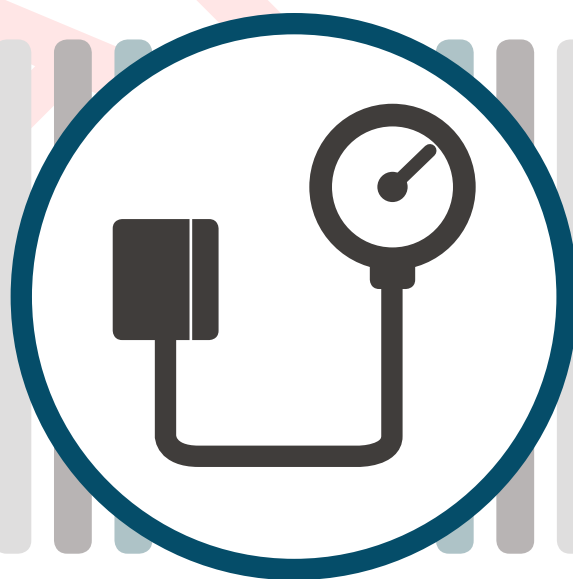


# Medicines to control blood pressure

Patient decision aid





## Blood pressure and problems with your blood vessels and heart

If you have persistently high blood pressure (also called hypertension), the tubes (arteries) that carry blood to the organs of your body may be damaged. If this happens then the amount of blood getting to some organs may be reduced (known as cardiovascular disease).

This means that you are more likely to get damage to your heart (causing a heart attack or heart failure) or brain (causing a stroke) or to have another heart attack or stroke if you have already had one. You might also get kidney or vision problems from damage to the blood vessels in your kidneys or eyes.

The higher your blood pressure, the more likely these things are to happen. But they don't happen to everyone, and it's not possible to say what will happen to any individual person.

### Controlling your blood pressure

High blood pressure can be treated by making changes to your lifestyle and by taking medicines. By lowering your blood pressure, you make it less likely that you will get cardiovascular disease (although there is a chance that this could still happen) or help stop it getting worse if you already have it.

**You can choose whether to take medicines to lower your blood pressure or not, and if you do choose to take medicines, which type is best for you.**

This decision aid can help you and your healthcare professional discuss your options.



## How this decision aid can help

This decision aid can help you and your healthcare professional discuss:

- ways to lower your blood pressure with **changes to your lifestyle**
- **step 1 treatment:** which medicine to start with first if you choose this option
- **step 2 treatment:** which medicine to add on to step 1 treatment if blood pressure is still high despite taking one medicine
- **step 3 treatment:** which medicine to add onto to step 1 and 2 treatments if blood pressure is still high despite taking two medicines.

If you don't want to take medicines to lower your blood pressure, then you can continue to try lifestyle changes. You might also choose not to add extra medicines to step 1 or step 2 treatment. However, if your blood pressure stays high you will continue to be at higher risk of heart problems and stroke. You can ask your healthcare professional for more information about this.



## What does NICE recommend?

### Changes to your lifestyle

Changing what you eat and drink can help control your blood pressure. Reducing salt intake, eating fruit and vegetables daily, being more physically active, avoiding drinking too much alcohol, and losing weight will also help lower your chance of getting cardiovascular disease. If you already have cardiovascular disease, these things can help stop it getting worse. Smoking does not increase blood pressure but it does increase the chances of cardiovascular disease and so it is also important that you try to stop smoking. Your healthcare professional can explain more about all these things and offer help.

### Taking medicines

NICE recommends that people with persistent high blood pressure should think about taking a medicine to help lower their blood pressure, as well as trying lifestyle changes.

If you also have high cholesterol, then this can increase your chance of getting a heart attack or a stroke. NICE suggests taking a medicine to lower your cholesterol and reduce your risk of cardiovascular disease. NICE has published a decision aid to help with that choice, and your healthcare professional can explain further if this applies to you.



## Which medicine is best?

There are different types of blood pressure medicines. There are several different medicines within each type.

**The table on pages 6–9 has more information about each type of medicine.**

NICE recommends different types of blood pressure medicine for certain people as the first medicine to begin with (see **step 1 treatment** in the diagram over the page). This depends on your age, your family origin, whether you're pregnant (or trying to become pregnant) or are breastfeeding, other conditions you may have, and any other medicines you are taking.

Your healthcare professional will usually start you on a low dose of your blood pressure medicine and gradually increase it over a few months. If the first medicine doesn't lower your blood pressure enough, your healthcare professional will offer you an additional medicine.

Most people need to take more than one medicine to lower their blood pressure. If you need to add a second or third medicine, there is no good evidence to say that one type of blood pressure medicine is better than another at preventing cardiovascular disease or premature death. So you can choose which type of blood pressure medicine you want to try adding.

If you have any problems with your blood pressure medicines, ask your healthcare professional about different medicines that you can try. If you are worried about having too many blood pressure medicines to take, you can ask your healthcare professional about other options.

Some of the types of medicine are often shortened to just their initials. Their full names are:

- angiotensin-converting enzyme inhibitor (ACE inhibitor)
- angiotensin receptor blocker (ARB)
- calcium channel blocker (CCB).



## Medicines to lower blood pressure

You can choose whether to take medicines to lower your blood pressure or not. You might also choose not to add extra medicines to step 1 or step 2 treatment.

1

**Step 1 treatment.** Start with:

- an **ACE inhibitor** or an **ARB** if:
  - you have type 2 diabetes (any age or family origin), **or**
  - you are younger than 55 and are not of African or Caribbean family origin
- a **CCB** if:
  - you are 55 or older and don't have type 2 diabetes, **or**
  - you are of African or Caribbean family origin and don't have type 2 diabetes

2

**Step 2 treatment.** If **one** medicine hasn't controlled your blood pressure enough, then you can:

- add a **CCB** or a **diuretic** if you are already taking an ACE inhibitor or an ARB
- add an **ACE inhibitor** or an **ARB** or a **diuretic** if you are already taking a CCB

3

**Step 3 treatment.** If **two** medicines haven't controlled your blood pressure enough, then you can:

- take a **diuretic** and a **CCB**, and add either
  - an **ACE inhibitor**, or
  - an **ARB**



## What are the possible benefits from controlling my blood pressure with medicines?

The medicines that NICE recommends can all lower your blood pressure. Lowering your blood pressure, even by a small amount, can help lower your risk of cardiovascular disease (although there is a chance that this could still happen) or help stop it getting worse if you already have it.

The actual benefit for you from lowering your blood pressure depends on several individual factors. These include what your cardiovascular risk is to start off with, your gender, age, blood pressure level and other conditions that you may have.

You can ask your healthcare professional to estimate your risk of getting cardiovascular disease over the next 10 years. They can also estimate what your risk would be if you managed to get your blood pressure lower.

**It is not possible to know in advance what will happen to any individual person**



## What are the possible disadvantages from taking medicines to lower my blood pressure?

Some people get side effects from blood pressure medicines, but most do not. Side effects are most likely to happen if you need more than one medicine to keep your blood pressure under control. However, not everyone will get them. They may be short lived or not trouble you if they do happen.

There might also be some times when your blood pressure is too low (called hypotension). Hypotension may not always cause symptoms, but some people may feel light headed, especially on standing, or even faint.

If you are experiencing troublesome side effects with your medicines, speak to the healthcare professional who prescribes your medicines about alternative options for you.

	ACE inhibitor	ARB	CCB	Diuretic
<b>What are these medicines called?</b>	The names of these medicines commonly end in 'pril' (for example, ramipril, lisinopril and perindopril).	The names of these medicines commonly end in 'artan' (for example, losartan, candesartan and valsartan).	The names of these medicines commonly end in 'dipine' (for example, amlodipine, felodipine and lacidipine).	A common example is indapamide.
<b>What are the possible side effects?</b>  (The diagrams on page 11 may help make sense of the numbers.)  Sometimes, other problems have been reported by people taking these medicines.  These are listed in the information leaflet you will get with the medicines.	A common side effect of ACE inhibitors is a persistent dry cough: 10 people or more in every 100 who take an ACE inhibitor will get this (so up to 90 don't). But the cough may not trouble you if it does happen.	The side effects of ARBs are similar to those of ACE inhibitors. But you are less likely to get a persistent dry cough and swelling of the lips, eyes or tongue with ARBs than with ACE inhibitors.	Common side effects include swollen ankles (this improves if the dose is reduced and goes away quickly if you stop taking the CCB), flushing, headaches and palpitations (these tend to ease over a few days if you continue to take the medicine): more than 1 person in every 100 taking a CCB gets this (so up to 99 don't).	Common side effects are feeling light-headed on standing and salt imbalance (low sodium or potassium salt concentration in the blood) which may make you feel weak: more than 1 person in every 100 taking a diuretic gets one or more of these (so up to 99 don't).
				<b>Continued over page...</b>

## ACE inhibitor

## ARB

## CCB

## Diuretic

**What are the possible side effects? (Continued.)**

(The diagrams on page 11 may help make sense of the numbers.)

Sometimes, other problems have been reported by people taking these medicines.

These are listed in the information leaflet you will get with the medicines.

Other possible side effects to think about include changes to how well your kidneys work and swelling of the lips, eyes or tongue: more than 1 person in every 100 taking an ACE inhibitor may get one or more of these, (so up to 99 don't).

Any effect on your kidneys is usually detected on the blood test your healthcare professional will take a few weeks after starting this medicine.

Rarely, people may get serious liver, blood or skin problems.

Other possible side effects to think about include changes to how well your kidneys work: more than 1 person in every 100 taking an ARB gets these (so up to 99 don't).

This is usually detected on the blood test your healthcare professional will take a few weeks after starting this medicine.

A less common side effect is gum problems: up to 1 person in every 100 taking a CCB gets these (so at least 99 don't).

However, gum problems are usually caused by poor gum care so speak to your dentist about this.

It is rare for diuretics to affect how well your kidneys work. Any problems would usually be detected on the blood test your healthcare professional will take a few weeks after starting this medicine.

People often notice an increased need to pass urine after taking these medicines and so they are often taken in the morning. This usually stops after about a month of taking these medicines.

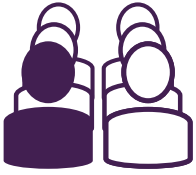


	ACE inhibitor	ARB	CCB	Diuretic
<b>Will I need to have blood tests?</b>	<p>You'll need blood tests to check how well your kidneys are working before starting treatment and between 1 and 2 weeks afterwards or after increasing the dose.</p> <p>You'll also need blood tests while you are taking these medicines, usually once a year unless you are unwell for another reason.</p>	<p>You'll need blood tests to check how well your kidneys are working before starting treatment and between 1 and 2 weeks afterwards or after increasing the dose.</p> <p>You'll also need blood tests while you are taking these medicines, usually once a year unless you are unwell for another reason.</p>	<p>Blood tests are not usually needed with these medicines.</p>	<p>You'll need blood tests to check how well your kidneys are working before starting treatment and between 1 and 2 weeks afterwards or after increasing the dose.</p> <p>You'll also need blood tests while you are taking these medicines, usually once a year unless you are unwell for another reason.</p>
<b>Your healthcare professional can tell you how often you'll need blood tests</b>				

	ACE inhibitor	ARB	CCB	Diuretic
<b>What else do I need to think about?</b>	<p>ACE inhibitors are not suitable for women who are pregnant, planning to become pregnant or breastfeeding.</p> <p>For people with type 2 diabetes, ACE inhibitors help to protect the kidney.</p> <p>ACE inhibitors work less well in people who are of African or Caribbean family origin if used as step 1 treatment.</p> <p>An ARB is preferred to an ACE inhibitor in people of African or Caribbean family origin, because the chance of getting swelling of the lips, eyes or tongue is lower.</p>	<p>ARBs are not suitable for women who are pregnant, planning to become pregnant or breastfeeding.</p> <p>For people with type 2 diabetes, ARBs help to protect the kidney.</p> <p>ARBs work less well in people who are of African or Caribbean family origin if used as step 1 treatment.</p> <p>An ARB is preferred to an ACE inhibitor in people of African or Caribbean family origin because the chance of getting swelling of the lips, eyes or tongue is lower.</p>	<p>CCBs are not usually prescribed if you have heart failure.</p> <p>Drinking grapefruit juice while taking some CCBs can increase your chance of getting side effects.</p>	<p>If you have diabetes, these medicines may affect blood sugar levels.</p> <p>If you have gout, then these medicines can make it worse.</p>

## How do you feel about the options?

Issue	How important is this to me?			
	Very important	Important	Not that important	Not at all important
What does taking the medicine involve?				
What differences will taking blood pressure medicine(s) make to my risk of cardiovascular disease?				
What are the possible side effects?				
Will I need regular blood tests?				
Will I have to change what I eat and drink?				
Will the blood pressure medicine(s) interact with other medicines that I take?				
Other things I want to talk about:				

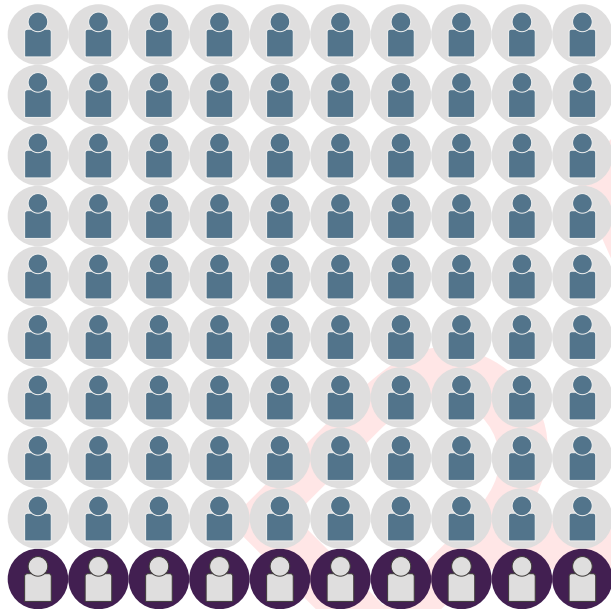


## Your chance of getting side effects

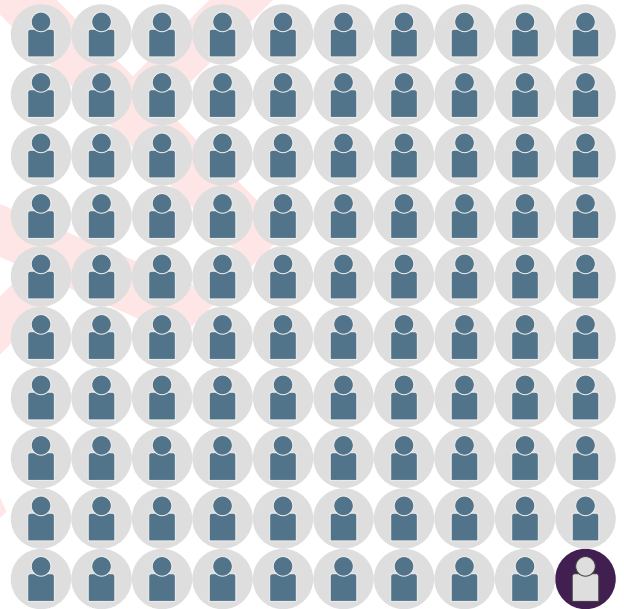
It isn't possible to give very precise figures for the chances of different side effects happening, so this decision aid gives a general idea. For example, "more than 1 person in every 100 gets this side effect (so up to 99 don't)".

Some people find the type of diagram below makes it easier to picture the chances of something happening to them. People who have **experienced an effect** are shown in **purple**.

10 in 100



1 in 100



It is not possible to know in advance what will happen to any individual person