

**Nebulizer and Air Compressor  
For Inhaled Medicines**

**What is a nebulizer?**

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 directly to the lungs where it works quickly and has fewer side effects compared with medicines taken by mouth.

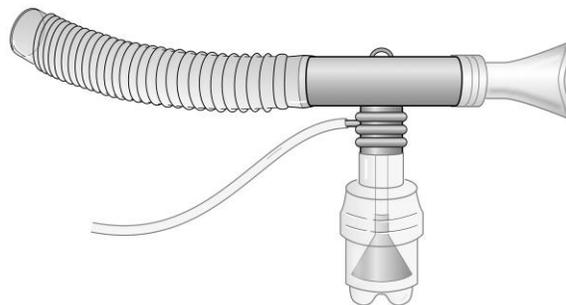
**What equipment is needed to use the small volume nebulizer?**

- Air compressor
- Small volume nebulizer kit: a medicine cup, lid, “T” connector, short tubing, a mouthpiece, long smooth tubing to connect the nebulizer to the compressor, and possibly a mask
- Plastic medicine vials (prescription)

**How is the nebulizer prepared for use?**

1. Wash your hands well with soap and warm water.
2. Plug the air compressor into an electrical outlet, on a hard surface, such as a table. Place the long, smooth tubing on the compressor outlet. Be sure to follow manufacturer’s directions to either clean or change the compressor filter occasionally.
3. Add the medicine into the cup. Unit dose plastic vials: Twist off the end of the vial and squeeze the liquid into the cup.
4. Place the mouthpiece and short tubing on the T-piece. Connect the T-piece onto the nebulizer. Turn the compressor on. Attach the smooth tubing from the compressor to the nebulizer.

Short tubing



Long, smooth tubing

5. A fine mist should be visible. If not, disconnect the smooth tubing; feel for air coming from the compressor, then check all connections. If the nebulizer is still not misting, use a different nebulizer kit.

### How do I do the 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. Continue 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 is over, take the medicine cup apart. Rinse it with hot tap water. Allow it to air dry on a clean towel.



### How do I clean and disinfect the small volume nebulizer?

All of your nebulizer parts must be cleaned and disinfected twice a week. There are 3 different ways a nebulizer may be cleaned and disinfected: by hand; or by heat methods: dishwasher or microwave.

#### How do I clean and 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 solution to completely cover the equipment. Make the mixture of 1 part white vinegar (5% solution from your grocery store) to 2 parts water (1 cup vinegar to 2 cups water).
4. Soak the nebulizer for 30 minutes to 2 hours.
5. Rinse all of the parts of the nebulizer with **sterile water**. Do not use water from the faucet, bottled, or distilled water; it could be contaminated. 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 nebulizer pieces in a bowl and add enough rubbing alcohol (isopropyl alcohol) to completely cover the nebulizer pieces.
4. Soak the nebulizer pieces for 5 minutes.

5. Rinse the nebulizer 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.

### **How do I clean and disinfect by heat?**

**Note: Use heat methods below only for sturdy, hard plastic nebulizer cups. Heat cleaning may melt lighter, clear plastic nebulizers.**

### **How do I clean and disinfect in the 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 nebulizer pieces on a paper towel.

### **How do I clean and disinfect in the microwave?**

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

### **Equipment**

If you have questions or need more supplies, call UW Home Care Services at **(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 © 7/2017 University of Wisconsin Hospital and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6922