

## Alpha-blockers

Alpha-blockers are medicines that are mainly used to treat [high blood pressure \(hypertension\)](#) and problems with passing urine in men who have enlargement of the prostate gland. [Prostate gland enlargement is also called benign prostatic hyperplasia \(BPH\)](#).

### What are alpha-blockers used for?

In the past, some alpha-blockers were also used to treat [heart failure](#) and [Raynaud's phenomenon](#). However, they are very rarely used to treat these conditions now because there are other medicines that are thought to work better.

Alpha-blockers are also sometimes used to treat ureteric stones. These are stones that have formed in the kidney and have then got stuck in the ureter, which is the tube that goes from the kidney to the bladder. They cause pain called renal or ureteric colic. An alpha-blocker may help to speed up the time it takes for the stone to get into the bladder and stop causing pain. [For more information about ureteric stones see the separate leaflet called Kidney Stones](#).

### Types of alpha-blocker

There are six alpha-blockers available to prescribe in the UK. They are:

- [Alfuzosin](#).
- [Doxazosin](#).
- [Indoramin](#).
- [Prazosin](#).
- [Tamsulosin](#).
- [Terazosin](#).

Alpha-blockers come as tablets or capsules which may be taken once a day or up to three times a day. They come in various brand names.

## What are alpha-blockers prescribed for?

### For high blood pressure (hypertension)

Alpha-blockers are usually prescribed after most other medicines have been tried. Alpha-blockers are normally only started if:

- Other medicines such as [beta-blockers](#), angiotensin-converting enzyme (ACE)inhibitors or 'water' tablets (diuretics) are not working. They may be used as well as these other medicines.
- There is a reason you cannot take a beta-blocker, an ACE inhibitor or a diuretic.

Having hypertension increases your risk of having a [heart attack](#) or a [stroke](#), or developing [chronic kidney disease](#) or [heart failure](#). There are many studies which show that medicines such as beta-blockers, ACE inhibitors and diuretics are better than alpha-blockers at lowering the risk of having these conditions, which is why they are used first.

### For prostate gland enlargement

Alpha-blockers can help symptoms of an enlarged prostate.

If you have an enlarged prostate, deciding whether or not to take an alpha-blocker depends on how much the symptoms are affecting you. If the symptoms are bothering you, taking an alpha-blocker is a good idea. If the symptoms are mild and not really affecting you much, then you don't need to take an alpha-blocker unless you want to.

An enlarged prostate gland can cause problems with passing urine, such as:

- Having to wait before your urine starts to flow.
- Taking longer to pass urine.
- Dribbling urine.
- Feeling that your bladder is not quite empty.

# How do alpha-blockers work?

Alpha-blockers work by blocking the transmission of certain nerve impulses. The ends of some nerves release a chemical (neurotransmitter) called noradrenaline (norepinephrine) when the nerve is stimulated.

This chemical then stimulates alpha-adrenergic receptors. These receptors are tiny structures which occur on cells in various parts of the body, including the heart, involuntary (smooth) muscles and blood vessels. When these receptors are stimulated, they cause various effects.

The alpha-blocker medicine attaches to alpha-adrenergic receptors and stops (blocks) the receptor from being stimulated. This can have various effects in the body:

- **For high blood pressure (hypertension):** alpha-blockers work by relaxing blood vessels. This allows blood and oxygen to circulate more freely around your body, lowering blood pressure and reducing strain on your heart.
- **For prostate gland enlargement:** alpha-blockers work by relaxing the muscles of your bladder and around your prostate gland so that you can pass urine more easily.

## Which alpha-blocker is usually prescribed?

**For high blood pressure (hypertension):** once-daily preparations of [doxazosin](#) or [terazosin](#) are usually recommended. Once-daily preparations are generally thought to be easier for people to take and to remember to take. [Prazosin](#) and [indoramin](#) need to be taken two or three times each day and prazosin is more likely to cause a large drop in blood pressure after the first dose has been taken.

**For prostate gland enlargement:** once-daily preparations of [alfuzosin](#), [doxazosin](#), [tamsulosin](#) or [terazosin](#) are generally recommended. This is because once-daily preparations cause fewer side-effects than the preparations that need to be taken up to three times a day.

## How long can you take alpha-blockers?

Most people with high blood pressure (hypertension) need to take medication for life. However, in some people whose blood pressure has been well controlled for three years or more, medication may be able to be stopped. In particular, in people who have made significant changes to lifestyle (such as having lost a lot of weight or having stopped smoking or heavy drinking, etc). Your doctor can advise you.

For people with symptoms caused by prostate gland enlargement, alpha-blockers are also usually taken long-term. Your doctor will usually review your symptoms 4-6 weeks after you start treatment. Once your symptoms have settled down, your treatment is usually reviewed every year. This is to make sure it is still working.

## Taking other medicines

There are a number of medicines that should usually be avoided if you also take an alpha-blocker. These include:

- Phosphodiesterase-5 inhibitors - for example, [sildenafil for erectile dysfunction](#).
- Antidepressants such as [tricyclic antidepressants](#), [mirtazapine](#) or [venlafaxine](#).

When these medicines are combined with an alpha-blocker, you may have a sudden drop in blood pressure (postural hypotension).

## Alpha-blocker side-effects

Although side-effects are uncommon, they occur in some people. Side-effects are more likely to occur in the first two weeks of treatment and usually go away on their own. The most common side-effects are slight drowsiness, [headaches](#) and [dizziness](#). More rarely they can cause sexual problems.

Alpha-blockers are also associated with an increased risk of falling and of breaking a bone (fracture) when they are first started. This is probably because they may lower blood pressure too much in some people. If you are prescribed an alpha-blocker, read the leaflet that comes with the medicine packet for a full list of possible side-effects and cautions.

## How to use the Yellow Card Scheme

If you think you have had a side-effect to one of your medicines you can report this on the Yellow Card Scheme. You can do this online at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard). The Yellow Card Scheme is used to make pharmacists, doctors and nurses aware of any new side-effects that medicines or any other healthcare products may have caused. If you wish to report a side-effect, you will need to provide basic information about:

- The side-effect.
- The name of the medicine which you think caused it.
- The person who had the side-effect.
- Your contact details as the reporter of the side-effect.

It is helpful if you have your medication - and/or the leaflet that came with it - with you while you fill out the report.

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## Further reading

- [British National Formulary \(BNF\)](#); NICE Evidence Services (UK access only)
- [Lower urinary tract symptoms in men: assessment and management](#); NICE Guidelines (June 2015)
- [Wright JM, Musini VM, Gill R](#); First-line drugs for hypertension. Cochrane Database Syst Rev. 2018 Apr 18;4:CD001841. doi: 10.1002/14651858.CD001841.pub3.
- [Belayneh M, Korownyk C](#); Treatment of lower urinary tract symptoms in benign prostatic hypertrophy with alpha-blockers. Can Fam Physician. 2016 Sep;62(9):e523.
- [Campschroer T, Zhu X, Vernooij RW, et al](#); Alpha-blockers as medical expulsive therapy for ureteral stones. Cochrane Database Syst Rev. 2018 Apr 5;4:CD008509. doi: 10.1002/14651858.CD008509.pub3.
- [LUTS in men](#); NICE CKS, March 2024 (UK access only)

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