

USING A NEBULIZER



Being able to breathe freely is not just important for good health; it is essential for good quality of life—being able to speak easily, move around, go outside, and participate in social activities. This video describes using a nebulizer, which is one way to improve breathing for people with chronic lung conditions such as asthma, emphysema, and COPD (chronic obstructive pulmonary disease). For videos on other ways, such as using inhalers and oxygen therapy, go to www.aarp.org/nolongeralone.

A *nebulizer* is a small machine that pushes air through a liquid medication and turns it into a mist. (The word derives from the Latin *nebula*, meaning “mist.”) The person breathes the mist into the lungs using a mask or a mouthpiece. The nebulizer used in the video is a typical product, but there are many nebulizers on the market. Be sure to read the manual that comes with the nebulizer machine. Unless a nurse comes to the home from a home health care agency, you will have to set up the nebulizer yourself by following the instructions in the package.

A health care provider’s prescription is required to obtain a nebulizer. Medicare, Medicaid, and most private insurance policies cover nebulizers, and usually the needed medications. Medicare’s coverage is under Part B for Durable Medical Equipment, which has a 20 percent copay after a deductible. A health care provider must provide a detailed medical history of your family member or friend and an explanation of why the nebulizer is needed, as well as information about the dosage, length of time the nebulizer will be needed, and other details.

Operating a Nebulizer

The nebulizer operates on batteries or a wall plug. A plastic tube connects the *compressor* (the part of the machine that blows air to turn the medication into mist) to the medicine cup. Inside the medicine cup there may be a small cone called a *vaporizer* that helps create the mist. The medicine cup is covered by a cap that attaches it to the tubing or mouthpiece. Keep all the equipment together in a clean container or ziplock bag so that it is easy to find and ready to use.

Find a comfortable place for your family member or friend to sit. The treatment will usually take 10 to 15 minutes.

Clean a space on the table or counter for the nebulizer and medicine. Plug the compressor into a wall outlet but leave it turned off. A battery-operated nebulizer can be used when you are not near an electrical outlet.

1. Wash your hands thoroughly.
2. Prepare the medicine, which will be a liquid. If it is provided in a single-dose pack, simply open the package and pour the medicine into the nebulizer’s medicine cup. If the medicine is in a multidose package, carefully draw up the prescribed dose with a clean syringe, then squirt this medicine into the cup. Add the correct amount of saline solution into the cup to dilute it if this is prescribed. Measure the dose carefully—adding more or using less could be harmful.
3. Once the medicine is in the medicine cup, attach the cap and connect it to the mask or mouthpiece. Hold everything upright so nothing spills. Now connect the tubing to the bottom of the medicine cap and to the air outlet on the compressor. If your family member uses a mask, put it over his or her nose and mouth, and adjust the elastic to keep it in place. If a mouthpiece is used, help your family member or friend put it between his or her teeth, then have your family member or friend close his or her lips tight around it to make a good seal.
4. Now you are ready to start. Turn the compressor on, and the mist will start to flow. Your family member or friend should sit upright and breathe slowly and deeply through the mouth. If possible, ask him or her to pause for two to three seconds after breathing in and before breathing out. This helps the medicine move deep into their lungs. If your family member needs to cough during the nebulizer treatment, turn off the machine

and remove the mouthpiece for a few seconds so he or she can cough into a tissue. When he or she is finished, resume treatment by turning the machine back on.

Follow this procedure until all the medicine is gone and there is no longer any mist coming from the mask or mouthpiece. Make sure the medicine cup is held level and upright so that all the medicine is given.

Cleaning the Equipment

Clean the equipment parts after every treatment, which will help kill any germs.

1. Separate the cap from the medicine cup and from the mask or mouthpiece.
2. Disconnect the tubing. Never submerge the tubing or the compressor in water. Just wipe them with a damp cloth every day.
3. Clean by hand. If you want to use a dishwasher, skip step 3 and go to step 4.
 - a. Wash the mask or mouthpiece, medicine cup, vaporizer cone, and cap in warm soapy water.
 - b. Rinse it with running water, shake dry, and set it on a clean towel to air dry.
 - c. Go to step 5.
4. Clean with a dishwasher. If you have a dishwasher, you can clean the pieces by putting them in a basket on the top shelf of the dishwasher to prevent the pieces from melting or warping.
5. If there is water in the tubing, connect it to the compressor without the medicine cup and let the compressor blow air through the tube. It is important to dry the tube, because moisture can cause germs to grow.

Once a week, give the nebulizer a more thorough cleaning. Put the mask, medicine cup, vaporizer cone, and cap into a mixture of equal parts water and white vinegar. Soak them for 30 minutes, then rinse them with running water and set them on a clean towel to air dry.

Most compressors have an air filter that should be changed every six months or sooner, following the manufacturer's instructions. Keep the manufacturer's contact information handy in case you have any questions.

Side Effects

Most people have no side effects from using a nebulizer. If your family member or friend uses a mouthpiece and complains about a dry mouth, lips, or nose, ask the health care provider about switching to a mask. You can also use aloe vera (a plant-based product) or a water-based cream or gel to soothe the irritation.

Some people may have side effects. Call the health care provider if your family member or friend:

- > Feels anxious or jittery during or after the nebulizer treatment
- > Has increased difficulty breathing
- > Has a cough and brings up sputum (thick material) that is green or yellow
- > Has a fever

Helping your family member or friend breathe more easily brings many benefits, not just to his or her lungs but also to his or her overall sense of well-being.

Additional Resources

The American Lung Association, a nonprofit organization, has lots of information about lung diseases and treatments. Instructions on using and cleaning a nebulizer can be found at <https://www.lung.org/lung-health-diseases/lung-disease-lookup/copd/treating/medication-management-tips/how-to-use-a-nebulizer>.

The American Association for Respiratory Care has a comprehensive patient guide that includes instructions for several different types of nebulizers and provides a background on lung diseases. Go to <https://www.aarc.org/wp-content/uploads/2018/03/aersol-guides-for-patients.pdf>.

There are many other videos and resource guides in this Operating Specialized Medical Equipment series. Go to www.aarp.org/nolongeralone for a complete listing.

AARP Public Policy Institute

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