

## Nebulisers

You should only use a nebuliser if your doctor has advised you to do so.

This information sheet is designed for people already using a nebuliser and is only intended to be used as a guide. You should always discuss the use of your medicines with your doctor or nurse.

A nebuliser is a powerful drug delivery system. It should only be used if your doctor has specifically recommended that you would benefit from this form of treatment and even then, only under careful medical supervision.

Do not buy, borrow or use a nebuliser without seeking medical advice.

### What is a nebuliser?

There are three parts to a nebuliser:

**1. FACE MASK OR MOUTHPIECE.**

There is a choice. In consultation with your doctor or nurse, choose which is best for you.

**2. NEBULISER CHAMBER:**

This is a small chamber in which a liquid drug is turned into a fine 'mist' or aerosol, which you can inhale into your lungs.

**3. COMPRESSOR:**

This is the power source responsible for pressurising the air to produce the aerosol.

We often mistakenly refer to the compressor as the nebuliser. This only confuses things.

The nebuliser and the drugs used within it are available on prescription through the NHS. Usually the compressor is not.

Most compressors are connected to the mains electricity supply (220 to 240 volts) but portable compressors are available. These can be charged from a 12 volt supply (e.g. a special rechargeable battery, or attached to a car cigarette lighter socket).

You can operate some nebulisers with a foot pump, so you don't need a powered compressor. These nebulisers may be a useful back up, since they are less expensive (see the information sheet 'Nebuliser Suppliers' for a contact list).

## Medications used in nebulisers

Nebulisers are most commonly used by people with asthma or COPD to take relievers such as salbutamol, terbutaline or ipratropium (Atrovent), at a high dose.

Generally, you can get the same effect by taking four to six puffs from an inhaler with a large volume spacer (a large plastic or metal container, with a mouthpiece at one end and a hole for your aerosol inhaler at the other - it helps the inhaler get more medicine into your lungs).

It's rare for a nebuliser to be more effective than an inhaler-spacer combination - unless you find spacers very difficult to use.

**Other medications used in nebulisers are:**

- **Saline** - helps you cough-up sticky phlegm (usually given by the physiotherapist in hospital)
- **Steroids** (usually budesonide) - a nebuliser is occasionally used to deliver high doses of steroids
- **Antibiotics** - people with bronchiectasis (a condition where there is scarring and distortion of the bronchial tubes (airways) which reduces the ability of the tubes to clear mucus) occasionally use a nebuliser to deliver antibiotics
- **Dornase alpha** - sometimes helps to liquefy phlegm in cystic fibrosis
- **Morphine and similar drugs** - may be given as part of terminal care when breathlessness cannot be treated in any other way.

n.b Medications used with nebulisers are very expensive compared to inhaler-spacer combinations.

## Caution when using nebulised drugs; you should be aware that

- Relying on a nebuliser may be potentially dangerous, particularly for asthmatics. If you are feeling more breathless than usual and your reliever is ineffective, taking extra doses of nebulised relievers will only disguise and delay the need to seek medical advice. Your tight chest is a warning sign telling you to increase your preventer treatment, possibly take a course of steroids and contact your doctor
- Do not use more reliever (e.g. salbutamol) than you have been prescribed. A higher dose will only increase side effects.

## Self-management for people with asthma and COPD

While using a nebuliser, it is particularly important to have your own individual, written self-management plan agreed by your doctor or nurse so that you know what to do if your condition gets worse. It should include what to do in an emergency and how to recognise danger signs, such as when:

- your normal dosage of reliever is not working
- you need a reliever (e.g. salbutamol) more often than usual

- you are waking at night with breathlessness.

Also, ask your doctor or nurse to write out instructions on how to use your nebuliser whether you buy, hire or are loaned a compressor with a nebuliser unit.

These should include:

- Setting up the nebuliser
- Keeping it clean, getting it serviced and getting it repaired
- How much medicine to use, when to take it and for how long
- How to put the medicine in the nebuliser.

With your doctor, practice nurse or other healthcare professional, you should practice putting the whole nebulised drug delivery system together and using it. It is useful to have a family member present to help you remember. If you have any questions, ask your doctor, pharmacist, physiotherapist, respiratory nurse or local lung function laboratory.

Remember:

- A tiny drop of nebuliser solution is always left at the bottom of the nebuliser chamber after use
- Tap the nebuliser chamber when using it. This displaces large droplets
- When using the compressor put it on a clean, hard surface, such as a table
- Always keep the compressor off the floor to prevent dust getting inside.

## Taking care of your nebuliser equipment

- You should have your compressor checked and maintained about twice a year and the nebuliser chamber about every two months
- You may need to change your filters more regularly
- You should also enquire about service arrangements and emergency provision if your existing compressor develops a fault
- Ask the manufacturer or your local lung function laboratory how often you need to change the inlet and the outlet filters (if fitted) Usually the filter needs changing when it becomes discoloured.

Remember:

- Some hospitals have a nebuliser service providing help and advice on the care of your nebuliser. Find out if your local hospital has such a service. It is often operated by the lung function laboratory
- If you are without a compressor while yours is being serviced, your manufacturer, doctor or nurse may lend you one
- You should have some back-up in case your compressor fails. As mentioned above, an inhaler with a large volume spacer will generally give a similar level of relief.

## Keeping your nebuliser equipment clean

Your nebuliser equipment may not work properly if it becomes dirty. You should care for all the parts of your equipment, especially the 'nebuliser chamber' (where the solution is changed into a 'mist'). Ask your doctor/lung function laboratory/respiratory nurse to go through carefully how to keep your delivery system clean

Some helpful tips include:

- Wash the 'nebuliser chamber' daily in clean, warm water. Rinse and dry
- Wash the face mask or mouthpiece about two to three times per week in warm water, rinse and leave to dry
- Clean the case of the compressor with a moist cloth. The compressor must be turned off at the mains before doing this.

## Traveling or going on holiday

- Take enough medicine to cover your holiday
- Take extra emergency medicines with you
- Make sure that your insurance will cover your equipment and any problems you may have while away
- If travelling abroad, take a letter from your doctor explaining your condition and your need for a nebuliser. You may need to give this to your airline when you book and also to show customs or security
- If flying, check with the airline that your needs will be met
- If you are visiting another country, take an adaptor (and alternative plugs) to run your compressor on a different voltage
- Hire a portable compressor which runs on batteries or a car cigarette lighter.

## Buying a nebuliser

Most people have to buy their own nebuliser. Even if a doctor recommends a nebuliser for you, they cannot prescribe one on the NHS. If a hospital consultant decides that a nebuliser is necessary, they can sometimes access NHS funding, but this funding is not guaranteed.

Although nebulisers are not exempt from VAT, you will be exempt if your doctor has recommended that you buy one. Check with the manufacturer how to claim VAT at zero rate for your nebuliser. They may have a form for you to complete or you may need a letter from your doctor. Pharmacies and GP surgeries ordering nebulisers are not normally exempt from VAT.

Last medically reviewed: November 2007