



Introduction to CPAP/ Bi-Level Therapy

A guide for clients

Tel: 1-888-310-1444

Fax: 1-888-310-1441

Email: info@medprorespiratory.com

Website: www.medprorespiratory.com

Table of Contents:

- Page 3 What is CPAP and how does it work?
- Page 4 Setting up the CPAP machine at home
- Page 5 Importance of humidification
- Page 6 Tips for adjusting to sleeping with CPAP
- Page 7 How will I know if CPAP is working for me?
- Page 8 Cleaning your CPAP equipment
- Page 9 Sample Weekly Cleaning Schedule
- Page 10 FAQs and FYIs
- Page 11 Safety Precautions
- Page 12 Additional resources

Your CPAP/bi-level unit is a prescribed medical therapy unit that needs to be applied in a very specific manner. If your doctor changes your CPAP/bi-level unit settings, notify MedPro Respiratory Care immediately.

Please note that the information provided here is meant to supplement, not replace, any special instructions provided by your doctor.

Note: Your unit may look different than the units pictures in these instructions.

What is CPAP and how does it work?

Your physician has chosen CPAP therapy to treat your obstructive sleep apnea.

Continous: Active as you breathe in and out

Positive: Pushing *into* the upper airway

Airway: Nasal passages and back of throat

Pressure: Amount of force to keep the airway open

A CPAP machine has a blower motor which pulls in air, through a filter. It creates a splint of air in the upper airway to prevent the tissue from collapsing and obstructing the airway. Regardless of where the obstruction is occurring, or the severity of your sleep apnea, the positive pressure from a CPAP will help to splint the airway open. The pressure needed varies for each person.

AutoCPAP: If you have never tried CPAP therapy before, you will likely start with an Auto-CPAP. An AutoCPAP can **automatically** titrate the pressure up and down through the night. Your respiratory therapist will analyze the data collected by the CPAP to see what pressure works to treat the majority of your obstructions. You may be changed to a fixed pressure.

Fixed/ Set Pressure CPAP: If you have had a CPAP titration done, you may be set up on a fixed pressure CPAP. This is the pressure required to treat the majority of your obstructions.



The amount of air pressure delivered by the CPAP can range from 4-20cmH₂O. (Bi-Level pressures may be greater than 20cmH₂O.)

Ramp: CPAP units have a feature called a ramp. Within a time frame, the CPAP pressure will start low and “ramp up” to your prescription pressure at a gentle rate that allows you to fall asleep. Some units allow you to set your ramp time. Your MedPro representative will demonstrate what features your CPAP/bi-level unit offers.



*Note: The CPAP uses room air from your room to create the air pressure splint. It does not give you any additional oxygen.

Setting up the CPAP machine at home

CPAP and bi-level units are available in different models. However, all models have the same basic parts.

Step 1: Place the CPAP/bi-level unit on a sturdy surface at or below the level of your head.

- Select a location near the bedside on a nightstand or dresser.
- Make certain there is air circulation around the unit and that the air inlet is not blocked by bedclothes, draperies or furniture.
- Do not place the unit near a heat source.

Step 2 (not shown): Plug the pronged end of the power cord into the wall outlet. Plug the opposite end of cord into the back of the CPAP. It may be pin-index and only fit one way.

- Do not use an extension cord with your unit.
- Do not plug the unit into an outlet that has other major appliances plugged into it.

Step 3: Connect one end of your tubing to the air outlet on the CPAP/bilevel humidifier, and the other end to your mask. Fill humidifier chamber with DISTILLED water. If you are using a heated tubing, plug the powered end into the fitted humidifier outlet.

Step 4: Assemble and fit your mask or nasal pillow circuit as instructed.



Step 4

Step 1

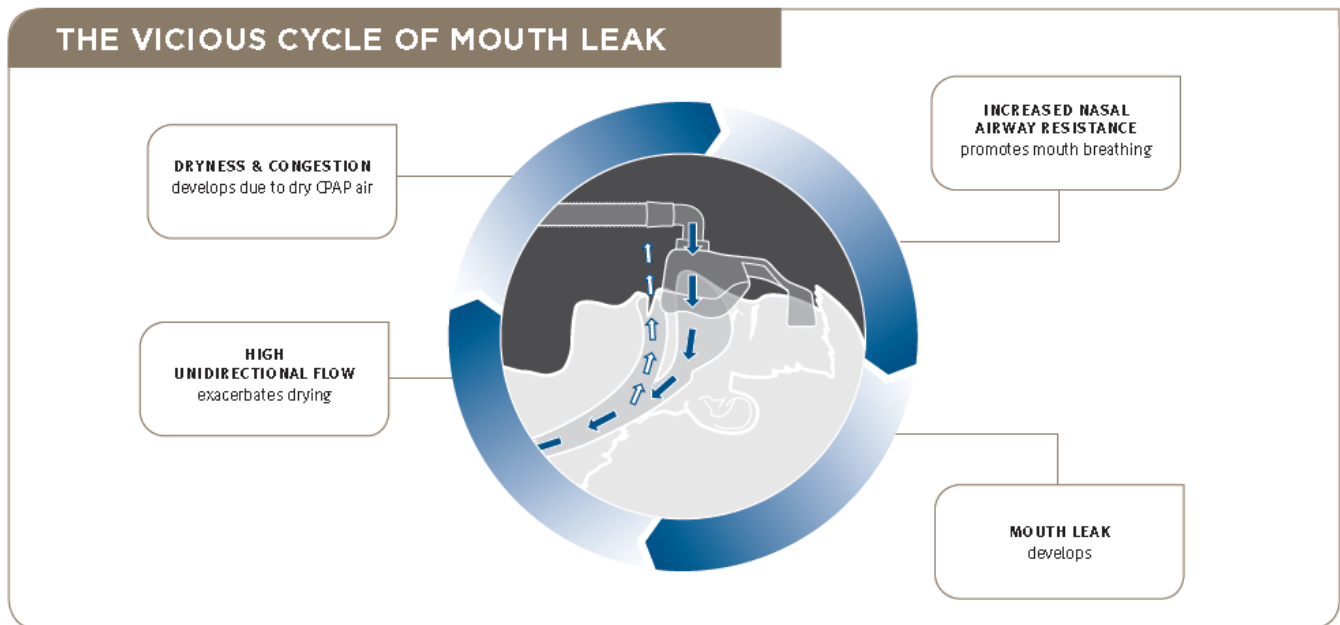
Step 3

Importance of Humidification

Humidification is very important. It can help avoid nasal congestion and/or irritation, which are the most common side effects of CPAP therapy.

The purpose of the nose is to heat, humidify and filter the air that we inhale. Once the inhaled air reaches the back of your throat, ideally it should be warmed to body temperature and saturated with moisture to prevent drying out the tissue.

When you are using CPAP therapy, you have more air flow entering the nasal passages. A lack of humidity will cause nasal congestion and make you more likely to breathe through your mouth.



Tips for adjusting to sleeping with the CPAP

Many people expect to go home and fall asleep with their CPAP immediately. For some, they are lucky to enjoy a good night's sleep right away, but for most there is a period of adjustment to using the CPAP.

Your first goal will be trying to fall asleep with the CPAP. Usually you will need to sleep about 4 or more hours per night for a week to observe the benefits of the CPAP therapy. Ideally we want you to sleep all night, every night with the CPAP therapy. You should also use your CPAP for naps.

Here are some tips for first time users to help succeed with CPAP:



-Practice putting your mask on and off before you are ready to go to sleep. Use a mirror until you are comfortable with placing the mask on your head.

Become familiar with how your mask fits you. It will make putting on the CPAP at bedtime and after bathroom breaks easier.

-During the day or evening, before you try to go to sleep, wear the CPAP while watching television or listening to music. (i.e. a distraction)

Breathing on the positive pressure of the CPAP is a new and unique feeling. Letting your body breathe on the CPAP while your mind is distracted helps you adjust to this feeling before you are trying to relax and fall asleep.

-Try falling asleep with the CPAP for about an hour, then remove it for the night if you are not asleep.

If you are trying to fall asleep with the CPAP, and have not been successful, remove the CPAP and try again the next night. Do not lay awake with the CPAP on for several hours. This creates stress and frustration, which is not conducive to falling asleep. It will also create a negative association with the CPAP.

-If you nap, use your CPAP.

Many people have success falling asleep with their CPAP when they nap in the afternoon. If you are struggling with CPAP during the night and take naps, try to use your CPAP during your naps.

How will I know if the CPAP is working for me?

Once you are sleeping more than 4 hours per night for approximately one week using the CPAP therapy, you will likely start to notice the benefits. This is a guideline – some people feel better after just a night or two, and for others it can take up to a month.

Your MedPro representative will also evaluate the effectiveness of your CPAP therapy by monitoring two sets of values – the Apnea Hypopnea Index and the Desaturation Event Index. These numbers will be included in the report created for your physician to let them know the results of your CPAP trial.

- **Apnea-Hypopnea Index:** How many times per hour the CPAP machine records no air flow (apnea) or a restriction of air flow (hypopnea).
- **Desaturation Event Index:** Calculated by one night of pulse oximetry towards the end of a CPAP trial. It measures the number of drops in the oxygen levels while asleep.

Normal range for both values is less than 5 events per hour.

The benefits of CPAP therapy can include:

- **Reduced or absence of snoring:** The CPAP creates an air splint that prevents the tissue in the airway from vibrating, so snoring is often absent. Breathing should be smooth and even.

-**Less night time arousals /awakenings:** As you will no longer be woken out of deep sleep from the obstructive apnea, you will likely sleep more soundly. This includes less bathroom visits at night.

-**Feeling more rested with less sleep:** You may find you can sleep less, or skip naps, and still feel more alert and refreshed. This is because your sleep is of better quality.

-**Decrease in high blood pressure:** As you no longer have pauses in the breathing, you have less adrenaline releases at night. If obstructive sleep apnea was a cause of your high blood pressure, your blood pressure may improve. If you feel light-headed or your blood pressure is running low, see your family physician. They may need to adjust your medication. *Never adjust your medication without a physician's approval.*

-**Weight loss:** There are a few reasons why you may lose weight once you sleep well with the CPAP. You may have more daytime energy, and are more active, burning calories. You may have decreased food cravings, resulting in lower calorie input. Also with better quality sleep your metabolism will be more efficient.

-**Improved ability to focus/ remember detailed / new tasks:** As you are able to get restorative sleep on the CPAP, higher functioning cognitive abilities will often improve. Many people report improved memory and focus when reading, sitting in meetings, etc.

-**Absence of morning headaches and / or aches/pains:** After a few nights of good quality sleep, most people report a complete absence of morning headaches as well as mild aches and pains.

Cleaning your CPAP equipment

Proper routine cleaning of CPAP equipment is extremely important. Gentle regular cleaning will help remove oils and bacteria from the mask that contribute to the breakdown of the soft plastic and shorten mask life expectancy. Absence of cleaning can increase the risk of contracting an infection from the mask or humidifier chamber.

Note: Do not submerge your CPAP unit in water. If you have a heated humidifier, immerse *only* the water chamber in water or disinfectant. Never immerse electrical appliances in any liquid. **DO NOT clean any parts of the system with alcohol, cleaning solutions containing alcohol or any strong household cleaners.**

Every Day:

- Empty any remaining water out of the humidifier chamber, rinse and refill
- Wet a cloth with warm water (dish soap optional) and wipe off all areas of the mask cushion or pillows. (CPAP wipes can be used instead of a cloth.) Repeat if mask still feels oily. Allow to air dry.

Twice Per Week:

- Open the humidifier chamber and submerge into a sink of warm water with dish soap. Clean thoroughly with cloth. (For some models an old toothbrush can be helpful to get into the corners.)
- Rinse and allow to air dry.

Once Per Week:

- Soak tubing in warm water and dish soap. Rinse with clean water. Hang tubing over door or shower rod to drain excess water. *Respironics heated tubing should not have the “plug end” submerged in water – carefully rinse the tubing without submerging completely.
- With a soft cloth, gently wash the mask frame, humidifier chamber, and mask headgear with a solution of warm water and a mild, clear liquid detergent.
- Rinse thoroughly and allow to air dry.
- Using a dry cloth, lightly dust the CPAP to prevent particle build up. If using a slightly damp cloth, unplug the CPAP unit.

Monthly:

- Use a diluted disinfectant of 3 parts water to 1 part vinegar and soak the humidifier chamber for 30 minutes. Rinse well with clean water and allow to air dry.
- If you have a reusable filter (Respironics), rinse the dust from the foam filter located at the back of your CPAP. Allow to dry before replacing – never use a damp filter in the CPAP unit.

Most filters require replacement every 6 months. Some models have washable filters.

Cleaning Accessories:

See your MedPro representative for more information on tube-cleaning brushes or CPAP wipes.

Sample weekly cleaning schedule:

Weekday	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Humidifier Chamber	Empty, rinse and refill humidifier chamber with water.	Empty, rinse and refill humidifier chamber with water.	Empty, rinse and refill humidifier chamber with water.	Clean humidifier chamber with soap and water, rinse.	Empty, rinse and refill humidifier chamber with water.	Empty, rinse and refill humidifier chamber with water.	Clean humidifier chamber with soap and water, rinse.
Mask	Rinse pillow or mask cushion with water.	Rinse pillow or mask cushion with water.	Rinse pillow or mask cushion with water.	Rinse pillow or mask cushion with water.	Rinse pillow or mask cushion with water.	Rinse pillow or mask cushion with water.	Wash tubing, mask frame and headgear with soap and water, then rinse clean.
CPAP unit							Wipe dust off CPAP unit with damp (not wet) cloth, then wipe with a dry cloth.

Inspect filter monthly.

Frequently Asked Questions

Frequently Asked Questions:

How do I know if I am not getting enough humidity?

Signs of too little humidity include sneezing in the morning, nasal congestion, a runny nose, a dry mouth or a sore throat. You may also pull your mask off during the night, or have burning nostrils. Rarely, insufficient humidity can result in nosebleeds.

By using a heated humidifier, extra humidity is provided to the air. It should make using the CPAP easier.

I have nasal congestion, even though I am using a humidifier. What can I do to alleviate it?

You can increase your humidifier setting to increase the moisture provided to your nose.

Why is there water in the tubing?

If your room temperature is cool, it will cool down the CPAP tubing and the air inside. Cold air does not hold as much moisture, so water drops will form and collect inside the hose. If this happens, you need to decrease the humidity setting. If you start to get a congested nose, speak to your MedPro representative about heated tubing.

I have optimized my humidity, but still have nasal irritation. What can I do now?

Secaris, a water-based lubricant, can be used to alleviate persistent nasal dryness. If you are struggling with nasal congestion, you may wish to speak to your doctor about options to treat nasal irritation.

Can I travel with my CPAP?

Most CPAP units can accept 100-240V so can be used anywhere in the world as long as you have a plug adapter. When flying, a CPAP should be taken as carry-on rather than checked luggage. Security may ask you to power the CPAP on. You are not normally charged for additional carry-on as the CPAP is a medical device. (You should call the airline to clarify details.)

How often should I replace my mask and CPAP?

To prolong the life of your equipment and supplies, it is important to inspect and clean all components regularly. The mask, tubing and headgear should last approximately 6 to 12 months, but lifespan can vary greatly. Daily cleaning is recommended. Most CPAP units are warrantied for 3 years in Canada if purchased from a home medical equipment provider, and many CPAP units will last over 5 years.

For Your Information

For Your Information:

-The CPAP machine is designed to eliminate the interruption of your respirations during sleep at your current weight. However, if you are overweight, weight loss generally will improve your overall health and could allow your doctor to decrease the pressure of air prescribed for your machine.

-If you require surgery or hospitalization for any reason, make sure you inform your physician of your diagnosis and the need to use the CPAP machine with all sleep. You may need to take your CPAP unit to the hospital so that you can use it during your hospitalization, especially when you are sedated before and after surgery. Ask your physician.

You should be able to use CPAP all night long, every night. If, after trying these suggestions, you cannot sleep through the night, please contact MedPro Respiratory Care.

Safety Precautions



Use Your Equipment Safely

Never immerse the CPAP or bi-level units in water.

Never try to clean the unit by placing it in water. The electrical components will be damaged and this can create a shock to the user the next time it is plugged into an electrical outlet.

Never plug in the unit if it is wet or damp.

Moisture always increases the potential of electrical shock.



Never plug your unit into an electrical outlet that is being used to supply power to another major appliance.

Plug your unit into an electrical outlet that is NOT being used to supply electricity to other major appliances. If you need to use the same outlet that is shared by other equipment, make sure the other appliances are NOT being used at the same time.

Never try to repair your CPAP or bi-level unit.

Your CPAP machine is considered medical equipment. A faulty unit needs to be serviced by a professional. If you are trialing this equipment, call MedPro Respiratory Care and your unit will be replaced. If you have purchased the unit, contact MedPro Respiratory Care for assistance in getting it repaired.



Never use your unit with an extension cord.

Additional resources:

MedPro Respiratory Care

<http://www.medprorespiratory.com/>

Obstructive Sleep Apnea and sleep disordered breathing:

- Canadian Sleep Society
<http://www.canadiansleepsociety.ca/>
- National Sleep Foundation
<http://www.sleepfoundation.org/>
- American Academy of Sleep Medicine
<http://www.aasmnet.org/>
- WebMD Sleep Disorders Health Centre
<http://www.webmd.com/sleep-disorders/>

CPAP equipment and accessories:

- Philips Respironics
http://www.healthcare.philips.com/ca_en/homehealth/sleep/index.wpd
 - Provider of “SleepMapper” resources
- ResMed
http://www.resmed.com/us/patients_and_families/patients.html?nc=patients
 - Providers of “Wake Up to Sleep” on-line support sleep apnea community
- Fisher Paykel
<http://www.fphcare.ca/sleep-apnea/cpap-devices/f-p-icon/>
 - Providers of “Infosmart”