

Nebulisers

A nebuliser is a device that changes liquid medication into an aerosol, or mist, so that it can be inhaled. Nebulisers are used to deliver medication directly to the lungs, with less side-effects. This is particularly useful in cystic fibrosis (CF) as more medication can be delivered where it is needed most.

Why do I need to use a nebuliser?

You may have been asked to start taking a medication that is only available in nebulised form or is more effective when nebulised as it is going straight to the lungs. Your CF team will let you know the dosage and frequency of your medication.

What do I need to know before I start using a nebuliser?

Make sure your handset is clean and dry before adding medication to the chamber, or before storing, after use.

You must use a different nebuliser handset for each medication you are nebulising. Never mix medications in your medication chamber unless you have been told to do so by your CF team.

Nebulisers can be used with a mask or a mouthpiece, so discuss your options with your CF team to make sure you have the right equipment. When using a mouthpiece, make sure you completely seal your lips. You may need to add in a nose peg to ensure you are not breathing through your nose. Babies and young children will need to use a mask until they learn to use a mouthpiece.

Most nebulisers leave a small amount of medication in the chamber once the dose has been delivered. This is called the residual volume and is does not need to be nebulised. Once the dose is completed, empty the residual volume before cleaning. Do not reuse this medication.

Some nebulisers do not take batteries and need a mains power source to work, so make sure you have checked out what you need before picking up your nebuliser.

What are the different types of nebulisers?

The main types of nebulisers used in the CF clinics in Western Australia are air compressors and vibrating mesh nebulisers.

Air compressor nebuliser: a conventional nebuliser that works by pumping air into the liquid medication to change it into a mist. An example of this is the Pari Boy® SX. It is mains powered, easy to use and suitable for all ages. In some situations, it can be used in combination with your mouthpiece PEP device. Ask your physio for more information.

Vibrating mesh nebuliser: the Aeroneb® Go and the Eflow® Rapid nebulisers are both examples of vibrating mesh devices. They are quiet and smaller than conventional nebulisers, with faster treatment times, and can be run on batteries or a power cord. They are not suitable for all nebulised medications.

If you are not sure whether you have the right nebuliser for you, talk to your CF team about your options.

Which medications can be nebulised?

Some of the medications that may be nebulised include:

- Bronchodilators- to relax the muscles in the airways
- Antibiotics- to treat infection in the lungs
- Mucolytics- to thin the mucus so that it is easier to clear
- Antifungals- to reduce fungal growth in the lungs

Cleaning your nebuliser

It is very important that you read the instructions provided with your device for specific cleaning information. In general, the medication chamber, or handset, should be cleaned every time you use it. This can be done by washing in warm soapy water, rinsing in running water and leaving to air dry. Equipment must be completely dry before reusing or storing.

Your handset should be sterilised weekly in boiling water for 5 minutes or you can use a steam steriliser.

CFWA support

CFWA have a range of nebulisers available for loan to children. Equipment available at any given time varies, as it is dependent on grant funding. Nebulisers are loaned in consultation with the CF team at Princess Margaret Hospital (PMH).

If you are an adult with CF, or have a child with CF, and are considering buying your own nebuliser device, you may be able to access one of our subsidies.

CFWA also have a support program available for young children who are using nebulisers. Our Homecare Workers may be able to visit you at home to help administer nebulised medications. If you are interested in this service or would like more information about loaning, buying or using a nebuliser please contact us at CFWA.

Useful Resources

- Cleaning video <https://vimeo.com/176915729>
- Nebuliser systems for drug delivery in cystic fibrosis
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007639.pub2/abstract>

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