beats.

These numbers are written as a fraction (**systolic/diastolic**), measured in **mmHg** (millimetres of mercury).

What is high blood pressure?

High blood pressure, also called **hypertension**, is defined as a **systolic pressure** of **140 or above,** and/or **diastolic pressure** of **90 or above**.

This would be written as 140/90 mmHg, and might also be referred to as "140 over 90".

Blood pressure often rises with age, and if you are over 80 then the boundary for high blood pressure rises to 150/90 mmHg.

High blood pressure does not usually have any symptoms, and you may not know if you have consistently high blood pressure. However, high blood pressure increases your risk of heart attack and stroke. The good news is that blood pressure is the easiest risk factor to change.

All adults who are 40 years old or over should get their blood pressure checked by a GP at least once every 5 years.

What causes high blood pressure?

Often, there is not a single obvious cause for high blood pressure. However, many factors can increase your risk of high blood pressure, including:

- A family history of high blood pressure.
- Being of Black African, African Caribbean, or South Asian descent.
- Having overweight or obesity.
- Not being physically active.
- A high salt intake.
- A high alcohol intake.
- Diabetes or kidney disease.
- Certain medicines, like oral contraceptives ("the Pill").

How is blood pressure measured?

The only way to know whether you have high blood pressure is to have it measured. You can have your blood pressure measured:

- At your GP surgery
- At some pharmacies
- In some workplaces
- At a health event

Blood pressure is usually measured with an automated blood pressure monitor.

An inflatable cuff is wrapped around your upper arm. The cuff will tighten around your arm and then slowly begin to release. This should not hurt, but may be slightly uncomfortable.

While it releases, the person taking your blood pressure will check your pulse.

When having your blood pressure taken:

- Avoid alcohol, smoking, and exercise for 30 minutes before the measurement.
- Empty your bladder beforehand.

- Rest for at least 5 minutes before taking your reading. Ideally, sit down quietly with your arm relaxed and supported on a firm surface
- Roll up or remove long sleeves so that the cuff can be placed properly.
- Don't talk during the measurement - this can affect the reading.

The below table shows the range of blood pressure from low blood pressure to high blood pressure.

90/60mmHg or lower	**Low**
90/60mmHg to 120/80mmHg	**Normal**
140/90mmHg or higher	**High**

Measuring blood pressure at home

A single high blood pressure reading does not mean you have long-term high blood pressure. Blood pressure varies throughout the day, and it can be raised by things like stress or anxiety.

If your blood pressure reading is high, the doctor may ask you to **monitor your blood pressure at home**. This will show whether your blood pressure is consistently high, or whether the high reading is a one-off.

Monitoring blood pressure at home can be done in one of two ways:

- **Ambulatory blood pressure monitoring (ABPM)**
- **Home blood pressure monitoring (HBPM)**

A high blood pressure reading at home is slightly lower. This is because you tend to be more relaxed. If you are under 80 it is defined as 135/85 or above. If you are over 80 it is defined as 145/85 or above.

ABPM

Ambulatory blood pressure monitoring involves wearing a device that automatically takes your blood pressure. This happens at regular intervals over 24 hours as you go about your normal day.

These measurements give your doctor a clear idea of how your blood pressure changes throughout the day. It also avoids stress from being at a clinic, which can affect your blood pressure.

HBPM

Home blood pressure monitoring is where you are given an automated blood pressure monitor to use at home. This is less invasive than ABPM, but still helps you and your doctor to understand your blood pressure over time.

Why is my blood pressure important?

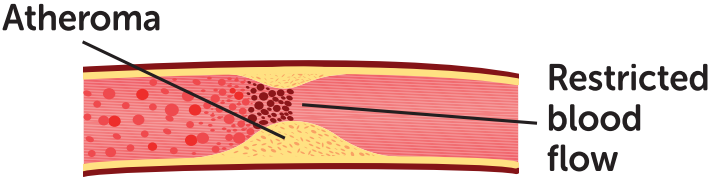
Long-term high blood pressure can increase your risk of a number of serious and potentially life-threatening conditions, like:

- Heart attack
- Stroke or transient ischaemic attack (TIA)
- Heart failure
- Peripheral artery disease
- Kidney disease
- Vascular dementia
- Damage to your eyes

High blood pressure means that the heart has to work harder to push blood around your body. This can put strain on your heart, leading to heart failure or other heart damage.

Over time, high blood pressure can also cause damage to your blood vessels.

Fat can get caught in these damaged areas, building up over time. This is called a **plaque or an atheroma**. It narrows the blood vessel, raising your blood pressure even more.



Sometimes, a narrowed section of your blood vessel might get damaged, and the plaque may tear or break. If this happens, your body will try to heal the damage by making a blood clot. This clot can potentially grow to block the artery.

Clots and plaques can also break off, blocking a blood vessel somewhere else in the body.

Any of these blockages prevent blood from moving through the body, so oxygen and nutrients cannot reach their destination. This can cause a stroke or heart attack.

Managing high blood pressure

Lowering your blood pressure can reduce your risk of heart disease, stroke, heart failure, and death.

The good news is many people can manage their blood pressure by making simple lifestyle changes. Even if your blood pressure is normal now, a heart-healthy lifestyle can help maintain it. Living healthily today supports healthy blood pressure in the future.

You might be given medication to lower your blood pressure. This depends on how high it is and if you're at high risk of heart disease or stroke.

With or without medication, a healthy lifestyle is key to keeping your risk of heart attack or stroke as low as possible.

It is important that you attend any regular check-ups you have with your doctor. Tell your doctor if you are having any symptoms that you think might be associated with your high blood pressure.

Chest Heart & Stroke Scotland offers a range of support if you have high blood pressure or have experienced a heart attack or stroke. This may include:

Stroke nurses who can provide information and support.

Peer support groups to meet people who are struggling with the same issues and challenges.

Advice Line Practitioners who can offer information and advice on any questions you might have on any topics.

Find out more by calling our Advice Line on **0808 801 0899**.

Lifestyle changes

Lifestyle is a huge part of controlling your blood pressure. By living a "heart-healthy" life, you can significantly reduce your risk of developing high blood pressure.

Even if you already have high blood pressure, lifestyle changes can help reduce it. This lowers your risk of health complications like heart disease and stroke.

Some crucial aspects of your lifestyle are:

Healthy weight

Having overweight will generally raise your blood pressure, and is a leading cause of high blood pressure.

If you have overweight, losing weight, even only a little, can help lower your blood pressure. For each kilogram (2.2lb) of weight you lose, you can expect to reduce your blood pressure by about 1 mmHg.

Healthy diet

Studies have shown eating a "heart-healthy" diet can lower blood pressure by as much as 11 mmHg. This diet is low in fat and sugar, and high in fibre.

Salt intake

Eating a lot of salt increases your blood pressure. Try to keep your salt intake below 6g per day

Physical activity

Regular physical activity can help lower your blood pressure by up to 5-8mmHg. It also strengthens your heart, improves circulation, and can help you lose weight.

Alcohol

Alcohol is a big factor in high blood pressure. Follow government guidelines for how much you drink. Avoid binge-drinking.

Smoking

There is no evidence that smoking causes high blood pressure, but it does make heart disease and stroke more likely.

Caffeine

Caffeine causes a short-lived but sharp rise in blood pressure.

Recreational drugs

Some drugs, such as cocaine, ecstasy, and amphetamines, can cause a spike in your blood pressure.

Stress

Stress does not increase your blood pressure in the long run. However, your blood pressure does rise when you are stressed. Stress can lead to unhealthy habits like heavy drinking, poor diet, or not exercising.

Sleep

Not getting enough sleep is sometimes linked to high blood pressure. Try to get at least 6 hours of sleep every night if you can.

You may find the following Chest Heart & Stroke booklets helpful:

Healthy Eating and Healthy Weight

Salt

Physical Activity

Alcohol

Stopping Smoking

Mental Wellbeing

Find them all at **chss.org.uk/resources-hub**.

Medication for high blood pressure

Your doctor may recommend medication to help control your blood pressure. This will depend on how high your blood pressure is and if you have other risk factors for heart disease or stroke. This should be done alongside the lifestyle changes already mentioned.

You will probably have to keep taking these blood pressure medicines for the rest of your life. You may need to try several types of medication to find what works best for you.

You may need to take more than one type of medication to control your blood pressure.

Always follow your doctor's instructions, take the tablets as prescribed, and do not stop taking your medication without talking to your doctor first.

It is important to take medication regularly and as prescribed.

It can help to set an alarm to remind yourself to take the tablets. Keep your medicines in a safe place where you see them every day. Take medications at a time of day that works for you, such as when brushing your teeth in the morning.

Ask your pharmacist if you need help remembering to take your medication.

If you have side effects, **speak to your GP**. They may be able to reduce the dose, give you a different medication, or suggest ways to manage side effects. **Do not stop taking your medication** without speaking to a doctor first.

Some effervescent (dissolvable) tablets contain salt. If you are trying to reduce your salt intake, change to a non-effervescent equivalent if you can.

What medication will I be given?

Five main medications are used to treat high blood pressure. You will probably be given a combination of two or more of these:

ACE inhibitors

enalapril, lisinopril, perindopril, ramipril

ACE (angiotensin converting enzyme) inhibitors relax and widen blood vessels, making it easier for blood to pass through.

ACE inhibitors increase your potassium levels. You will need regular blood tests to check kidney function and potassium levels. Avoid salt substitutes when taking ACE inhibitors - these can raise potassium too.

5-30 out of every 100 people develop a cough when they take ACE inhibitors. If this is a problem for you, speak to your doctor.

Angiotensin receptor blockers

candesartan, irbesartan, losartan, valsartan

Angiotensin receptor blockers (ARBs) work in a similar way to ACE inhibitors but they are less likely to cause a dry cough. You may be given ARBs if you are unable to take ACE inhibitors.

As with ACE inhibitors, you will need to have regular blood tests and check-ups.

Calcium channel blockers

amlodipine, diltiazem, lacidipine, verapamil

These medicines reduce calcium moving into your cells. This is important because calcium triggers your blood vessels to narrow, so taking calcium channel blockers widens your blood vessels.

While taking calcium channel blockers, you will need to avoid drinking grapefruit juice, as this can trigger a reaction.

Diuretics

bendroflumethazide, chlortalidone, indapamide

Diuretics (also called **water tablets**) make you urinate, so your body gets rid of more salt and water over time.

This means you have less fluid in your system, which helps to reduce blood pressure, swelling and the build-up of fluid.

Diuretics can also relax your blood vessels, widening them and making it easier for blood to pass through the body.

You will usually be told to take them in the mornings. This is so that your sleep is not disturbed by getting up to pee.

While taking diuretics, it is important that you make sure you are well hydrated and drink plenty of water.

Beta-blockers

atenolol, bisoprolol, metoprolol, propanolol

Beta-blockers block the hormones adrenaline and noradrenaline, which are involved in the stress response. Beta blockers lower your blood pressure by slowing your heart rate and relaxing your blood vessels.

Beta-blockers are not usually recommended for people with asthma, as they may make it worse. They can be used for people with other respiratory conditions, but you may need to be more closely monitored as a result.

Beta-blockers can have side effects including: tiredness or fatigue, cold hands and feet, erectile dysfunction, dizziness, and disturbed sleep or nightmares. These will usually improve over time.

If you do experience side effects, speak to your doctor or nurse.

Living with high blood pressure

High blood pressure on its own has very few symptoms and should not affect your life too much. However, there are some things you may need to consider:

Driving

Regular high blood pressure should not affect your ability to drive. You do not need to take action if you drive a car or motorbike. If you drive a bus, coach, or lorry, you may need to contact the DVLA to tell them that you have high blood pressure. Check the DVLA website for the latest guidance.

If you have malignant hypertension (extremely high blood pressure that has developed rapidly), you must stop driving. You must also inform the DVLA.

This applies no matter what type of vehicle you drive.

Insurance

Some insurance companies will not offer you motor or life insurance if you have high blood pressure, or your premiums may go up.

Check that your travel insurance covers you fully for blood pressure issues.

Check out the CHSS **Finding Inclusive Insurance** factsheet for more information: **chss.org.uk/resources-hub**.

Work

Having high blood pressure should not usually affect your career. You do not have to tell your employer that you have high blood pressure, unless it affects your ability to do your job.

However, jobs which regularly expose you to big changes in speed or pressure may be unsafe. This includes: diver, submariner, airline pilot or airline worker.

Sexual activity

High blood pressure should not affect your normal sexual activity. In fact, sex can be good for your blood pressure, as it is a form of moderate physical exercise!

However, in some cases your high blood pressure, or the medications you take for it, may affect your ability to have sex.

Blood vessels in the genitals may be affected, reducing blood flow. This can cause impotence (erectile dysfunction) or ejaculation problems for people with penises. People with vaginas may find sex painful or have difficulty reaching orgasm. If you have concerns about sexual activity, speak to your GP.

Do not take erectile medication like Viagra unless it has been prescribed by your doctor. Viagra can affect your blood pressure and may mix badly with blood pressure medications.

Pregnancy, contraception and HRT

High blood pressure should not stop you getting pregnant. You may have an increased risk of complications. If you are trying to conceive and have high blood pressure, speak to your doctor.

Contraception may also affect your blood pressure, especially combined oral contraceptives. The impact of the combined contraceptive pill on blood pressure is small, but unpredictable.

You can still take Hormone Replacement Therapy (HRT) if you have high blood pressure. Your doctor should monitor your blood pressure and adjust your medicines if needed.

Holidays and flying

If your blood pressure is very high or poorly controlled, flying may be dangerous, as blood pressure rises at high altitudes. Speak to your GP before arranging to fly.

Before travelling, make sure that you have enough medication to last your whole trip.

Our publications are free to everyone in Scotland, in PDF and in print. See them all at **www.chss.org.uk/resources-hub**

For free, confidential advice and support from our Advice Line Team, contact:

0808 801 0899 (Mon-Fri 9am-4pm)
text ADVICE to 66777
adviceline@chss.org.uk

One in five people in Scotland are affected by chest, heart and stroke conditions or Long Covid. Go to www.chss.org.uk/supportus to find out how you can help us support more people in Scotland.

To give feedback or request alternative formats, email: **health.information@chss.org.uk**

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Updated: Nov 2025
Next review: Nov 2028
E29-v3.0-Nov2025

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