

## Nebulizer and Air Compressor for Inhaled Medicines

A **nebulizer** (neb-U-lie-ser) is a small cup that holds liquid medicine. The medicine is turned into a fine mist by a small air compressor.

Taking slow, deep breaths of mist takes the medicine right to the lungs where it works quickly and has fewer side effects compared with medicines taken by mouth.

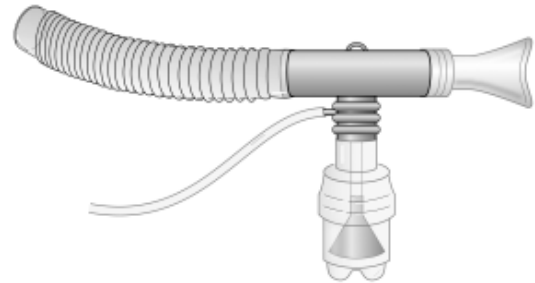
### Equipment Needed

- Air compressor
- Small volume nebulizer kit:
  - Medicine cup
  - Insert and cap
  - “T” connector
  - Short tubing
  - Mouthpiece
  - Long smooth tubing
- Plastic medicine vials

### Preparing Nebulizer

1. Wash your hands well with soap and warm water then dry.
2. Plug in the air compressor and set it on a hard surface, such as a table. Twist and push the long, smooth tubing on the compressor outlet to make a snug fit.
3. Check filter per manufacturer instruction or monthly with use. Replace if dirty, clogged or wet.
4. Add the medicine into the cup. Unit dose plastic vials. Twist off the end of the vial and squeeze the liquid into the cup.
5. Place the mouthpiece and short tubing on the T-piece. Connect the T-piece onto the medicine cup. Attach the smooth tubing from the compressor to the nebulizer.

Short tubing

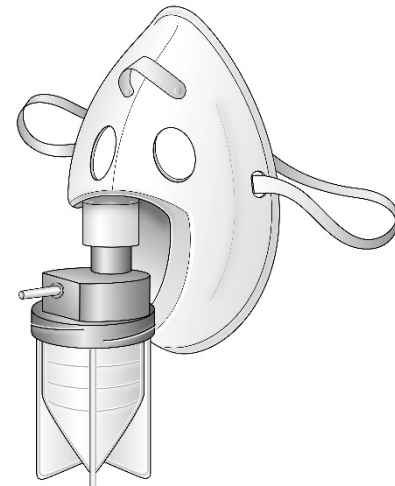


Long, smooth tubing

6. Turn the compressor on. You should see a fine mist. If not, disconnect the smooth tubing and feel for air coming from the compressor. Then check all connections. If the nebulizer is still not misting, consult the instruction manual for proper setup.

### Nebulizer Treatment

1. Place the mouthpiece in your mouth. Some small children use a mask over the mouth and nose rather than a mouthpiece.



2. Take slow, deep, even breaths through the mouth. Hold your breath briefly on each inhale. Breathe out slowly.

3. Make sure the medicine cup is kept upright.
4. Stop the treatment if you notice any side effects or reactions to the medicine.
5. Do the treatment until the medicine is finished (no mist comes out). If the medicine sticks to the sides of the cup, gently tap the sides of the cup.
6. After the treatment, take the medicine cup apart. Rinse it with hot tap water. Allow it to air dry on a clean towel.

### **Cleaning the Nebulizer**

All of your nebulizer parts must be cleaned and disinfected twice a week. There are 4 ways to clean and disinfect a nebulizer:

1. Disinfect by hand using vinegar and water.
2. Disinfect by hand using rubbing alcohol.
3. Disinfect with heat using a dishwasher.
4. Disinfect with heat using a microwave.

#### **Disinfect by Hand**

To clean and disinfect by hand, you can use either vinegar and water method or rubbing alcohol method. **If you have cystic fibrosis (CF) do not use the vinegar and water method.**

#### **Vinegar and Water Method**

1. Take the nebulizer apart. Wash the pieces in warm soapy water.
2. Rinse with hot tap water.
3. Place the nebulizer pieces in a bowl and add enough vinegar and water mixture to completely cover the pieces. Make the mixture of 1 part white vinegar (5% solution from your grocery store) to 3 parts water (1 cup vinegar to 3 cups water).

4. Soak the pieces for 30 minutes to 2 hours.
5. Rinse all the pieces with **sterile water**. Do not use water from the faucet, bottled, or distilled water. You can make water sterile by boiling it for 5 minutes. Use this water once, and then throw it out.
6. Place the pieces on a paper towel to dry.

#### **Rubbing Alcohol Method**

1. Take the nebulizer apart. Wash the pieces in warm soapy water.
2. Rinse with hot tap water.
3. Place the pieces in a bowl and add enough rubbing alcohol (isopropyl alcohol) to completely cover the pieces.
4. Soak the pieces for 5 minutes.
5. Rinse the pieces with **sterile water**. Do not use water from the faucet, bottled, or distilled water. You can make water sterile by boiling it for 5 minutes. Use this water once, and then throw it out.
6. Place the nebulizer pieces on a paper towel to dry.

#### **Disinfect By Heat**

Use these heat methods only for sturdy, hard plastic nebulizer cups. Heat cleaning may melt lighter, clear plastic nebulizers.

#### **Dishwasher**

1. Take the nebulizer apart.
2. Place the pieces in a dishwasher basket on the top rack of the dishwasher.
3. After the dishwasher cycle is done, remove the pieces and shake out the extra water.
4. Air-dry the pieces on a paper towel.

## **Microwave**

1. Take the nebulizer apart. Wash the pieces in warm soapy water.
2. Rinse with hot water.
3. Place the pieces in a bowl. Add enough water to completely cover the pieces.
4. Microwave for 3-5 minutes. Use shorter time in high power microwaves to keep the pieces from melting.
5. Place the pieces on a paper towel to dry.

## **Who to Call**

If you have questions or need more supplies, call:

UW Health Care Direct  
**(608) 203-2273**

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 7/2024 University of Wisconsin Hospital and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6922