

Asthma inhalers

Rescue inhalers (or quick-relief inhalers)

You use these medications to ease asthma symptoms. They relax the muscles that tighten around your airways. This helps open them up so you can breathe easier. If you're using this type of medication more than 2 days a week, see your doctor.

- **Short-acting beta-agonists** are the first choice for quick relief of asthma symptoms. They include [albuterol](#) ([ProAir HFA](#), [Proventil HFA](#), [Ventolin HFA](#)), [epinephrine](#) ([Asthmanefrin](#), [Primatene Mist](#)), and [levalbuterol](#) ([Xopenex HFA](#)).



Uses

[Albuterol](#) (also known as salbutamol) is used to prevent and treat [wheezing](#) and shortness of breath caused by [breathing problems](#) (such as [asthma](#), [chronic obstructive pulmonary disease](#)). It is also used to prevent asthma brought on by [exercise](#). It is a quick-relief drug. Albuterol belongs to a class of drugs known as [bronchodilators](#). It works by relaxing the muscles around the airways so that they open up and you can breathe more easily. Controlling symptoms of [breathing problems](#) can decrease time lost from work or school.

How to use Ventolin HFA Aerosol With Adapter

Shake the canister well before using. Follow the instructions for test sprays in the air if you are using a canister for the first time or if you have not used it for 2 weeks or more, or if the [inhaler](#) has

been dropped. A fine mist is a sign that the inhaler is working properly. Avoid spraying the medication in your [eyes](#).

Inhale this medication by [mouth](#) as directed by your doctor, usually every 4 to 6 hours as needed. Dosage is based on your medical condition and response to treatment. Do not increase your dose or use this drug more often than prescribed without your doctor's approval. Using too much of this medication will increase your risk of serious (possibly fatal) side effects.

If you are using this medication to prevent [asthma](#) brought on by [exercise](#), inhale as directed by your doctor, usually 2 puffs 15 to 30 minutes before [exercise](#).

- **Anticholinergics** such as [ipratropium](#) ([Atrovent](#)) lessen [mucus](#) in addition to opening your airways. They take longer to work than short-acting beta-agonists.



Uses

- [Ipratropium](#) is used to control and prevent symptoms ([wheezing](#) and shortness of breath) caused by ongoing [lung disease](#) ([chronic obstructive pulmonary disease-COPD](#) which includes [bronchitis](#) and [emphysema](#)). It works by relaxing the muscles around the airways so that they open up and you can breathe more easily. Controlling symptoms of [breathing problems](#) can decrease time lost from work or school. For preventing symptoms of [lung disease](#), this [medication](#) must be used regularly to be effective. Use your quick-relief [inhaler](#) or nebulized solution (such as [albuterol](#), also called salbutamol in some

countries) for [wheezing](#) or sudden shortness of breath unless otherwise directed by your doctor. Ipratropium does not work as fast as your quick-relief medication, but may sometimes be used together with your quick-relief medication to relieve symptoms of wheezing or sudden shortness of breath if so prescribed by your doctor.

How to use Atrovent Solution

This product should be clear and colorless. Before using, check this product visually for particles or discoloration. If either is present, do not use the liquid.

Inhale this medication into your [lungs](#) using the nebulizer as directed by your doctor, usually 3 to 4 times a day (6 to 8 hours apart). Avoid getting this medication into your [eyes](#). It may cause [eye pain](#)/irritation, temporary [blurred vision](#), and other [vision](#) changes. It is recommended that you use a mouthpiece rather than a face mask with the nebulizer or that you close your [eyes](#) during use. Each treatment usually takes about 5 to 15 minutes. Use this medication only through a nebulizer. Do not swallow or inject the solution. To prevent infections, clean the nebulizer and mouthpiece/face mask according to the manufacturer's directions.

Rinse your [mouth](#) after treatment to prevent [dry mouth](#) and throat irritation.

- **Oral corticosteroids** such as [methylprednisolone](#) and [prednisone](#) lower swelling in your airways.

Uses

- [Prednisone](#) is used to treat conditions such as [arthritis](#), [blood disorders](#), [breathing problems](#), severe [allergies](#), [skin](#) diseases, [cancer](#), [eye problems](#), and [immune system disorders](#). Prednisone belongs to a class of drugs known as corticosteroids. It decreases your [immune system](#)'s response to various diseases to reduce symptoms such as swelling and allergic-type reactions.

- **Combination quick-relief medicines** have both an anticholinergic and a short-acting beta-agonist.

How to use prednisone oral

Take this [medication](#) by [mouth](#), with food or milk to prevent [stomach](#) upset, as directed by your doctor. Take the tablet form of this medication with a full glass of water (8 ounces/240 milliliters) unless your doctor directs you otherwise. If you are using the liquid form of this medication, carefully measure the dose using a special measuring device/spoon. Do not use a household spoon because you may not get the correct dose. If you are prescribed only one dose per day, take it in the morning before 9 A.M.

Take this medication exactly as directed by your doctor. Follow the dosing schedule carefully. The dosage and length of treatment are based on your medical condition and response to treatment. If you are taking this medication on a different schedule than a daily one (such as every other day), it may help to mark your calendar with a reminder.

Do not stop taking this medication without consulting your doctor. Some conditions may become worse when this drug is suddenly stopped.

Preventive long-term medications

These treat symptoms and prevent asthma attacks. They reduce swelling and [mucus](#) in your airways so they're less sensitive and less likely to react to asthma triggers.

- **Inhaled corticosteroids** are the most effective long-term control medicines. These aren't the same as [anabolic steroids](#) that people use to grow muscle. They include [beclomethasone](#) ([Qvar RediHaler](#)), [budesonide](#) ([Pulmicort Flexhaler](#)), [ciclesonide](#) ([Alvesco](#)), [fluticasone](#) ([Flovent HFA](#)), and [mometasone](#) ([Asmanex Twisthaler](#)).



Uses

[Budesonide](#) is used to control and prevent symptoms ([wheezing](#) and shortness of breath) caused by [asthma](#). This [medication](#) belongs to a class of drugs known as corticosteroids. It works directly in the [lungs](#) to make breathing easier by reducing the irritation and swelling of the airways. This medication must be used regularly to be effective. It does not work right away and should not be used to relieve sudden [asthma attacks](#). If an [asthma attack](#) occurs, use your quick-relief [inhaler](#) as prescribed.

How to use Pulmicort Flexhaler 180 Mcg/Actuation Breath Activated

Do not shake this product, and do not use a spacer with it. Hold the device upright while using. If the [inhaler](#) device is dropped or shaken, or if you accidentally breathe into the device after the dose has been loaded, you will lose the dose. Load another dose. Do not use the inhaler if it has been damaged or if the mouthpiece has come off.

Inhale this medication by [mouth](#), usually once or twice daily or as directed by your doctor. Inhale deeply and forcefully while using the device. Turn your [mouth](#) away from the device to breathe out before inhaling. Do not exhale back into the device.

If your prescribed dose is 2 puffs, wait at least one minute between them. If you are using other inhalers at the same time, wait at least 1 minute between the use of each medication, and use this drug (the corticosteroid) last

- **Inhaled long-acting beta-agonists** open your airways by relaxing the smooth muscles around them. You'll take this medication along with an inhaled corticosteroid. They include [formoterol](#), [salmeterol](#), and vilanterol.



Uses

Salmeterol is used as a long-term (maintenance) treatment to prevent or decrease [wheezing](#) and [trouble breathing](#) caused by [asthma](#) or ongoing [lung disease](#) ([chronic obstructive pulmonary disease-COPD](#), which includes [chronic bronchitis](#) and [emphysema](#)). It should only be used long-term if your [asthma symptoms](#) are not controlled by your other [asthma medications](#) (such as inhaled corticosteroids). Salmeterol must not be used alone to treat asthma.

- **Combination inhaled medicines** have an inhaled corticosteroid along with a long-acting beta-agonist. This is an easy way to take them together. They include [Advair](#), [Breo](#), [Dulera](#), and [Symbicort](#).

How to use Symbicort turbuhaler

Turbuhalers can be used by children over 8, and adults.

1. Unscrew the cap of the turbuhaler anticlockwise and lift off.



2. Hold the turbuhaler upright. Load it by turning the coloured base of the turbuhaler to the right as far as it will go.



3. Then twist it back to the left until it clicks. It is now loaded.



4. Breathe out gently, away from turbuhaler. Hold the turbuhaler without covering the air inlets and put the tip of the mouthpiece between your lips. Be sure you make a good seal. Breathe in quickly

and deeply through your mouth and hold your breath for 5–10 seconds.



5. Remove the turbuhaler from your mouth and breathe out. Replace the cap and screw it shut.



If another dose is required, repeat steps 1 to 5.

Note: you will not get more than one dose at a time.

You must inhale the medicine before loading the device again

How Do You Take Asthma Medications?

Asthma inhalers

Asthma inhalers are the most common and effective way to deliver [asthma medicine](#) to your lungs. They're available in several types that work in different ways. Some deliver one medication. Others contain two medications. Your doctor might give you:

- A metered-dose inhaler, which uses a small aerosol canister to push out a short burst of medication through a plastic mouthpiece



- A dry powder inhaler, which releases the medicine only when you take a deep breath



Advair Diskus Blister

Uses

This product is used to control and prevent symptoms ([wheezing](#) and shortness of breath) caused by [asthma](#) or ongoing [lung disease](#) ([chronic obstructive pulmonary disease-COPD](#), which includes [chronic bronchitis](#) and [emphysema](#)). It contains 2 [medications](#): [fluticasone](#) and

salmeterol. Fluticasone belongs to a class of drugs known as corticosteroids. It works by reducing the irritation and swelling of the airways. Salmeterol belongs to the class of drugs known as long-acting beta agonists. It works by relaxing the muscles around the airways so that they open up and you can breathe more easily. Controlling symptoms of [breathing problems](#) can decrease time lost from work or school. When used alone, long-acting beta agonists (such as salmeterol) may rarely increase the risk of serious (sometimes fatal) asthma-related [breathing problems](#). However, combination inhaled corticosteroid and long-acting beta agonists, such as this product, do not increase the risk of serious asthma-related breathing problems. For [asthma treatment](#), this product should be used when breathing problems are not well controlled with one asthma-control [medication](#) (such as inhaled corticosteroid) or if your symptoms need combination treatment. Before using this medication, it is important to learn how to use it properly. This medication must be used regularly to be effective. It does not work right away and should not be used to relieve sudden [asthma attacks](#). If an [asthma attack](#) occurs, use your quick-relief [inhaler](#) (such as [albuterol](#), also called salbutamol in some countries) as prescribed.

• How to use Advair Diskus Blister, With Inhalation Device

Read the Patient Information Leaflet and Instructions for Use provided by your [pharmacist](#) before you start using this [medication](#) and each time you get a refill. Follow the illustrated directions for the proper use of this medication. If you have any questions, ask your doctor or pharmacist.

Depending on your brand, the [inhaler](#) should be used in a level, flat position or in a vertical position. Inhale this medication by [mouth](#) as directed by your doctor, usually twice daily (in the morning and evening, 12 hours apart). You may or may not taste/feel the drug when you inhale. Either is normal. Do not exhale into the device.

Do not take the inhaler apart or wash the mouthpiece or any part of the device. Close the device after each use.

If you are using other inhalers at the same time, wait at least 1 minute between the use of each medication, and use this drug last.

To prevent [dry mouth](#), hoarseness, and oral [yeast infections](#) from developing, gargle, rinse your [mouth](#) with water and spit out after each use. Do not swallow the rinse water.

The dosage is based on your medical condition, age, and response to treatment.

Use this medication regularly in order to get the most benefit from it. This medication works best if used at evenly spaced times. To help you remember, use it at the same times each day. Do not increase your dose, use this medication more often, or stop using it without talking with your doctor. Also, do not use other long-acting beta agonists while using this medication.

If you have been using a quick-relief inhaler (such as [albuterol](#), also called salbutamol in some countries) on a regular daily schedule (such as 4 times daily), you must stop this schedule and only use the quick-relief inhaler as needed for sudden shortness of breath/[asthma attacks](#). Consult your doctor for details.

If you are regularly taking a different corticosteroid by [mouth](#) (such as [prednisone](#)), you should not stop taking it unless directed by your doctor. Some conditions (such as [asthma](#), [allergies](#)) may become worse when the drug is suddenly stopped. If you suddenly stop taking the drug, you may also have withdrawal symptoms (such as [weakness](#), [weight loss](#), [nausea](#), [muscle pain](#), [headache](#), tiredness, [dizziness](#)). To help prevent withdrawal, your doctor may slowly lower the dose of your old medication after you begin using [fluticasone](#)/salmeterol. Tell your doctor or pharmacist right away if you have withdrawal.

It may take 1 week or longer before you get the full benefit of this drug. Tell your doctor if your condition does not improve or if it worsens.

Learn which of your inhalers you should use every day (controller drugs) and which you should use if your breathing suddenly worsens (quick-relief drugs). Ask your doctor ahead of time what you should do if you have new or worsening [cough](#) or shortness of breath, [wheezing](#), increased

sputum, worsening [peak flow meter](#) readings, waking up at night with [trouble breathing](#), if you use your quick-relief inhaler more often (more than 2 days a week), or if your quick-relief inhaler does not seem to be working well. Learn when you can treat sudden [breathing problems](#) by yourself and when you must get medical help right away.



Chronic obstructive pulmonary disease (COPD)

There's currently no cure for chronic obstructive pulmonary disease (COPD), but treatment can help slow the progression of the condition and control the symptoms.

Treatments include:

- stopping smoking – if you have COPD and you smoke, this is the most important thing you can do
- inhalers and tablets – to help make breathing easier
- pulmonary rehabilitation – a specialised programme of exercise and education
- surgery or a [lung transplant](#) – although this is only an option for a very small number of people

A doctor will discuss the various treatment options with you.

[Stop smoking](#)

If you smoke, stopping is the most effective way to prevent COPD getting worse.

Although any damage done to your lungs and airways cannot be reversed, giving up smoking can help prevent further damage.

This may be all the treatment that's needed in the early stages of COPD, but it's never too late to stop – even people with more advanced COPD will benefit from quitting.

If you think you need help to stop smoking, you can contact [NHS Smokefree](#) for free advice and support. You may also want to talk to a GP about the [stop smoking treatments](#) available to you.

Find out more about stop smoking support or [find a stop smoking service near you](#).

Inhalers

If COPD is affecting your breathing, you'll usually be given an inhaler. This is a device that delivers medicine directly into your lungs as you breathe in.

A doctor or nurse will advise you on how to use an inhaler correctly and how often to use it.

There are several different types of inhaler for COPD. The main types include:

Short-acting bronchodilator inhalers

For most people with COPD, short-acting [bronchodilator](#) inhalers are the first treatment used.

Bronchodilators are medicines that make breathing easier by relaxing and widening your airways.

There are 2 types of short-acting bronchodilator inhaler:

- beta-2 agonist inhalers – such as [salbutamol](#) and terbutaline
- antimuscarinic inhalers – such as ipratropium

Short-acting inhalers should be used when you feel breathless, up to a maximum of 4 times a day.

Long-acting bronchodilator inhalers

If you experience symptoms regularly throughout the day, a long-acting bronchodilator inhaler will be recommended.

These work in a similar way to short-acting bronchodilators, but each dose lasts for at least 12 hours, so they only need to be used once or twice a day.

There are 2 types of long-acting bronchodilator inhaler:

- beta-2 agonist inhalers – such as salmeterol, formoterol and indacaterol

- antimuscarinic inhalers – such as tiotropium, glycopyrronium and aclidinium

Some new inhalers contain a combination of a long-acting beta-2 agonist and antimuscarinic.

Steroid inhalers

If you're still becoming breathless when using a long-acting inhaler, or you have frequent flare-ups (exacerbations), a GP may suggest including a steroid inhaler as part of your treatment.

[Steroid inhalers](#) contain [corticosteroid medicines](#), which can help to reduce the inflammation in your airways.

Steroid inhalers are normally prescribed as part of a combination inhaler that also includes a long-acting medicine.

Tablets

If your symptoms are not controlled with inhalers, a doctor may recommend taking tablets or capsules as well.

Theophylline tablets

Theophylline is a type of bronchodilator. It's unclear exactly how theophylline works, but it seems to reduce swelling (inflammation) in the airways and relax the muscles lining them.

Theophylline comes as tablets or capsules and is usually taken twice a day.

You may need to have regular blood tests during treatment to check the level of medicine in your blood.

This will help a doctor work out the best dose to control your symptoms while reducing the risk of side effects.

Possible side effects include:

- feeling and being sick
- [headaches](#)
- difficulty sleeping ([insomnia](#))
- noticeable pounding, fluttering or irregular heartbeats ([palpitations](#))

Sometimes a similar medicine called aminophylline is also used.

Mucolytics

If you have a persistent chesty cough with lots of thick phlegm, the doctor may recommend taking a mucolytic medicine called [carbocisteine](#).

Mucolytic medicines make the phlegm in your throat thinner and easier to cough up.

Carbocisteine comes as tablets or capsules and is usually taken 3 or 4 times a day.

If carbocisteine does not help your symptoms, or you cannot take it for medical reasons, another mucolytic medicine called acetylcysteine is available.

This comes as a powder that you mix with water. Acetylcysteine powder has an unpleasant smell, like rotten eggs, but this smell should go away once you mix it with the water.

Steroid tablets

If you have a particularly bad flare-up, you may be prescribed a short course of [steroid tablets](#) to reduce the inflammation in your airways.

A 5-day course of treatment is usually recommended, as long-term use of steroid tablets can cause troublesome side effects such as:

- weight gain
- mood swings
- weakened bones ([osteoporosis](#))

Your doctor may give you a supply of steroid tablets to keep at home to take as soon as you experience a bad flare-up.

Longer courses of steroid tablets must be prescribed by a COPD specialist. You'll be given the lowest effective dose and monitored closely for side effects.

Antibiotics

Your doctor may prescribe a short course of [antibiotics](#) if you have signs of a chest infection, such as:

- becoming more breathless
- coughing more
- noticing a change in the colour (such as becoming brown, green or yellow) and/or consistency of your phlegm (such as becoming thicker)

Sometimes you may be given a course of antibiotics to keep at home and take as soon as you experience symptoms of an infection.

Pulmonary rehabilitation

Pulmonary rehabilitation is a specialised programme of exercise and education designed to help people with lung problems such as COPD.

It can help improve how much exercise you're able to do before you feel out of breath, as well as your symptoms, self-confidence and emotional wellbeing.

Pulmonary rehabilitation programmes usually involve 2 or more group sessions a week for at least 6 weeks.

A typical programme includes:

- physical exercise training tailored to your needs and ability – such as walking, cycling and strength exercises
- education about your condition for you and your family
- dietary advice
- psychological and emotional support

The programmes are provided by a number of different healthcare professionals, including [physiotherapists](#), nurse specialists and dietitians.

The British Lung Foundation has more information about [pulmonary rehabilitation](#).

Improving muscle strength

If you are having a bad flare-up and are unable to exercise, you may be offered electrical stimulation to make your muscles stronger.

This is where electrodes are placed on your skin and small electrical impulses are sent to weak muscles, usually in your arms or legs.

Other treatments

If you have severe symptoms or experience a particularly bad flare-up, you may sometimes need additional treatment.

Nebulised medicine

Nebulised medicine may be used in severe cases of COPD if inhalers have not worked.

This is where a machine is used to turn liquid medicine into a fine mist that you breathe in through a mouthpiece or a face mask. It enables a large dose of medicine to be taken in one go.

You'll usually be given a nebuliser device to use at home after being shown how to use it.

Roflumilast

Roflumilast is a new medicine that can be used to treat flare-ups.

It is recommended for people whose symptoms have suddenly become worse at least 2 times over the past 12 months, and who are already using inhalers.

Roflumilast comes as tablets and the medicine helps reduce inflammation inside the lungs and airways.

Side effects of roflumilast include:

- feeling and being sick
- diarrhoea
- reduced appetite
- weight loss
- headache

Long-term oxygen therapy

If COPD causes a low level of oxygen in your blood, you may be advised to have oxygen at home through nasal tubes or a mask.

This can help stop the level of oxygen in your blood becoming dangerously low, although it's not a treatment for the main symptoms of COPD, such as breathlessness.

Long-term oxygen treatment should be used for at least 16 hours a day.

The tubes from the machine are long, so you will be able to move around your home while you're connected. Portable oxygen tanks are available if you need to use oxygen away from home.

Do not smoke when using oxygen. The increased level of oxygen is highly flammable and a lit cigarette could cause a fire or explosion.

Find out more about [home oxygen therapy](#).

Ambulatory oxygen therapy

Some people with COPD will benefit from ambulatory oxygen, which is oxygen you use when you walk or are active in other ways.

If your blood oxygen levels are normal while you're resting but fall when you exercise, you may be able to have ambulatory oxygen therapy rather than long-term oxygen therapy.

Non-invasive ventilation (NIV)

If you're taken to hospital because of a bad flare-up, you may have a treatment called non-invasive ventilation (NIV).

This is where a portable machine connected to a mask that covers your nose or face is used to support your lungs and make breathing easier.

Surgery

Surgery is usually only suitable for a small number of people with severe COPD whose symptoms are not controlled with medicine.

There are 3 main operations that can be done:

- bullectomy – an operation to remove a pocket of air from one of the lungs, allowing the lungs to work better and make breathing more comfortable
- lung volume reduction surgery – an operation to remove a badly damaged section of lung to allow the healthier parts to work better and make breathing more comfortable
- [lung transplant](#) – an operation to remove and replace a damaged lung with a healthy lung from a donor

These are major operations done under [general anaesthetic](#), where you're asleep, and involve significant risks.

If your doctors feel surgery is an option for you, speak to them about what the procedure involves and what the benefits and risks are.

Resources:

<https://www.webmd.com/asthma/asthma-treatments>

<https://www.nhs.uk/conditions/chronic-obstructive-pulmonary-disease-copd/>

<https://www.webmd.com/drugs/2/drug-20538/advair-diskus-inhalation/>