Continuous Positive Airway Pressure

Continuous positive airway pressure (CPAP) is used to treat obstructive sleep apnea (OSA). Apnea is a condition in which breathing stops for 10 seconds or longer. OSA causes your breathing to start and stop while you sleep. The interruptions (pauses) in breathing are called apneas. Sleep apnea happens when you regularly stop breathing for 10 seconds or longer during sleep. OSA happens when your airway is repeatedly obstructed, or blocked, by your tongue or the soft part of your mouth.

During sleep apnea, the oxygen level in your blood gets lower. When this happens, you may wake up slightly, without knowing it, and start breathing again. This can happen many times during the night, and prevents a restful, healthy sleep. The lack of sleep may cause:

- Daytime sleepiness
- Headaches
- Accidents
- Poor memory
- Lack of concentration
- Irritability

The CPAP machine uses a nasal mask or nasal pillows that fit your nose or a full face mask that fits over your nose and mouth. The air blows through your upper airway allowing the constant pressure to keep your airway open (Figure 1). This allows for normal breathing and restful sleep.

**Figure 1. CPAP keeping the upper airway open**
If you have OSA and it is not treated, the low oxygen level in your blood may harm your heart and other organs. That is why it is very important for you to use CPAP. Obstructive sleep apnea returns when CPAP is not used. By using CPAP properly, you can expect to:

- Breathe more easily during sleep.
- Not wake up during sleep as often.
- Get the restful sleep you need.

**Preparation**

If you need CPAP therapy, this is what you can expect:

- You and your family will be trained to use the CPAP equipment by staff at the sleep lab, hospital or home care company.
- When you get your CPAP equipment from the home care company, you will receive instructions about how to care for and use the equipment. You will be fitted with the mask and shown how to wear it. They will give you the supplies you need.
- The home care company will set the CPAP machine as instructed by your physician.
- You will be given phone numbers for those who can best answer your questions.

**Setup**

- Place the CPAP machine on a sturdy table near your bed.
- If your machine has a humidity chamber, fill it with distilled water.
- Plug it into an electrical outlet.
- Connect the tubing to the machine.

**At bedtime**

Wear your CPAP device at night when you sleep. When you go to bed, follow these steps:

1. Put the mask on as instructed by the home care company.
2. Adjust the mask to make sure it fits properly.
3. Turn on the power switch.
4. Lie down, relax and breathe through your nose.

In the morning, turn off the machine. Remove your mask for cleaning.

**How to clean and care for your CPAP equipment**

It is important to keep your equipment clean to prevent infection.

**Daily cleaning**

- Clean the mask or nasal pillow and headgear once a day.
- Use a damp towel with mild detergent and warm water or wipe the parts with pre-moistened towels designed for CPAP equipment.
- Empty the water from the humidifier chamber daily. Refill it with clean, distilled water before bedtime.
**Weekly cleaning**
Clean the outside of the CPAP machine, the mask or nasal pillow, the tubing hoses and the humidifier chamber once a week. Follow these steps:

1. Unplug the machine from the power source.
2. Wipe the outside of the CPAP machine with a damp cloth to remove dust and debris.
3. Remove the mask or nasal pillow, humidifier chamber and tubing.
4. Wash them with warm soapy water.
5. Rinse them with clean, clear water.
6. Place the parts on a clean towel to dry.
7. Hang the tubing to dry.
8. To disinfect the chamber, mix 1 part vinegar and 4 parts water in the clean chamber. Let it soak for 30 minutes. Rinse it with clean water.

**CPAP servicing**
Change your CPAP machine filter according to the manufacturer’s instructions.

A durable medical equipment company should check your CPAP machine once a year to make sure the pressures are set correctly and all parts are working properly (recommended by the American Sleep Apnea Association).

**Helpful hints**
- Use your CPAP machine every night for the best results.
- Use a permanent ink marker to mark where the straps fit into the mask. This will help keep the mask fitting properly for you.
- Wash your face to remove excess oils before using the mask. This will help in securing the mask and will improve the useful life of the mask.

**Troubleshooting**
- **Discomfort from feeling too much pressure:** It will take time to adjust to nasal CPAP. Use the machine’s “ramp” feature to gradually increase air pressure over time. Relax and breathe slowly through your nose.
- **Dryness of your nose:** Use a room humidifier or call your physician or home care company about adding a humidifier to your CPAP system.
- **Soreness to the bridge of your nose:** Ask your physician or home care company about using a special dressing to prevent skin breakdown.
- **Eye soreness:** Contact the home care company. You can be fitted with a different size mask.
- **Nose or ear infections:** These may be made worse by the mild pressure. If this happens, stop using the CPAP machine. Call your physician right away for treatment. Follow your physician’s instructions about starting CPAP therapy again.

- **Runny nose:** Call your physician for treatment options.

**Contact information**

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For more information about Northwestern Medicine, please visit our website at nm.org.

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