



SUMMIT  
MEDICAL  
GROUP

Sleep Disorders Center

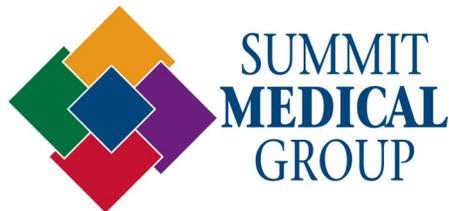
# A ROADMAP TO PAP THERAPY

TREATMENT AHEAD

## The Sleep Disorders Center at Summit Medical Group Mission Statement

The mission of the Sleep Disorders Center at Summit Medical Group (SMG) is to assure the highest quality care available for disorders of sleep. Our SMG sleep medicine professionals are committed to providing all necessary resources to optimize treatment outcomes and the patient experience. Providing easy accessibility to staff, maintaining patient privacy and dignity, and offering the highest level of medical expertise is the standard we set at the center. The overall philosophy of the Sleep Disorders Center is to meet and exceed the needs and expectations of the patients and the medical providers who rely upon us.

We want to **thank you** for choosing Summit Medical Group for your care.



# Contents

Important Things to Know Before Starting PAP Therapy .....	1
What is Sleep Apnea?.....	2
The Benefits of PAP Therapy .....	3
Treatment of Apnea with PAP Therapy .....	4
Overview of PAP Device Features .....	5
Durable Medical Equipment .....	9
Effective PAP Therapy: How Can I Be Successful? .....	11
Compliance Goals.....	13
Solutions for Common Complaints .....	14
How to Optimize the PAP Therapy Experience.....	18
Are You Having Surgery?.....	19
PAP Equipment Cleaning and Care .....	20
Websites for Further Education .....	23
SMG Nondiscrimination Statement and Language Assistance Resources .....	24
Glossary of Common Sleep Medicine Terms .....	27

# Important Things to Know Before Starting Positive Airway Pressure (PAP) Therapy

1. There are current requirements for using PAP therapy that must be met or exceeded in many circumstances – most commonly if you want medical insurance to provide coverage for the cost of therapy (in the case of Medicare and many managed care plans), or if you want to maintain certain licensures (Commercial Driver’s License [CDL] or an airplane pilot’s license). You must wear your PAP equipment for a minimum of four hours per night on 70 percent of nights during a consecutive 30 day period during the first three months of initial usage. In some circumstances, the usage requirement might be higher. These requirements are very rigid, and there is little or no tolerance if they are not met.
2. You must have a follow-up face-to-face appointment with your treating sleep provider between the 31st and 91st day post PAP set up. During this appointment, your provider must document that you are benefiting from your PAP therapy.
3. If you are non-compliant with PAP therapy, in most cases the durable medical equipment (DME) supplier is obliged to take the equipment back, unless you are prepared to assume all costs of therapy. The SMG sleep team, along with your DME supplier will make every attempt to prevent this from occurring, but you must fully participate and make every effort to be successful during the treatment process. Make sure to utilize the resources that are provided to you, by us, and by your DME supplier. Our common goal is that you have a successful experience.
4. Return to your sleep provider for the appointment(s) scheduled after the initiation of your PAP therapy. The first time you come back, bring the entire PAP device, mask, and tubing, and do this for any follow-up visits when you are having trouble with treatment. For other visits, always bring the data card installed in your PAP device, so your provider can extract data from the card which will inform them of your progress. Bring a list of questions with you to each visit to ensure you get the most out of each meeting with your provider.
5. Make sure you know how to contact your DME supplier. They are an essential resource for everyone being treated with PAP therapy. Replacement of equipment that wears out or breaks, advice on how to manage problems that arise, and making sure that adequate coverage and reimbursement is maintained are a few of the issues you may encounter.

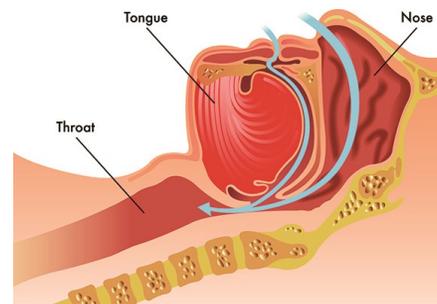
# What is Sleep Apnea?

Sleep apnea is a serious and sometimes life-threatening condition in which breathing is interrupted during sleep. Although sleep apnea is most common in overweight adult males, it occurs with significant frequency in men and women regardless of age, weight and other physical features. It also occurs in children, where its effects can be highly impactful.

People who have sleep apnea can stop breathing for a few seconds or up to one minute or longer. This can occur one hundred or more times per hour. When breathing stops, oxygen levels may drop and sleep is interrupted. This leads to sleep deprivation and may increase the likelihood of hypertension, heart issues, strokes, and other potentially devastating medical conditions. For these reasons, it is important to see a doctor if you are experiencing sleep apnea symptoms.

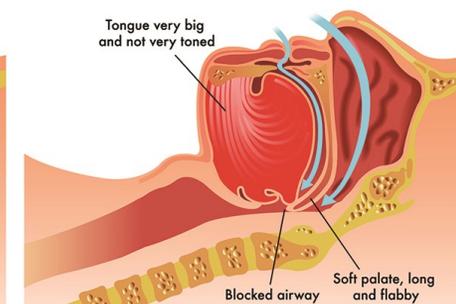
## Types of Sleep Apnea

- **Obstructive sleep apnea (OSA)** is the most common form of apnea and occurs when muscles inside the throat relax and cause tissue at the back of the throat to collapse and block the airway. This prevents air from getting to the lungs. It is most commonly associated with snoring and gasping for air.
- **Central sleep apnea (CSA)** is less common than OSA. It occurs when the brain does not properly control breathing, leading to arousals and low oxygen levels. This is more commonly seen in people with heart failure, those who have suffered strokes and in the elderly.



### Normal breathing

During sleep, air can travel freely to and from your lungs through your airways.



### Obstructive Sleep Apnea

Your airway collapses, stopping air from traveling freely to and from your lungs and disturbing your sleep.

## The Benefits of PAP Therapy

There are many benefits of PAP therapy. PAP therapy will relieve airway obstructions and decrease repeated arousals that can occur while you sleep. It is important to use your PAP therapy device every night. The elevated medical risks associated with sleep apnea drops to that of the normal population risk when sleep apnea is treated.

**Additionally, successful PAP therapy users report improvement in:**

- Quality of sleep
- Quality of life
- Energy
- Motivation
- Cognitive ability
- Sexual drive and performance
- Alertness while driving
- Nighttime urination



# Treatment of Apnea with PAP Therapy

After consulting with your provider and with the help of a home or in-lab sleep study, PAP therapy will help relieve the airway obstruction that occurs while you sleep. If your provider diagnoses you with sleep apnea, they will develop an individualized treatment plan to help relieve your symptoms and protect your health. Depending upon the specific PAP device that is best for you, the machine will be set at a specific pressure or a variable pressure.

## What is CPAP?

**CPAP is the abbreviation for continuous positive airway pressure.** CPAP therapy is most often used to treat OSA, and involves placing a mask interface over the nose and/or mouth to introduce air through the nasal passages using a sophisticated air compressor to keep the airway open, eradicating snoring and preventing the airway from being obstructed.

## What is BiPAP?

**BiPAP is the abbreviation for Bi-Level positive airway pressure.** The need for BiPAP therapy is only determined following a study performed in a sleep lab. Unlike CPAP, bi-level therapy offers two air pressures — the higher level when breathing in and the lower level when breathing out.

## What is AutoCPAP?

An auto-adjusting CPAP device continuously and automatically changes the pressure delivered to the patient on a breath-by-breath basis. These machines can establish an appropriate pressure in the home environment without performing a sleep study in a sleep lab.

AutoCPAP devices are generally prescribed for patients following a home-based sleep study as an initial means of therapy. This approach works well 60 to 70 percent of the time, with the remaining people often requiring in-lab sleep studies to identify an effective mode of therapy for their apnea.

## What is AutoBiPAP/AutoSV/AVAPS/BiPAP ST?

These are more sophisticated devices typically utilized in patients with more complicated forms of apnea.

# Overview of PAP Device Features

## Ramp

For many people with OSA, the ramp feature is something they use every night as it makes it easier for them to get to sleep with a lower starting pressure. Most commonly, the ramp feature is set to start at four minutes and increase in increments every five minutes to full pressure over a total of 20 to 45 minutes. Users typically program the PAP ramp feature to be completely off by the time it takes them to fall asleep. As one acclimates to using PAP therapy, ramp time can be modified or discontinued altogether per individual preference.

## When is the ramp used?

The ramp can be used at the beginning of the sleep period to facilitate falling asleep. It can be reactivated in the middle of the night when you wake up, so you can restart sleep with a lower, more comfortable pressure.

## Flex or EPR

CPAP machines have a feature which is an expiration pressure relief called EPR (ResMed) or Flex (Respironics). This feature may be patient controlled, if enabled, and will reduce exhalation pressure automatically based on the setting. Some patients find that breathing is easier when using the EPR or Flex feature.





## Humidifier

Humidifiers are designed to add moisture to the air that is being delivered to you from the therapy device. Humidifiers can help reduce the dryness often caused by PAP therapy and enhance comfort. Humidifiers use distilled water which is available at grocery stores and pharmacies. When traveling, filtered/pure water may be used if distilled water is unavailable.

## Tubing

The tubing (or hose) is used to carry the air from the therapy device to your mask. Some tubing is heated to reduce condensation. You should inspect your tubing at least once a week. If you think that your tubing is ready to be replaced, contact your DME supplier or arrange to have the tubing replaced regularly.



## Filters

Your PAP machine comes with a filter. The filter should be replaced periodically per manufacturer instructions.

## PAP Interface Devices

Masks are used as an interface from the therapy device to you. A comfortable mask is a key factor in being able to use your treatment daily. Talk to your DME supplier about the different masks and headgear that are available. There are three general mask configurations: **full face** (over the nose and mouth), **nasal** (over the nose) and **nasal pillows** (under the nose). There are many models of each configuration available, and each mask typically comes in a variety of sizes.



### Full Face Masks

Philips Respironics: Dreamwear

ResMed: Mirage Quattro FX



### Nasal Masks

Philips Respironics: Wisp

ResMed: Airfit N20



### Nasal Pillows

ResMed: Swift FX

ResMed: Airfit P10

## Comfort Accessories and Extras

### Mask Liners & Nasal Pads

Mask liners reduce mask leaks, improve comfort at the bridge of the nose, absorb facial moisture and oil, and reduce mask pressure marks. They may be helpful in increasing your comfort.

- Silent Night™
- RemZzzs®
- Gecko™ nasal pad

### Chinstraps

Chinstraps hold the chin in a stable/closed position, encouraging breathing through the nose and preventing leaking from the mouth. A chinstrap helps prevent the jaw from dropping once sleep is established. Chinstraps are an optional accessory that can be used with nasal masks and nasal pillows. There are many different styles of chin straps. If you are not happy with the chinstrap that you have, it is worthwhile to search online for a chinstrap that you think will work best for you. They are usually quite inexpensive and a good investment.

### Mouth Tape

Mouth tape optimizes breathing patterns through the nose. Using a hypoallergenic adhesive, they gently hold and support the mandible (jaw) and tongue.

- SomniFix® Mouth Strips

### CPAP Moisture Creams

CPAP creams are formulated as a skin moisturizer without petroleum which takes away the risk of inflammation and lung damage. Creams reduce skin dryness and chafing while maintaining skin softness.

- CPAP Chap®
- CPAP™ Moisture Therapy

### CPAP Pillows

CPAP pillows minimize mask leaks with side cutouts, which reduce mask interference and keeps the mask from shifting throughout the night. The pillows are designed to allow your face and head to rest comfortably in any sleep position.

**All of the above accessories can be purchased on Amazon, CPAP.com, or 1800CPAP.com**

# Durable Medical Equipment

## What is a Durable Medical Equipment (DME) Supplier?

Durable Medical Equipment (DME) is any equipment or device that provides therapeutic benefits to a patient with certain medical conditions and/or illnesses. In this case, DME includes all equipment utilized in the treatment of sleep apnea, including PAP devices, masks, tubing, filters, chinstraps, and oxygen when indicated. DME suppliers provide this equipment to the patient under specific instructions from the sleep provider, and they do so in conjunction with your insurance company who pays for some or all equipment based on pre-existing contracts and the specifics of your particular insurance plan. Companies who provide DME for sleep patients employ appropriately educated and certified personnel including respiratory care practitioners (RCPs) and/or registered polysomnographic technologists (RPSGTs).

## What is the DME Supplier's Role in Your Medical Care?

DME suppliers fulfill a number of essential roles in the successful treatment of individuals with sleep apnea. In addition to providing the proper equipment, they facilitate patient education, problem solving, and compliance tracking. It is extremely important for the DME supplier to have a good working relationship with the sleep provider to ensure that communication, orders, and overall patient management occur as seamlessly as possible. Additionally, the companies should utilize the highest quality equipment and provide patients with service that is proper, responsive, highly competent, respectful of privacy, and ethical.

## How is Your DME Supplier Selected?

When we initiate or continue therapy to manage your sleep problems, we direct our orders to a specific DME supplier. The process by which we select a DME supplier for you includes a number of important factors, including geography, their in-network status with your insurance provider, any prior relationships they may have with you, and the overall quality of the services they provide. The majority of the complaints that we receive from patients under treatment for sleep apnea are related to issues with their DME supplier. We do not have financial relationships with any of the DME suppliers, nor can we control how they operate. We work very hard to maintain good working relationships with the suppliers and work regularly with those who provide the best service for our patients. It is very difficult to switch a patient from one DME supplier to another, but we will do this when necessary. It is your right to request a specific DME supplier, and if the company is in network with your insurance, we will always respect that request. If we have concerns regarding the supplier, we will discuss them with you.

## Engagement of the DME Supplier

An order will be written by your sleep provider and will be sent to an in-network DME supplier within two business days. The DME supplier will reach out to you to set up a meeting at a place and time convenient for you. During this meeting you will be set up with your PAP equipment. If this does not occur, please contact your ordering provider's office.



## PAP Therapy Treatment Initiation

During your initial set up appointment, a respiratory care practitioner (RCP) or sleep technologist will meet with you to set you up with your equipment. You will be fitted with a mask and have the option to trial different masks during this visit. Once you have found a mask that works for you, it is important to maintain it properly.

### Helpful Hint:

After you start using the PAP device, if you have problems with the mask such as poor fit, leak, discomfort, etc., please contact the DME supplier and they will either help you adjust the mask or replace it with another model.

A comfortable mask is a key factor in being able to use your treatment daily. Talk to your DME supplier about the different masks and headgear options that are available to you.

**The first mask replacement is FREE if it occurs within 30 days of the start of therapy.**

# Effective PAP Therapy: How Can I Be Successful?

## PAP Therapy Treatment Acclimation

If you are having other problems with your PAP device, which may include dryness of the mouth, air swallowing, or cleaning and maintenance, to name a few, please contact the DME supplier or your medical provider for advice.

## Effective PAP Therapy: How Can I Be Successful?

In order for PAP therapy to be successful, you should be using it every night for the entire time you are sleeping. Falling asleep on the couch without your PAP device, or taking it off after a few hours, deprives you of the full benefit of this treatment. Those who have the most success with this treatment learn from the beginning to put it on all night, every night.

## Your First Year

During your first year on PAP therapy you will see your sleep doctor a minimum of 3-4 times following the set up date of your equipment. The goal is to provide you with appropriate feedback and advice to ensure success with your PAP therapy. The following devices will help you achieve success.



**Smart Card/Data Card:** A smart card or a data card is a memory storage device that works with PAP devices. The card should be in your PAP device, and you should bring it with you to each provider visit. The data card is then downloaded during your office visit. The data card conveys essential data to your provider, including frequency and duration of PAP device use, mask leak and residual apnea frequency.

**Modem:** Most currently-utilized PAP devices are enabled to transmit the smart card data wirelessly to the DME supplier to assure proper usage and efficacy of your therapy.

## When Should I See My Sleep Doctor After PAP Device Set Up?

You must have a follow-up face-to-face appointment with your treating sleep doctor between the 31st and 91st day post set up. During this appointment, your physician must document that you are benefiting from your PAP therapy.



Philips Respironics | [usa.philips.com](http://usa.philips.com)



## What Should I Bring to My Doctors Appointment After PAP Set Up?

When you return to see your physician for a scheduled follow-up visit, it is essential to be prepared. For the first visit back after PAP therapy has been started, please bring the ENTIRE PAP device, including mask, headgear and tubing. During subsequent appointments, if you are having problems with your mask or your PAP device, please bring everything with you to the visit.

It is essential that you bring your PAP data card. Please make sure that it is properly engaged before you remove it from the PAP machine, otherwise it might lose useful data. The information carried on the card is information that we need to collect at EVERY VISIT.

# Compliance Goals

## Medicare Compliance Requirement

You **MUST** wear your mask with your PAP machine for a minimum of four hours per night on 70 percent of nights, during a consecutive 30-day period anytime during the first three months of initial usage. Ideally, you should wear it all night (at least six hours or more), every night.

## PAP Therapy Compliance Tips

Every patient travels their own road during PAP therapy. However, the most successful patients are those who comply every night. By using your PAP device nightly, your physician will have the information stored in your PAP machine and your nightly compliance data which will most effectively determine how to treat your sleep apnea.

Using a PAP device can be frustrating as you try to get used to therapy, but it's important to stick with it. The treatment is essential to avoiding complications of obstructive sleep apnea, such as heart problems, diabetes, high blood pressure, and excessive daytime sleepiness.

**Work with your provider and DME supplier to ensure the best treatment outcome for you.** Regular visits to your sleep specialist are important and your sleep team can help troubleshoot any problems that might otherwise interfere with a successful outcome.

## Compliance Specialists

When seeing your provider for follow up visits, they may recommend that you see one of our PAP Compliance Specialists. They are highly trained experts who provide assistance in helping you become a successful PAP device user. We do not charge you or your insurance for these visits. If you need to schedule a visit, discuss this with your provider. If appropriate, this will be arranged at your convenience.



**Remember: You are entitled to a free mask replacement if a problem occurs within 30 days of the start of therapy.**

*With time and patience, PAP therapy will positively affect your quality of life and overall health.*

# Solutions for Common Complaints

The following are some tips to help you solve common complaints you may experience during PAP therapy.

## How will I get used to wearing a PAP mask?

You might need to take small steps to get accustomed to wearing your PAP Mask.

### Desensitization

Try wearing the mask during the day when you're watching TV or reading a book. Sometimes simply wearing the mask while you're on the computer can help you get used to wearing it at night.

Once you become accustomed to how the mask feels on your face, start wearing it every time you sleep at night, and even during brief naps. The more you use the PAP mask, the easier it will be to acclimate to its use.

### Key Tips

**The mask should be snug and comfortable.** If it is too loose, it will leak and lose effectiveness. If it is too tight, it will hurt and may buckle and leak. Don't be afraid to undo the fastener and refit the mask if it does not feel right. After any mask has been in use for a while, the materials stretch, and the mask/headgear may need to be reconfigured to accommodate this. If you gain or lose a significant amount of weight, the mask that fit you in the past may no longer be the best one for you. New masks are always on the market. Unless you're extremely happy with your current mask, tell your DME supplier that you want to be refit with something else when you're due for your next mask replacement.



## My PAP mask is uncomfortable to wear at night.

**When it comes to getting a new PAP mask, it's important that you work closely with your provider and DME supplier to make sure that the mask and device suits your needs and fits you properly.**

Ask your sleep technologist or DME supplier to show you how to adjust your mask to get the best fit. Read manufacturer product instructions, which can guide you on proper fit. YouTube offers a number of informative videos for additional education.

## I can't tolerate the flow of air from the PAP mask.

**You may be able to overcome this issue by using the ramp feature on the PAP machine.**

The ramp feature allows you to start with low air pressure, which is then followed by an automatic, gradual increase that eventually sets itself to the pressure you were prescribed by your doctor. The rate of this ramp feature can be adjusted by your provider as well. Ask your DME supplier if the Flex or EPR feature on your PAP machine has been activated. This will improve your ease of exhalation.



## My nose is running or stuffy after wearing the PAP mask.

The nose filters and humidifies air as it enters the airway. However, the airflow from the PAP device can be very drying. The nose reacts to this dryness with an inflammatory reaction. Nasal tissues swell as a response to irritation from dryness. Some people will react as if they have allergies – with sneezing and a runny nose. If congested, it can result in mouth breathing, dry mouth, air swallowing and sometimes, bloating and belching. Stuffy noses may interrupt sleep. Usually these symptoms can be minimized or avoided altogether by the use of the inline humidifier provided with your PAP device. Most PAP devices allow you to adjust the settings to increase humidification which may reduce nasal stuffiness.

Consider using a nasal saline spray such as **NeilMed®**, or **Ayr®** at bedtime to prevent your nose from becoming excessively dry or irritated. Make sure that your mask is actually fitting well; a leaky mask can dry out your nose. If congestion persists, some patients are prescribed a nasal steroid spray or other forms of therapy for chronic rhinitis. Do not use petroleum jelly or an oil-based product to moisturize your nose.



## I feel claustrophobic when I'm wearing the PAP mask.

- **Begin by having a positive attitude about your PAP treatment.** Once you have the treatment working for you, you'll be happy that you made the effort.
- **Practice wearing your PAP mask while you're awake, without pressure.** Practice by holding the mask up to your face without any of the other parts attached. Once you're comfortable with that, try wearing the mask with the straps.
- **Take small steps to get used to the PAP mask.** Hold the mask with the hose connected to your face, without using the straps. Have the hose attached to the PAP machine at a low-pressure setting (with ramp feature turned on). And, finally, wear the mask with the straps and with the air pressure machine turned on while awake. After you're comfortable with that, try sleeping with it on.
- **Try relaxation exercises.** Certain exercises, such as progressive muscle relaxation or meditation may help reduce anxiety about wearing your PAP mask. It may help to get a different size mask or to try a different style, such as a full face mask.

If you're still feeling claustrophobic, talk to your provider, sleep technologist or DME supplier.

## I can't fall asleep easily with the PAP mask on.

This is a normal, temporary problem that occurs most often with patients new to PAP therapy. Follow our advice on getting used to your PAP machine, and try out the ramp feature of your machine. Also, make sure that you're practicing good sleep hygiene, which includes exercising regularly and avoiding caffeine and alcohol before bedtime. As simple as it sounds, don't go to sleep until you are tired. Keeping regular sleep hours is helpful, as is powering-down all electronic media 30 or more minutes before sleep onset.

## Why do I have dry mouth after wearing my PAP mask?

Breathing through your mouth at night or sleeping with your mouth open are two common causes of dry mouth. PAP therapy may worsen the symptoms.

If you wear a nasal mask, a chinstrap may help keep your mouth closed and reduce air from leaking. Make sure that you're wearing the right kind of mask (nasal vs. full face) and try adjusting your PAP machine's heated humidifier. If you have increased the humidity setting and still have a dry mouth, **Biotène**® gel (not the toothpaste, spray or mouthwash) can help. It works best by putting a nickel-sized blob between your teeth and cheeks. It will seep into the mouth overnight. Also helpful are **XyliMelts**® and **OraMoist**®, which are tablets that adhere to the cheek and help address dry mouth during the night (and day, if you wish).

## I inadvertently take my PAP mask off at night while sleeping.

**It's normal to sometimes wake up to find that you've removed the mask in your sleep.** If you move a lot in your sleep, you may find that a full face mask will stay on your face better. You may be pulling off the mask because your nose is congested. If so, ensuring a good mask fit and adding a heated humidifier to your PAP machine may help. A chinstrap may also help you keep the mask on your face. If you sleep with someone else, enlisting them to wake you up if they see that you've removed the mask, will be helpful. The best way to minimize this problem is to keep putting the mask back on whenever you wake to find it off. With persistence, this problem can almost always be solved.



**Philips Respironics**  
White Chinstrap



**AG Industries**  
Universal Chinstrap

# How to Optimize the PAP Therapy Experience

## General Sleep Recommendations Include:

- **Set a goal for at least seven to eight hours of sleep time per night.**
- **Use the bed mainly for sleep, and go to bed only when tired.** If you are unable to fall asleep after 30 minutes, consider getting out of bed, but don't engage in any activity that requires sustained mental alertness (such as playing video games or using other electronic media).
- **Maintain a regular bedtime and wake-up time**, including weekends and days off from school or work. Avoid excessive naps during the daytime. If a nap is necessary, limit it to no more than 30 minutes. Specifically avoid falling asleep in front of the TV after dinner.
- **Make the bedroom your 'safe haven' for sleep.** Keep it comfortable, quiet, dark, and cool. Avoid allowing children or pets in the room. They don't sleep better in your room, and neither do you. If you have problems falling or staying asleep, turn the alarm clock around so you cannot see what time it is in the middle of the night.
- **Avoid excessive alcohol, caffeinated beverages, and nicotine products** for at least six hours prior to bedtime, longer if necessary.
- **Avoid strenuous exercise and large meals for at least four hours prior to bedtime.** However, frequent or even daily exercise is associated with better sleep, preferably earlier in the day.

## Traveling with PAP: Portable PAP Units

It is important that you take your PAP machine with you when you travel. Maintaining good quality sleep with PAP therapy improves daytime performance and function. If you travel often, it may be worth the money to purchase a secondary, travel-specific machine. Insurance companies do not cover portable travel PAP devices. For many people, travel PAP devices have been excellent investments. If you have a second home or a specific place you visit frequently, purchasing a second full-sized PAP device may also be a good option.



**Transcend®**  
Auto miniCPAP



**HDM® Z1 Travel**  
CPAP Machine



**ResMed AirMini™**  
CPAP Machine

# Are You Having Surgery?

## Special Considerations

Bearing in mind that every surgery requires thoughtful preparation for the best outcomes, special considerations for surgery patients with sleep apnea do require some additional forethought by the patient and the surgical and hospital medical staff. Medical professionals have known for quite some time that patients with sleep apnea are at an increased risk of developing complications after operations. Although medical personnel have specific protocols in place for obstructive sleep apnea (OSA) patients undergoing surgery, it benefits the patient to be aware and proactive regarding the things they should know and do before surgery.

Because sedation can relax the throat muscles beyond the normal level in non-OSA patients, patients with OSA tend to be more sensitive to what would otherwise be non-obstructive doses of drugs. Anesthesia can increase apnea episodes in quantity and severity, thereby further decreasing the all-important arterial oxygen saturation.

## Working with the Anesthesiologist

While the anesthesiologist will perform a thorough history and examination before the surgery, which often reveals the potential for post-op problems with the airway, every OSA patient should be proactive in preparing themselves and their anesthesiologist by informing them of their condition well before the surgery.

The majority of anesthesiology departments will have someone talk to you about your options and your concerns, so make contact as soon as the surgery is scheduled. Working with the anesthesiologist ahead of time allows them to devise a plan for assuring your comfort and safety relative to pre-existing problems such as OSA. While the final choice of the type of anesthesia will

be a team decision between the patient, surgeon and anesthesiologist, and will be based on the circumstances, the patient can have some input on the process.

## Inform Hospital Staff of Your Device

Not every person on the hospital medical staff will be familiar with the operation of the many models and types of PAP therapy devices. Consequently, it is wise to inform hospital staff of your device and its settings beforehand so they have an opportunity to learn proper function before your operation and hospital stay.

The Joint Commission on Hospital Accreditation requires the hospital engineering staff to inspect your PAP machine beforehand if it will be used during your hospital stay. OSA patients should inform hospital personnel that they use a PAP device and will bring their machine in to use post operatively. Providing the staff with a copy of your prescribed pressure is also recommended.

Bringing the PAP machine to the hospital is also necessary for same-day surgery where you will be home again that same evening. Using your PAP machine during the post-operative period, when you are coming out of anesthesia, is important to your recovery.

Regardless of the type of procedure, your hospital's surgical and medical staff should be well-prepared to deal with OSA patients so that the surgery and recovery is uneventful. By being proactive and consulting with the hospital before the surgery date, you can do your part in helping them prepare for the smoothest possible surgical experience while giving you the peace of mind to concentrate on recovery and return to normal.

# PAP Device Equipment Cleaning and Care

## Daily Care

Each morning wipe your nasal pillows or the gel cushion portion of your mask with a warm, wet wash cloth.

- If you are getting a build up of facial oils on your nasal pillows or the gel/cushion portion of your mask, daily washing with soapy water may be necessary to avoid skin irritation.
- NEVER use alcohol on the mask or nasal pillows.
- Empty the water from the humidifier chamber **daily**. Separate the chamber and let it air dry all day. Refill with fresh distilled water before using at night, making sure not to fill beyond the indicated maximum fill line.



## Weekly Care

- Wash long tubing, gray/black foam filter, humidifier chamber, headgear and full mask with warm soapy water. Be sure to use a pure soap such as **Ivory®**, **Neutrogena®** or **Jergens®** (anti-bacterial or skin softening soap is not recommended).
- Rinse thoroughly and allow to air dry. Make sure the tubing is dry before use.
- CAUTION: Do not place any equipment in the dishwasher.
- Note that headgear can be machine washed, but it is best to wash by hand.
- Wipe machine with soft, damp cloth.
- Replace white paper filters every two weeks.
- All nasal pillows should be replaced every two weeks along with most nasal mask gels. Others should be replaced once a month.

## Additional weekly instruction for patients with heating tubes

- Disconnect the heated tubing from the heated humidifier before cleaning.
- Inspect the heated tubing for damage or wear (e.g. cracking, crazing, tears, punctures, etc.). Discard and replace if necessary.
- CAUTION: Avoid submerging the end of the humidifier connector in water. If the end of the humidifier connector gets wet during the cleaning process, be sure to thoroughly rinse all soap residue from the connector and air dry before use.

## Monthly Care

If desired you may wash your long tubing in one part white vinegar and two parts water. Be sure to rinse well and wash in warm soapy water after. This will help ensure that your tubing stays as clean as possible until it can be replaced (every three months).

*These are general cleaning instructions. Be sure to check the PAP machine's user manual and package insert for instructions specific to your supplies and equipment.*



### Shopping List

- ❑ Mild soap (Ivory®, Neutrogena® or Jergens®)
- ❑ Distilled water
- ❑ Distilled white vinegar

## In Case of Breakage

Contact your DME supplier if you have any problems that you are unable to correct. Do **NOT** attempt to repair your device by yourself.

### Vinegar and Water Solution

Use one part white vinegar to two parts water. Soak your equipment in this solution for 30 minutes to kill any accumulated bacteria. After your equipment soaks for 30 minutes let it air dry.

If your equipment smells like vinegar you may want to soak your equipment in dishwashing liquid to get the vinegar scent off.

**Never** wash your humidifier chamber with a metal plate in the vinegar/water solution.

## Sanitizing Machines

The **SoClean®** and **Lumin™** machines are two sanitizing systems marketed towards PAP device users. There is a lot of literature on these two machines which you can find on their websites. It is important to look at reviews and effectiveness of the systems to ensure you make an educated decision before purchasing. Feel free to ask your physician if these sanitizing machines would be a good fit for you.

A comparison of these products can be found at: <https://www.thecpapshop.com/blog/lumin-or-soclean-choose-right-cpap-sanitizer/>

*Disclaimer: These products are not endorsed by Summit Medical Group. Be sure to check the PAP machine's user manual and package insert for cleaning instructions specific to your supplies and equipment.*



**SoClean®**  
Sanitizing Machine  
[soclean.com](http://soclean.com)



**Lumin™**  
Sanitizing Machine  
[3blumin.com](http://3blumin.com)

## Did You Know?

Physicians often field patient questions about PAP therapy equipment cleaning and the link to potential infections. If you are using PAP therapy equipment, it is important to add a daily equipment cleaning routine to your schedule. This routine will ensure that your machine is being cleaned effectively.

"Though there may be a reasonable concern for potential infection from the use of PAP equipment, there is little research in adults supporting such an association. Modern devices with the use of heated humidifiers, heated tubing, hypoallergenic filters, and improved design have not been well studied. In fact, there are currently zero—yes, zero—case reports by doctors found in the scientific literature of PAP machine use contributing to an increased risk of upper respiratory infection like sinus infections or pneumonia." *Peters, Brandon. Can My CPAP Make Me Sick? Routine Cleaning Helps Avoid Illness Risk of Infection Reduced with Regular Cleaning, Distilled Water Use, Verywell Health, 2018, [verywellhealth.com/can-cpap-make-me-sick-3015030](http://verywellhealth.com/can-cpap-make-me-sick-3015030).*

**For more information, please review the medical journal links provided below.**

Gelardi M, Carbonara G, Maffezzoni E, Marvisi M, Quaranta N, Ferri R. Regular CPAP utilization reduces nasal inflammation assessed by nasal cytology in obstructive sleep apnea syndrome, *Sleep* 2012 Aug;13(7):859-63. doi:10.1016/j.sleep.2012.04.004. Epub 2012 July 2.

Ortolano, GA *et al.* Filters reduce the risk of bacterial transmission from contaminated heated humidifiers used with CPAP for obstructive sleep apnea, *J Clin Sleep Med*. 2007 Dec 15; 3(7)700-5.

## Visit These Websites for Further Education

- [sleepapnea.org](http://sleepapnea.org)
- [talkaboutsleeeep.com](http://talkaboutsleeeep.com)
- [sleepfoundation.org](http://sleepfoundation.org)
- [sleepeducation.org](http://sleepeducation.org)
- [aasm.org/about/patient-info](http://aasm.org/about/patient-info)

If you have any additional questions about your PAP machine and/or supplies, please call your Durable Medical Equipment supplier.

If you have any additional questions regarding PAP therapy and your health, please call your sleep provider's office.

**Thank you for choosing Summit Medical Group.**



**SUMMIT  
MEDICAL  
GROUP**

**SLEEP DISORDERS CENTER**  
Call 973-822-1772  
[summitmedicalgroup.com](http://summitmedicalgroup.com)

### RECOMMENDED APPS AVAILABLE

#### **DreamMapper**

##### **Philips Respironics Machines**

The DreamMapper mobile app can be downloaded to your iOS (Apple) device at the iTunes store. For Android Devices, visit the Google Play store.

**Website:** [sleepapnea.com/products/dreammapper](http://sleepapnea.com/products/dreammapper)

**Registration website:** [mydreammapper.com/Account/Register](http://mydreammapper.com/Account/Register)

#### **myAir Sleep™**

##### **ResMed Air10 Device Only**

Track your sleep therapy progress with the myAir for Air10 by ResMed app. Download the myAir app for your Apple iPhone in the App Store or for your compatible Android smartphone in the Google Play store.

**Website:** [ResMed.com](http://ResMed.com)

**Registration website:** [myair.resmed.com](http://myair.resmed.com)

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کریں 19082778928.

## Glossary of Common Sleep Medicine Terms

<b>CPAP</b>	Continuous positive airway pressure
<b>Auto-PAP</b>	Auto adjusting CPAP machines; also known as APAP
<b>BiPAP</b>	Bi-Level positive airway pressure
<b>Auto-BiPAP</b>	Auto-adjusting Bi-Level machine
<b>BiPAP ST</b>	Bi-Level positive airway pressure with a back-up rate
<b>VPAP</b>	Variable positive airway pressure
<b>AutoSV</b>	Automatic Servo Ventilation
<b>DME</b>	Durable Medical Equipment
<b>Compliance</b>	The measurement of how frequently you use your PAP machine and if it is working for you
<b>Full face mask</b>	Style of mask covering the mouth and nose/nostrils
<b>Nasal mask</b>	Style of mask covering the nose only
<b>Nasal pillows</b>	Style of mask sealing under the nose only