

# MEDfacts

An Educational Health Series From National Jewish Health®



## Using A Pari LC® Star Nebulizer With Amikacin

Many medications are available as inhaled treatments. Inhaled methods deliver medication directly to the airway, which is useful for respiratory problems.

A nebulizer delivery system consists of a nebulizer (small plastic medication cup with a lid that drops into the cup and twists) and a source for compressed air. The air flow from the compressor to the nebulizer changes the medication solution to a mist. When inhaled correctly, the medication has a better chance to reach the small airways. This increases the medication's effectiveness.

### Supplies you will need:

- PulmoAide 5650D Compressor, To order the PulmoAide 5650D:
  - Check with a local home care company or,
  - Search PulmoAide 5650D on the internet and place an order online.
  - You can provide the receipt to your insurance company.
- Pari LC® Star Nebulizer (Part #22F51) and solid mouthpiece to be used when administering antibiotic inhaled Amikacin; or mouthpiece with expiratory valve if living alone.
- Pari Expiratory Filter Set (Part #41F05) (only need if another person or animal is around during treatment)
- One (1) box Pari expiratory filter pads (Part #41F0522P30) (only need if another person or animal is around during treatment)
- Pre-treatment medicine
- Amikacin
- Syringes with needles and alcohol pads
- Sharp container
- Sodium chloride **inhalation** solution, USP 0.9% (5ml)



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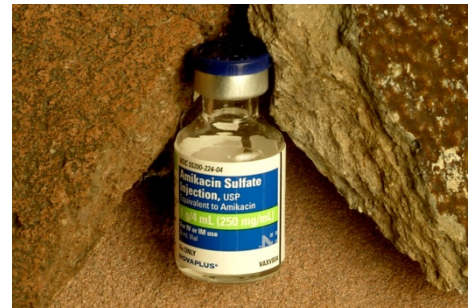
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## Assembling the Air Compressor

1. Place the compressor and nebulizer on a clean, flat, hard surface. The compressor should be placed where it can safely reach its power source and where you can reach the ON/OFF switch.
2. If you are taking amikacin you must use the PulmoAide 5650D. Please see manufacturers instructions.
3. Plug the power cord into an electrical outlet.
4. Connect the air tubing to the compressor.

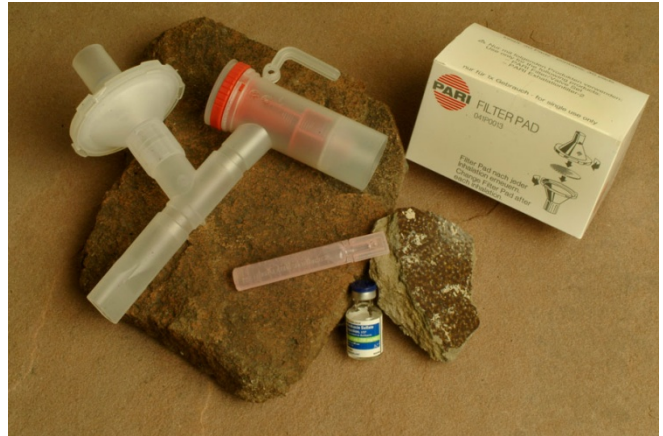
## Preparing the Medication if using Amikacin

1. Wash your hands prior to preparing each treatment.
2. Always use a clean nebulizer.
3. Remove the nebulizer insert from the nebulizer cup.
4. Amikacin comes in a vial. Check the label on the vial of medicine. Make sure you have the right medicine. Check the expiration date. Do not use the medicine if the expiration date has passed.
5. Remove the plastic cover from the vial of medicine. You will not replace this plastic cover. You will see a rubber stopper. Wipe the top of the vial with an alcohol swab.
6. Hold the syringe. Pull off the needle cover with your other hand. Do not touch the needle or lay the syringe down when the needle is uncovered.
7. Pull back the end of the plunger to the dose of medicine you will be taking.
8. Invert the vial of medicine, so the rubber stopper is facing down.
9. Insert the needle into the inverted vial. Make sure the needle is close to the rubber stopper, but inside the vial. Push the plunger so the air in the syringe goes into the vial.
10. Now, pull back on the syringe plunger to pull the right amount of solution from the inverted vial into the syringe.
11. Take the needle out of the vial.
12. Check for air bubbles in the syringe. Gently tap the syringe with the needle up. This will cause the air bubbles to rise to the needle end of the syringe slowly. Push the plunger, and air will leave the syringe.
13. Your doctor has prescribed the correct dose of medicine for you. Check to make sure you have the right amount of medicine.
14. Put the correct dose of amikacin in the medicine cup. Do no mix the amikacin with other medicines.
15. Put the correct dose of saline solution in the medicine cup. The saline solution comes in a plastic ampule. Hold the plastic ampule with one hand. Twist off the cap with the other hand.
16. Replace the top of the nebulizer. The semi-circle should face the mouthpiece of the nebulizer. The two alignment rings should be lined up with each other.



## Assembling the PARI LC® Star Nebulizer if you have Family Members or Animals at Home

1. If using a mouthpiece and you have family members or animals at home you will use an exhalation filter. This filter will help prevent family members or animals from inhaling the antibiotic also.
2. Place a filter pad in the exhalation filter and twist the exhalation filter closed. This filter pad will need to be changed each time you take a treatment.
3. Connect the exhalation filter to the y piece.
4. Attach the y piece to the front of the nebulizer. Attach the other end of the y piece to the solid mouthpiece as shown below.
5. Connect the tubing to the bottom of the nebulizer.
6. Turn the compressor on and check the nebulizer for misting.
7. Note: If you are using the nebulizer in the hospital, connect the tubing to the wall air and turn the wall air on to 6 liters.



## Assembling the PARI LC® Star Nebulizer if you are in a Closed Room, Outside or if you Live by Yourself

1. If using a mouthpiece and you are in a closed room, outside or if you live by yourself you may not need an exhalation filter. In this case, attach the mouthpiece to the front of the nebulizer. The blue expiratory valve should face upward.
2. Connect the tubing to the bottom of the nebulizer.
3. Turn the compressor on and check the nebulizer for misting.

### If the nebulizer is not misting

1. Check all of the connections.
2. Refer to the manufacturer's instructions.

### Taking A Nebulized Treatment Using A Mouthpiece

1. Note: Remember to take the pre-treatment medicine before the nebulized treatment.
2. **Sit comfortably.** Position yourself in an upright, sitting position that will allow you to take a deep breath.
3. **Turn the compressor on.** The nebulizer will begin to mist.
4. **Put the mouthpiece in your mouth between your teeth and close your lips around it.**
5. **Hold the nebulizer in an upright position.** This prevents spilling and promotes nebulization.
6. **As the mist starts, breathe in slowly and deeply over three to five seconds.**
7. **At the end of a deep breath, exhale slowly through your mouth.**

8. Continue these steps until the onset of inconsistent nebulization, also called sputtering.

### Care and Cleaning of Nebulizer Equipment After Each Use

Please follow the manufacturer's instructions for cleaning the nebulizer equipment.

Suggested guidelines include the following:

1. Take apart the nebulizer. Wash all parts (except tubing) in liquid dish soap and water. Rinse with water.  
Or  
Place the nebulizer parts (except mask, tubing) in a dishwasher basket and place on the top rack of the dishwasher.
2. After washing the nebulizer shake off any excess water.
3. Reattach the nebulizer pieces and tubing to the air compressor and turn on the compressor to dry the nebulizer quickly. Make sure the nebulizer is completely dry before storing the nebulizer.

### Care and Cleaning of Nebulizer Equipment Every Other Treatment Day

To disinfect and sterilize your nebulizer:

#### Boiling Water

1. Wash your hands.
2. Take the nebulizer apart.
3. Put all the parts of the PARI LC Star except the tubing in boiling water for 10 minutes.
4. After boiling the nebulizer shake off any excess water
5. Reattach the nebulizer pieces and tubing to the air compressor and turn on the compressor to dry the nebulizer quickly. Make sure the nebulizer is completely dry before storing the nebulizer.

Remember to change the nebulizer tubing every 2 weeks.

### Care of the Compressor

Check the manufacturer's instructions for cleaning and care of the compressor you are using.

Note: This information is provided to you as an educational service of National Jewish Health.

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