

Nebulizer Setup and Use Guide

Complete Instructions for Nebulizer Therapy

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1. Introduction to Nebulizer Therapy

A nebulizer is a medical device that converts liquid medication into a fine mist that can be inhaled directly into the lungs. This delivery method is particularly effective for treating respiratory conditions such as asthma, COPD, cystic fibrosis, and other lung diseases.

Benefits of Nebulizer Therapy:

- Direct medication delivery to lungs
- Effective for severe respiratory symptoms
- Suitable for patients who cannot use inhalers
- Allows for higher medication doses when needed
- Ideal for young children and elderly patients

2. Types of Nebulizers

Jet Nebulizers (Compressor Nebulizers)

- Most common type
- Uses compressed air to create mist
- Reliable and cost-effective
- Suitable for most medications
- Requires electrical power

Ultrasonic Nebulizers

- Uses high-frequency vibrations
- Faster nebulization time
- Quieter operation
- May not be suitable for all medications
- More expensive than jet nebulizers

Mesh Nebulizers

- Uses vibrating mesh technology
- Portable and battery-operated
- Very quiet operation
- Efficient medication delivery
- Higher cost but very convenient



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3. Components and Assembly

Standard Nebulizer Kit Components:

- **Compressor Unit:** Main machine that generates airflow
- **Nebulizer Cup:** Holds the medication
- **Mouthpiece or Mask:** For medication delivery
- **Tubing:** Connects compressor to nebulizer cup
- **Filters:** Keep air clean (replaceable)

Assembly Steps:

1. Place compressor on stable, flat surface
2. Connect one end of tubing to compressor outlet
3. Attach other end of tubing to nebulizer cup
4. Choose appropriate delivery method (mouthpiece or mask)
5. Ensure all connections are secure

4. Medication Preparation

Before Handling Medication:

- Wash hands thoroughly with soap and water
- Check medication expiration date
- Verify correct medication and dosage
- Use only medications prescribed by your doctor

Preparation Steps:

1. Open medication vial or ampoule carefully
2. Pour entire contents into nebulizer cup
3. If using multiple medications, follow doctor's instructions for mixing
4. Do not dilute medication unless specifically instructed
5. Replace nebulizer cup lid securely

Important Notes:



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- Use each medication vial only once
- Do not save leftover medication
- Store unopened vials as directed (refrigerated or room temperature)
- Never mix different medications without doctor approval

5. Step-by-Step Setup Process

Step 1: Prepare Your Environment

- Choose quiet, comfortable location
- Ensure good ventilation
- Have tissues available
- Sit upright in comfortable chair
- Remove any tight clothing around chest/neck

Step 2: Machine Setup

1. Plug compressor into electrical outlet
2. Check that power switch is in OFF position
3. Verify all tubing connections are secure
4. Ensure air filter is clean and properly installed
5. Test compressor briefly to ensure proper airflow

Step 3: Medication Loading

1. Remove nebulizer cup from assembly
2. Add prescribed medication to cup
3. Replace cup in holder securely
4. Attach mouthpiece or mask
5. Double-check all connections

6. Proper Usage Technique

Starting Treatment:

1. Turn on compressor unit
2. Check for steady mist production



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3. Place mouthpiece in mouth or position mask over nose and mouth
4. Begin normal breathing pattern

Breathing Technique:

- **Inhale slowly and deeply** through mouth
- **Hold breath for 2-3 seconds** if possible
- **Exhale normally** through mouth or nose
- Continue until medication is completely nebulized (usually 10-15 minutes)

Signs Treatment is Complete:

- No more mist being produced
- Sputtering sounds from nebulizer cup
- Very little liquid remaining in cup
- Treatment time reaches 15-20 minutes

7. Cleaning and Maintenance

After Each Use:

1. Turn off and unplug compressor
2. Disassemble nebulizer cup and mouthpiece/mask
3. Rinse all parts (except tubing) with warm water
4. Shake out excess water and air dry
5. Wipe down compressor exterior with damp cloth

Daily Cleaning:

1. Wash nebulizer cup, mouthpiece/mask with warm soapy water
2. Rinse thoroughly with clean water
3. Disinfect with rubbing alcohol or vinegar solution
4. Allow all parts to air dry completely
5. Store in clean, dry location

Replacement Schedule:

- **Nebulizer cups:** Every 6 months or as recommended
- **Mouthpieces/Masks:** Every 6 months or when damaged
- **Tubing:** Every 6 months or if cracked



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- **Filters:** Monthly (disposable) or as directed

8. Troubleshooting Guide

No Mist Production:

Possible Causes: Loose tubing connections, clogged nebulizer cup, compressor malfunction, insufficient medication

Solutions: Check and tighten all connections, clean nebulizer cup thoroughly, test compressor without medication, add more medication if cup is nearly empty

Weak Mist Output:

Possible Causes: Dirty air filter, worn nebulizer cup, low compressor pressure, thick medication

Solutions: Clean or replace air filter, replace nebulizer cup, have compressor serviced, consult doctor about medication consistency

9. Safety Considerations

General Safety:

- Never leave nebulizer unattended during use
- Keep electrical components away from water
- Do not smoke or use near open flames
- Ensure proper ventilation during use
- Keep out of reach of children when not in use

Medication Safety:

- Use only prescribed medications
- Check expiration dates before each use
- Store medications as directed
- Never share medications with others
- Report any adverse reactions immediately



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Emergency Procedures:

- Stop treatment if experiencing severe side effects
- Contact doctor if symptoms worsen during treatment
- Have emergency contact numbers readily available
- Know when to seek immediate medical attention

Important Reminders:

- Follow your doctor's prescribed treatment schedule
- Never skip treatments without medical approval
- Keep backup medication and equipment available
- Maintain regular follow-up appointments
- Report any changes in symptoms or medication effectiveness