WHAT IS A NEBULIZER?

A nebulizer, often called “the machine” is a small cup with a lid that holds liquid medication and is attached to an air compressor with plastic tubing. When the nebulizer is attached to the air compressor, the liquid becomes a mist that is inhaled into the lungs. A treatment can take anywhere from 10-30 minutes depending on the amount of medication being given, the type of nebulizer used, and the compressor that is used.

HOW IS IT USED?

There are different types of nebulizers available. Some are used with a mouth piece while others are used with a face mask. You should always check the package insert for details. Your Cystic Fibrosis (CF) doctor/nurse/respiratory therapist will instruct you on proper use of your nebulizer.

HOW IS IT CLEANED?

1. Wash your hands.
2. With a paper towel wash the inside and outside of the nebulizer parts with liquid soap and hot water. Throw out the paper towel.
3. Rinse the nebulizer parts with water.
4. Air-dry nebulizer parts on a clean paper towel or clean dish towel.

Once the nebulizer is cleaned, it can be disinfected. Remember to clean the nebulizer right after you use it otherwise the medication can dry and harden making it difficult to clean.

WHY IS IT IMPORTANT TO CLEAN THE NEBULIZER?

It is important to clean and disinfect the nebulizer to help prevent the spread and growth of germs.
HOW IS IT DISINFECTED?

Although vinegar was recommended in the past, vinegar should not be used to clean/disinfect the nebulizer because it is not strong enough to kill the germs a person with CF has. Be sure to read the package insert for cleaning instructions and if allowed, use one of the disinfecting options below:

1. **Boil** for 5 minutes.
   - For safety reasons it is recommended that you not leave the nebulizer parts boiling unattended, and that you use an audible timer.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.

2. **Microwave** (in water) for 5 minutes.
   - For safety reasons it is recommended that you allow the water/bowl to cool prior to air-drying parts.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.

3. **Dishwasher**, if the water is hotter than 158 degrees F for 30 minutes.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.

4. Soak in a solution of 1 part **household bleach** and 50 parts water for 3 minutes.
   - Rinse all parts well. Use sterile water for the final rinse. You can make water sterile by boiling it for 5 minutes. This boiled water should only be used once.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.
5. Soak in **70% isopropyl alcohol** for 5 minutes.
   - Rinse all parts well. Use sterile water for the final rinse. You can make water sterile by boiling it for 5 minutes. This boiled water should only be used once.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.

6. Soak in **3% hydrogen peroxide** for 30 minutes
   - Rinse all parts well. Use sterile water for the final rinse. You can make water sterile by boiling it for 5 minutes. This boiled water should only be used once.
   - Air-dry the nebulizer parts by placing them on a clean paper towel and covering them with another clean paper towel. You should replace them paper towels with dry ones when they become wet until the parts are fully dry. This will help to stop the spread and growth of germs. Once dry, the parts should be stored in a dry, clean bag.

**EXAMPLES OF NEBULIZERS:**

Pari Baby, Pari LC Plus®, Pari LC Star®, Hudson T Up-Draft II®, Marquest Acorn II®, Sidestream

**MY NEBULIZER:**