



Nebulisers

This information is for people who have been prescribed a nebuliser and want to know more about it. Find out what a nebuliser is, what it's used for and who can benefit from using one as part of their treatment.

Got more questions? Give our friendly helpline team a ring on [03000 030 555](tel:03000030555).

What is a nebuliser?

A nebuliser is a machine that turns liquid medicine into a fine mist. You then breathe in the mist through a mask or mouthpiece. A nebuliser comes in four parts:

- a small plastic container (the nebuliser chamber)
- an air compressor (the nebuliser machine)
- a length of air tubing
- a facemask, or a mouthpiece.

The compressor forces air through the liquid medicine that sits in the chamber. This turns the liquid medicine into a fine mist. The mist is breathed in through the facemask or mouthpiece, through the connecting tube.

What's a nebuliser used for?

Most people use handheld inhalers to take prescribed regular inhaled medication.

You may use a nebuliser to inhale medication to clear your airways or to treat infections:

- **in an emergency**, if you are struggling to breathe and need a high dose of your reliever medicine - paramedics or hospital staff may give you reliever medicine through a nebuliser.
- **at home if your condition is very severe**, and you are unable to use an inhaler or inhalers are not as effective as nebulised medicine.
- **if you can't use an inhaler** because of another health condition, such as arthritis. Nebulisers are also used for babies and very small children.

For most people with lung conditions, especially for people living with COPD and asthma, using a handheld inhaler is easier and just as effective, especially if used with a spacer. But if you live with certain lung conditions, like cystic fibrosis or bronchiectasis, your health care professional may arrange for you to use a nebuliser at home. Read more about who could benefit from using a nebuliser as part of their treatment.

What are the different types of nebulisers?

There are a many different types of nebulisers available. Two of the most common are:

- **Ultrasonic nebulisers:** these use high-frequency vibrations to make an aerosol. Ultrasonic nebulisers can be expensive and are not often used outside hospitals.
- **Jet nebulisers:** these use compressed gas to make an aerosol. Jet nebulisers are the most commonly used type of nebuliser.

Nebuliser medications are usually administered through a mask. For some people with some medications, you may be advised to use a mouthpiece as this prevents possible side effects if a medication gets in your eyes or on your skin. Mouthpieces may also be the best way to deliver the maximum amount of medication. For example, if you have bronchiectasis, to get the most saltwater solution into your lungs to help clear mucus. Check with your health care professional if you're not sure if you should use a mask or mouthpiece with your nebuliser.

What's the difference between a nebuliser, spacer and inhaler?

Alongside a nebuliser, treatment for your lung condition may include inhalers and the use of a spacer.

What is an inhaler?

If you have a lung condition, as part of your treatment you may inhale medications to clear your airways, relieve your symptoms and prevent flare-ups.

Inhalers are a common method of delivering inhaled medication. You can read more about inhalers and watch videos on how to use them correctly to get the best benefit, on our sister charity's website Asthma UK (www.asthma.org.uk). It's very important to have your inhaler technique checked on a regular basis to make sure it's correct and effective.

What is a spacer?

A spacer is a large, empty container usually made of plastic that you fix to an inhaler. They are used with metered dose inhalers (MDIs) to help you get more medication straight into your lungs. You can read more about spacers on our sister charity's website, Asthma UK.

Who can benefit from using a nebuliser?

Does my lung condition mean I should be using a nebuliser?

As part of your treatment for your lung condition, you might be offered medications delivered by a nebuliser. This will be specific to your condition. Not all lung conditions require treatment by nebuliser.

Nebulisers can also be used in palliative care and to give drugs to very young children, such as those with viral bronchiolitis.

Bronchiectasis

For people with bronchiectasis, nebulisers can be used to deliver saltwater solution to help manage mucus build up. It works by helping to reduce the thickness of phlegm so it's easier to cough it out. Nebulisers can also be used to deliver antibiotics if you have a bacterial infection. Read more about how bronchiectasis is treated at www.blf.org.uk/support-for-you/bronchiectasis/treatment

Cystic fibrosis

Nebulisers are used to deliver medications to manage the build-up of mucus and other symptoms if you have cystic fibrosis. We have more information on how cystic fibrosis is treated for you to read at www.blf.org.uk/support-for-you/cystic-fibrosis/treatment

Chronic obstructive pulmonary disease (COPD)

For people with COPD, there is no evidence that nebulisers are more effective at delivering drugs than handheld inhalers as part of your usual treatment. But you may use a nebuliser in hospital for a short time if you have a severe flare-up. Your consultant may decide to arrange a nebuliser for you to use at home in some circumstances. Read more about how COPD is treated at www.blf.org.uk/support-for-you/copd/treatment

Asthma

If you have asthma, your health care professional is very unlikely to say you need to use a nebuliser at home. The latest research shows using a reliever inhaler with a spacer is easier and just as effective. You can read more about the different treatments for asthma on our sister charity's website, Asthma UK at www.asthma.org.uk/advice/inhalers-medicines-treatments

Pulmonary fibrosis

For people with pulmonary fibrosis, including idiopathic pulmonary fibrosis (IPF), saltwater solution can be used to help manage mucus build-up. Read more about treatment for pulmonary fibrosis at www.blf.org.uk/support-for-you/pulmonary-fibrosis/treatment

What medications are delivered by nebulisers?

A number of different medications can be given using a nebuliser, including:

- bronchodilators - drugs that open up your airways
- hypertonic saline solutions (medical grade saltwater solutions) - these loosen mucus in your airways and make it easier to cough up. Not everyone will be able to tolerate saline well, and respiratory teams will test this before prescribing it as a treatment method
- antibiotics to treat and prevent infections.

If your health care professional prescribes you nebulised antibiotics alongside other nebulised medication, they will give you the specialist equipment you need (such as tubing and filters) and tell you how to use it.

For most people, daily inhaled medications can't all be delivered by nebuliser. For example, some people with COPD will be prescribed an inhaled steroid to use daily. This medication can only be given by inhaler and cannot be used in a nebuliser.

Only use the nebuliser to take the medicine prescribed specifically for you to use in it. Read more about using your nebuliser safely.

Using a nebuliser at home

You should only use a nebuliser at home if **all** of the following apply:

- your health care professional has recommended one for you
- your health care professional prescribes medications to use with it
- you (and your carer, if you have one) are trained to use it
- you (and your carer, if you have one) understand the risk of infection and know how to clean and dry the nebuliser parts thoroughly to avoid infection.

Can I get a nebuliser from the NHS to use at home?

Medications used with a nebuliser is provided on prescription, but the nebuliser machine itself isn't always available on the NHS.

In some areas, if your consultant or specialist respiratory clinic decides you would benefit from using a nebuliser at home, they may arrange this for you. In this case, you may be loaned a nebuliser by the hospital or a community respiratory service. They will usually be responsible for its service and maintenance, but you should check this.

If your health care professional arranges a nebuliser for you, it is important they arrange for you and your carer to be trained to use it. You should also be shown how to look after it and how to make sure it is working properly.

Sometimes a local respiratory service may provide the device without charge, but if this isn't an option, you may have to pay for a device. If you have to buy it yourself, ask your local pharmacist or health care professional for advice on which one to buy.

Using your nebuliser safely

You should have a plan agreed with your health care professional about when to use your nebuliser. You should also discuss possible side effects. Your plan should also cover what to do in an emergency, if the nebuliser breaks down, or is very slow.

Always use your nebuliser exactly how your health care professional has shown you and only use the medication that has been prescribed for it.

If you're using a facemask to breathe in the mist, make sure the mask fits you properly. This will avoid the medication inadvertently leaving the mask and irritating your eyes. If you use a mouthpiece, seal your lips tightly around it and breathe through your mouth, not your nose.

Even when using a nebuliser correctly, it's possible for small amounts of medication to be released in the air around you. To avoid people around you accidentally breathing in the medication, make sure your face mask is sealed tightly and you use your mouthpiece correctly. Try to keep the room you use your nebuliser in well-ventilated, by opening windows and doors.

Sit up as straight as you can and breathe in a normal, relaxed way. Using a nebuliser normally takes between 10 and 15 minutes.

Top tips for using your nebuliser safely

- As with all electrical equipment, your nebuliser machine must not come in contact with water or other liquid while connected to the mains electricity.
- Don't use or store your nebuliser in a room that's very dusty or very smoky.
- When using the nebuliser, place it on a clean, flat table surface – don't use it on a carpet or rug, as fibres could be drawn into the nebuliser while you're using it.
- Keep all parts of your nebuliser (including the tubing) away from children and pets.
- Don't try and modify your nebuliser and don't cover the air intake grills on the nebuliser machine.
- If your machine has a filter in it, make sure you know how to change it and how frequently it should be changed. Ask your health care professional for more information or if you're not sure.

Cleaning your nebuliser

All nebulisers need to be maintained and cleaned. If your health care professional arranges one for you, make sure they give you information about this. If you buy your own nebuliser, get advice from your hospital or the manufacturer about maintenance and cleaning before you buy it.

It can be time-consuming to clean and maintain your machine, so you'll need to build this into your routine. It's important to clean and dry your nebuliser thoroughly every day if you use one regularly. You should not wash the tubing that connects the nebuliser to the chamber – only the mask and chamber need washing.

Wash your nebuliser after each use by:

- washing your hands
- disconnecting the mask, mouthpiece and chamber
- washing the individual parts in warm soapy water and rinsing with clean water
- shaking off excess water and leaving the parts to air dry on a clean tissue or kitchen paper towel – don't be tempted to manually dry the inside of the parts, especially the chamber, as this can create static charge causing the medication to stick inside and not be delivered correctly.

Make sure you know how to correctly put the pieces back together. You may also be advised to disinfect the nebuliser regularly.

Parts such as mouthpieces, masks, tubing, filters and the nebuliser's chamber need to be changed regularly, at least every three to four months.

To avoid cross infection, you should never use other people's mouthpieces, masks or tubing.

Risk of infection from nebulisers

Hospitals assess the risk of infections caused by using nebulisers and have clear procedures to avoid spreading infections. These may include using nebulisers or their parts only once, and processes to clean and decontaminate them. At home, you should also be aware of the risk of infection. Nebulisers can be contaminated by infections in your airways and bacteria in the environment. Any fluid left in a nebuliser can easily grow bacteria. So, it is very important you know how to clean and dry your nebuliser after every use.

Travelling with a nebuliser

If you need a nebuliser when you are away from home, tell your health care professional you plan to travel. Ask about getting a travel nebuliser and about a prescription for the medication you will need.

It's very important to continue to use your nebuliser safely when you're away from home. Make sure you bring with you everything you need to clean the device and service it correctly. If you're travelling outside of the UK, don't forget your travel adaptor!

Have a look at our information about going on holiday with a lung condition for more tips at www.blf.org.uk/support-for-you/going-on-holiday

Get in touch with us to find support near you.

Helpline: **03000 030 555**

Monday to Friday, 9am-5pm

Ringing our helpline will cost the same as a local call.

helpline@blf.org.uk

blf.org.uk

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blf.org.uk/nebulisers

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We value feedback on our information. To let us know your views, and for the most up to date version of this information and references, call the helpline or visit **blf.org.uk**