

## CPAP (AirSense 11) use MOP

### Introduction

This instruction manual explains use and maintenance of an AirSense 11 AutoSet machine. This is an auto-adjusting positive airway pressure (aCPAP) device that can be used to treat obstructive sleep apnea (OSA).

### Components

- Main compartment
  - PAP unit.
  - Humidifier tub.
  - SlimLine Tubing (secondary tube).
  - Power supply which consists of a USB style connection to the back of the AirSense 11.
- Inside flap
  - Users manual.
  - Filters.
  - Two sleeves that hold SD Cards.
- Outside the carry case
  - ClimateLineAir 11 tubing (primary tube).
  - Folder with paperwork.

For assistance

Sleep SMART Care Team Contact Information:

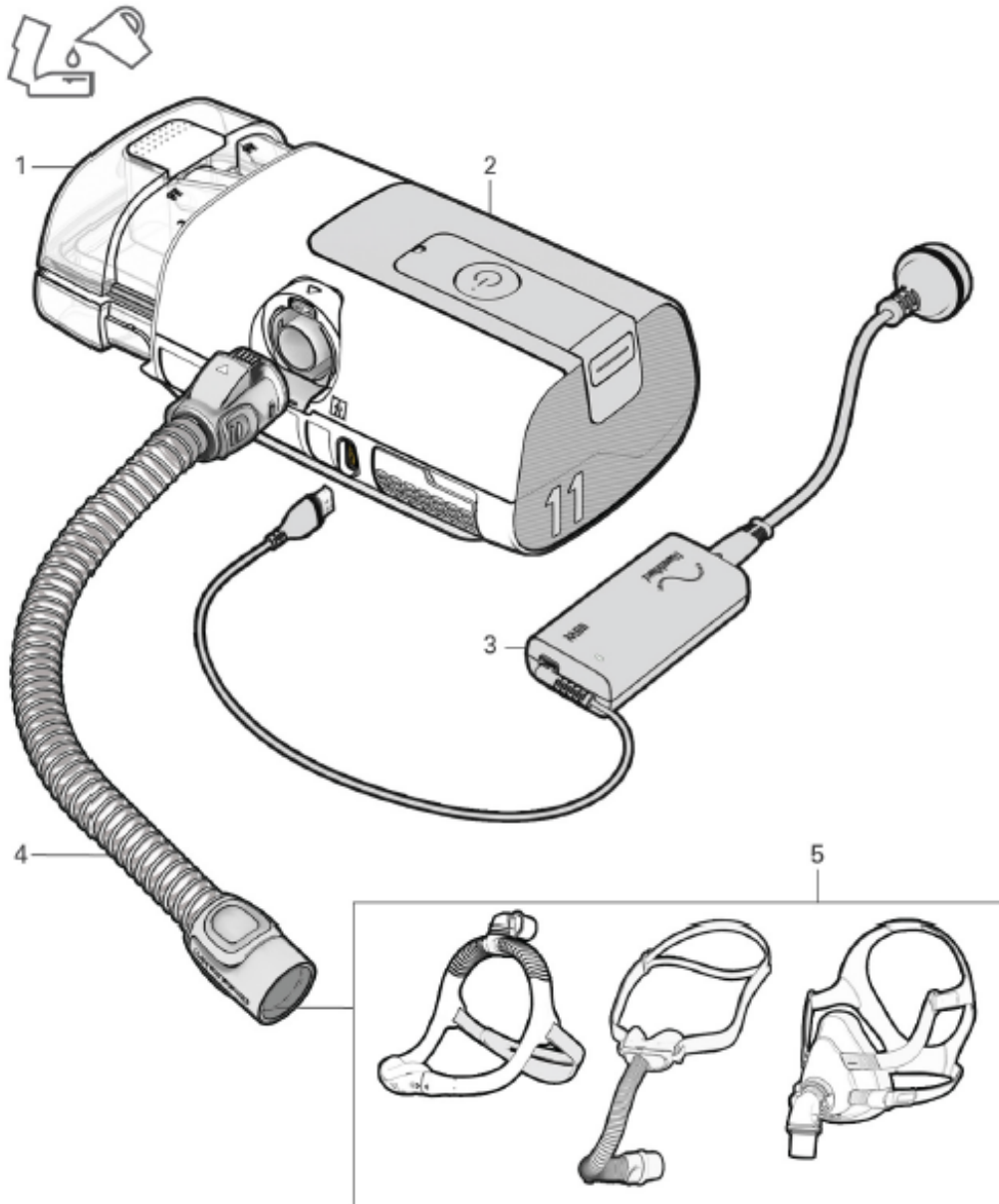
Tech support hotline: [sleepsmarttechsupport@noxhealth.com](mailto:sleepsmarttechsupport@noxhealth.com)

Phone Number (8am-7pm M-F only): **470-655-6688**

## Use and Care of The PAP Device



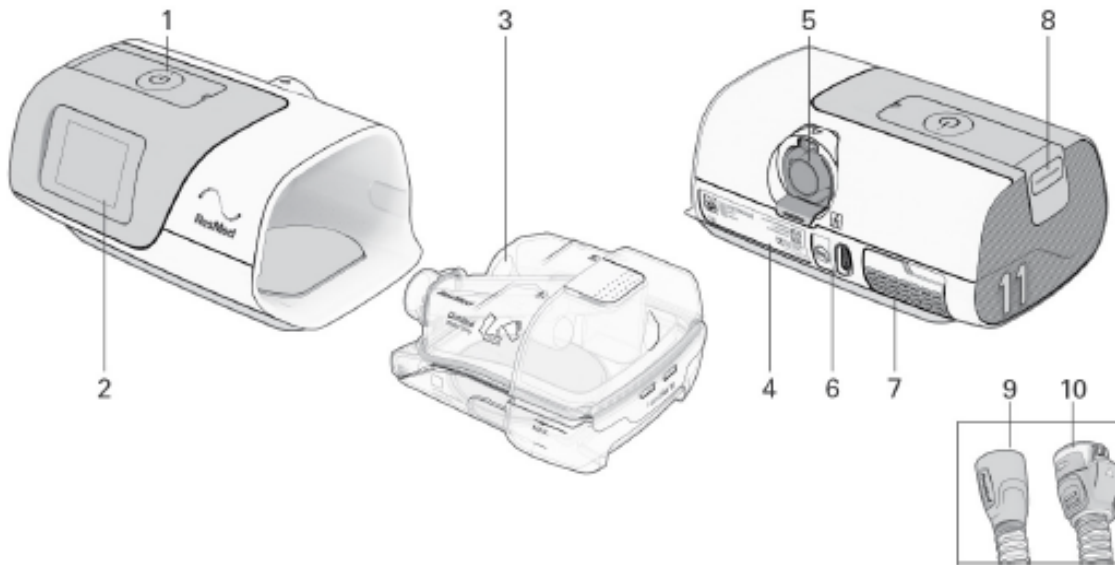
Quick setup view



Components

1. HumidAir™ 11 tub
2. AirSense™ 11 device
3. Power supply unit
4. ClimateLineAir™ 11 tubing
5. Mask

About the device:



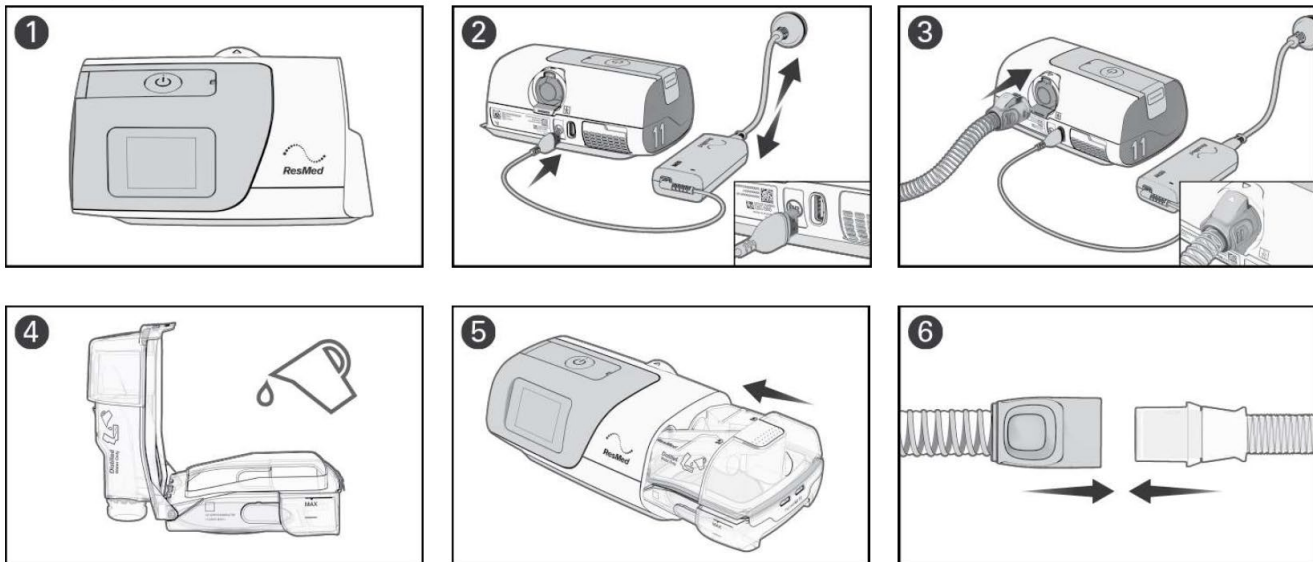
	Description	Purpose
1	Start Therapy/ Standby button	Press to start/stop therapy. The LED indicator is green during standby mode, and white during therapy, <b>Test Drive</b> , and <b>Mask Fit</b> functions.
2	Display touch screen	Navigates between functions and displays information on the operating status of the device.
3	HumidAir 11 tub	Water tub that provides heated humidification.
4	Device label	Contains information relevant to the device.
5	Outlet connector	Connects the air tubing
6	Power inlet	Connects the power cord
7	Air inlet filter cover	Contains the air filter
8	SD card cover	Removable cover that protects the SD card slot. The LED indicator is blue when data is written to the SD card.
9	SlimLine tubing	Non-heated air tubing
10	ClimateLineAir 11 tubing	Heated air tubing

**Notes:**

- If the Start therapy/ Standby button has a flashing white light, a system error has occurred. Refer to the Troubleshooting section for more information.
- Use this device only as directed by your physician or healthcare provider.

## Setting Up The PAP Unit

To set up the device:



1. Place the device on a stable level surface
2. Connect the power cord into the power inlet at the rear of the device. Connect one end of the power cord into the AC adaptor and the other end into the power outlet. Ensure the device is set up and connected to power to enable settings to be applied wirelessly to the device if required.
3. Connect the air tubing firmly to the outlet connector at the rear of the device
4. Open the humidifier tub and fill it with water.
 

**Note:** The humidifier tub must be removed from the device before adding water.

  - When using the HumidAir 11 Standard water tub, use distilled water only.

Fill the water tub up to the maximum water level mark. The humidifier tub has a maximum capacity of 380 mL.
5. Close the humidifier tub and insert it into the side of the device.
6. Connect the free end of the air tubing firmly onto the assembled mask.

See the mask user guide for detailed information.

**Notes:**

- Do not insert any USB cable into the AirSense 11 device or attempt to plug the AC adaptor into a USB device. This may cause damage to the AirSense 11 device or USB device.
- The electrical connector end of the heated air tubing is only compatible with the air outlet at the device end and should not be fitted to the mask.
- Do not use electrically conductive or anti-static air tubing.

Notes about reassembling and filling the water tub S11

1. Take the humidifier tub and slide it into the right side of the Airsense 11
2. One side of the tub has a locking latch. Lift the latch to open the tub.
3. Use distilled water only and fill to the max fill line.
4. Close the lid and make sure it snaps back together to ensure a good seal.









Notes about the ClimateLineAir 11 tube - Heated air tube

1. The purpose of the ClimateLineAir 11 tube is to help reduce the amount of condensation buildup and deliver optimal comfort
2. The ClimatelineAir 11 has two ends.
  - The soft rubber end attaches to the mask.
  - The more rigged end connects to the AirSense 11.

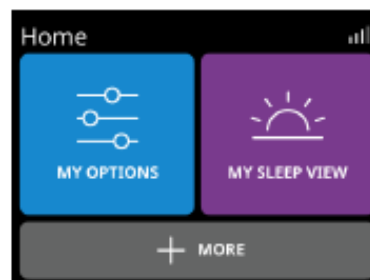
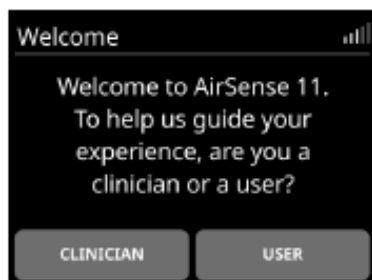
## Navigating the touch screen

The AirSense 11 device operates via a display touch screen, which allows you to access, view and change therapy and device settings. You can also track your sleep health progress.

The status bar at the top of the screen may display icons at different times and may include:

Icon	Description	Purpose
	Home Screen	Return to the Home screen at any time.
	Humidifier fault	Detects fault in the humidifier. Therapy will run without heating.
	Humidifier warming	Water in the humidifier tub is pre-heating.
	Humidifier cooling	Water in the humidifier tub is cooling.
	Bluetooth connected	Device is successfully connected via Bluetooth wireless technology.
	Cellular signal strength	Indicates the strength of cellular connectivity.
	No cellular connection	Cellular coverage is not available.
	Airplane mode	Device is in airplane mode.

### Initial Setup



From the **Welcome** screen, tap **USER** and follow the prompts.

- From the **Home** screen, you can access the following menus:
  - MY OPTIONS:** View and adjust therapy settings (eg, Adjust Ramp time)
  - MY SLEEP VIEW:** Track sleep health (check the number of hours used last night or mask status)
  - MORE:** Access additional features such as Run Mask Fit or switch to Airplane mode.

## Airsense 11- Navigating the touchscreen

### 1. Main screen (touch screen)

- **My Options** - View and adjust therapy settings (eg: humidifier adjustment).
- **My Sleep View** - Track sleep health (eg: check the number of hours used last night).
- **+ More** - Access additional features (eg: Run Mask Fit)

*When you have accessed any of these three options and you want to go back to the Main Menu, tap on the Home icon in the top left corner of the screen.*

## Getting Started AirSense 11

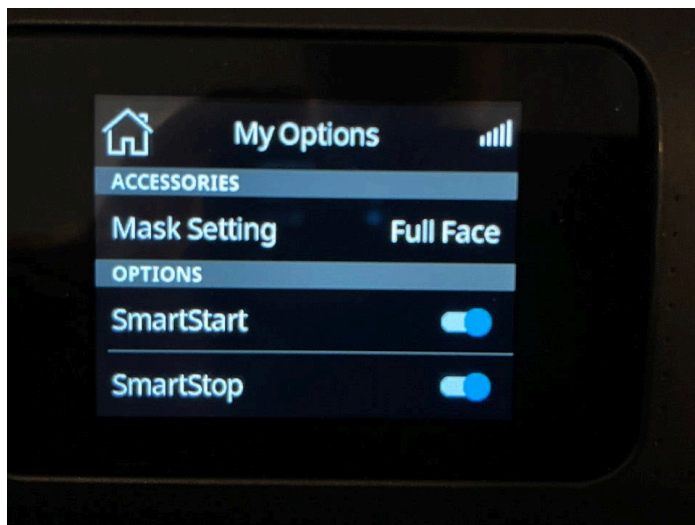
### Start/Stop

1. The round button on the top of the device is the Start/Stop button (On/Off).
2. When therapy is started the device will automatically start at a lower pressure to make it easier to breathe when you first go to sleep.
3. If subject wakes up in the middle of the night, press the Start/Stop button to turn off the device. Detach the ClimateLineAir 11 from the mask.
4. Getting back in bed - Attach the ClimateLineAir 11 by connecting it back to the mask and pressing the Start/Stop button.

*Remember - the PAP device will start out at a lower pressure.*

## The SmartStart and SmartStop Features

The aCPAP device has a comfort feature called SmartStart and SmartStop that are enabled. When SmartStart is enabled, therapy starts automatically when breathing into the mask. When SmartStop is enabled, therapy stops automatically after a few seconds when the mask is removed. In Sleep SMART, all devices are set to have SmartStart and SmartStop enabled. If a subject does not like the SmartStart feature, it can be disabled by contacting the Sleep SMART Care Team.



## Using PAP at Bedtime

- Always fill the water tub with distilled water only.
- Put on the mask and start the device. Remember that the device will increase flow if it senses leak.
- Place the tubing above the headboard or between the pillow and the wall. Bringing it over the pillow in this manner may help keep it out of the way during sleep.



## Restarting PAP during the Sleep Cycle

- If it is necessary to interrupt use of PAP (to use the restroom, for example), stop the device.
- Subjects can either disconnect the tubing at the mask, and keep just the mask on, or take the mask off and then put it back on when they come back to bed.
- When they return to bed, they should push Start/Stop again or simply breathe into the mask. The device will restart using the same lower pressure it likely started with at the beginning of the night. As before, the machine will gradually ramp up the pressure until it reaches the targeted range.
- If the subject wakes up in the middle of the night and the mask is to the side of the face, off the face, or on the floor, just put it back on and have the subject return to sleep. People sometimes remove their PAP masks while they are asleep during the first few weeks of acclimation to treatment.

When stopping the device in the morning (S11)

- When the device is stopped in the morning, the device will continue to run or blow a small amount of air to help cool down the water in the tub.
- Detach the tub and empty the water in the bathroom sink.
- Close the tub making sure it snaps in place.
- Insert the tub back into the AirSense 11. This will allow any remaining water to evaporate.

## The Five Most Important Aspects of PAP Treatment:

### 1. Type and Fit of the Mask

The most important piece of equipment in any aCPAP system is the mask. The mask is the one part of the aCPAP system that is in constant contact to the subject's face. An uncomfortable mask makes sleep difficult, if not impossible. A mask that does not fit properly can cause a leak, which leads to the aCPAP giving more pressure and adds to discomfort.

Here are some tips for a comfortable mask fit:

- Always adjust the straps while lying down. Gravity can affect the fit of the mask - unless the subject sleeps sitting up, do not adjust the mask sitting up.
- Some leak is normal, but if the leak does not go away after repositioning and adjusting the straps while the subject is lying down - or if a leak interrupts his or her sleep - please consider another mask.
- It is completely normal to go through an adjustment period with a mask. If the mask causes discomfort or leaks, even after it has been adjusted it while lying down, the mask should be changed.

- Mask leak and facial breakouts can be alleviated with daily mask cleaning.
- Masks are made to be replaced. Subjects should get a new cushion for the mask every three (3) months.
- The Mask Fit Function (on the Setup menu of the aCPAP) is only for use while working with a clinician.

## 2. Pressure

The aCPAP adjusts itself to create enough pressure to keep the airway open. Here are some important tips for making the device more comfortable.

The subject can always use the Start/Stop button on the top of the aCPAP. As the SmartStart feature will generally be enabled, the device will start automatically when the subject breathes into the mask.

- Never turn the device on until the mask is on the subject's face.
- It's important that the device be comfortable when it is put on. If the pressure from the device is too much or not enough when starting treatment, please call the Sleep SMART Care Team.
- If subject says it is difficult to breathe out against the pressure, or that the pressure wakes the subject up, make sure the Expiratory Pressure Relief (EPR) is turned on. By default the EPR is set to 3 (maximal added comfort at start of each expiration).

## 3. Humidity

The flow of air from the aCPAP that goes through the nose, sinuses, mouth, throat, and upper airway can cause dryness. This can happen especially if the mouth is often open while the subject sleeps. The humidifier that comes with the aCPAP helps to reduce dryness. The user controls how much humidity they receive. Here are some tips for setting the humidity for maximal comfort:

- It is normal to have to adjust the humidity differently throughout the year.
- Without enough humidity, the tissue in the nose and throat can become irritated. If the subject wakes with a stuffy nose that goes away 2-3 hours into the day, they should try increasing their humidity.
- A typical mid-range starting setting for the humidity is 4, on a scale of 0 (off) to 8.
- Adjust the humidifier to their comfort. If they prefer a lower temperature and humidity, they should set their humidity low.
- If subjects need more help with setting the humidifier for comfort, or they think that dryness is occurring because they might be keeping their mouth open at night, encourage them to call the Sleep SMART Sleep Coaches.

## 4. Replacement of Supplies

The Sleep SMART Care Team is the best source of information. It is always a good idea to

know when the supplies are due to be replaced or requested. Standard replacements will occur according to the schedule just below. However, the experience is different for each person, and sometimes parts need to be requested and replaced sooner. If not replaced periodically, headgear may stretch out and the aCPAP mask interface/pillows will get soft and floppy. They may begin to have leaks of pressure or humidity, which could lead to sub-optimal treatment, appearance of snoring, or daytime symptoms.

Standard replacement of supplies: filters should be replaced every month, nasal pillows and other mask interface seals approximately every three (3) months. The mask, headgear, ClimateLineAir tubing, and water chamber should be replaced every six (6) months. These can be replaced more often when occasionally necessary. Encourage subjects to call the Sleep SMART Care Team for filters, hoses, and replacement cushions or pillows when needed.

## Adjusting to Therapy

If the subjects are first-time users, they might need some time to get used to the therapy. This is not unusual as it takes most PAP users between one day and two weeks to adjust to the air pressure.

## Overcoming symptoms by changing comfort settings

If subjects are having difficulties getting used to therapy, use the AirSense 11 comfort features to help them on their journey to better sleep.

- Dry or runny nose - If they are getting a dry or runny nose, adjust the Humidity Level by turning it up.
- Droplets of water (condensation) - If they are getting droplets of water on their nose, mask or air tubing, adjust the Humidity Level by turning it down.

Climate Control is designed to make therapy more comfortable by enabling constant temperature and maintaining humidity.

This feature:

- delivers comfortable humidity level and temperature during therapy
- maintains the set temperature and relative humidity during sleep to prevent dryness in the nose and mouth
- can be set to either Auto or Manual
- is only available when both the ClimateLineAir 11 and HumidAir 11 tub are attached.

### Climate Control - Auto setting

Auto is the recommended and default setting. It is designed to make therapy as easy as possible so there is no need to change the temperature or humidity settings.

- Sets the tube temperature to Auto (80°F/27°C). If the air in the mask is too warm or too cold, you can adjust the tube temperature to anywhere from 60 to 86°F (16 to 30°C) or turn it off completely
- Adjusts the humidifier output to maintain a constant, comfortable humidity level of 85% relative humidity
- Protects against rainout (water droplets in the heated air tubing and mask).

### Climate Control - Manual setting

Manual is designed to offer more flexibility and control over settings and offers the following:

- Temperature and humidity can be adjusted to find the most comfortable setting
- Temperature and humidity level can be set independently
- Rainout protection is not guaranteed. If rainout does occur, first try increasing the tube temperature
- If the air temperature becomes too warm and rainout continues, try decreasing the humidity.

Note: If Climate Control is set to Manual, the Auto Tube Temperature setting is not available.

### Humidity Level

The humidifier is designed to make therapy more comfortable.

- If the subject is getting a dry nose or mouth, turn up the humidity
- If the subject is getting any moisture in their mask, turn down the humidity.
- The Humidity Level can be set to Off or between 1 and 8, where 1 is the lowest humidity setting, and 8 is the highest humidity setting.

To update the setting for Tube Temperature, Climate Control, or Humidity Level, tap MY OPTIONS from the Home screen, go down the list of options, and select the setting.

Note: Tube Temp Auto setting is only relevant when using the Climate Control Auto setting. If Climate Control is set to Manual, Auto set temperature is not a valid selection.

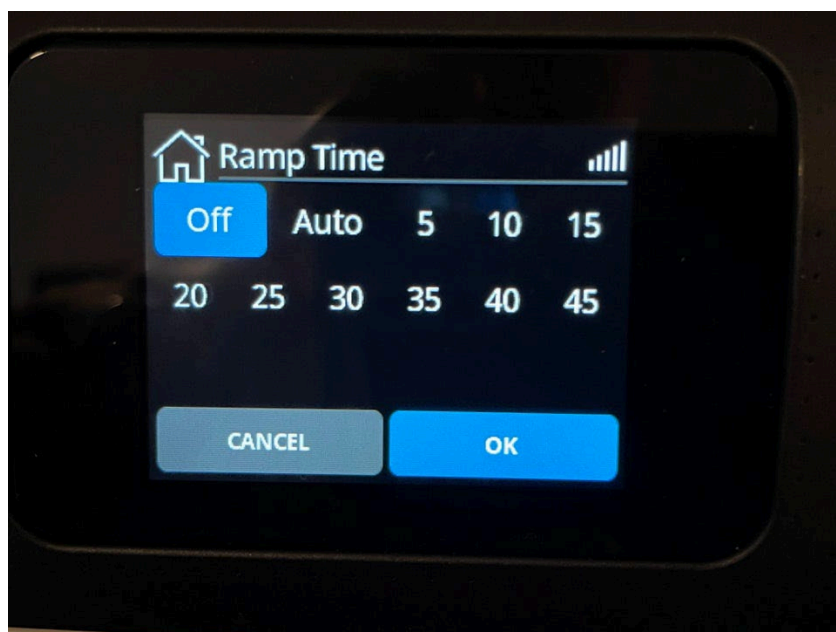
### Ramp

The ramp is the period during which the pressure increases from a low start pressure to the prescribed treatment pressure. Ramp Time can be set to Off, 5 to 45 minutes (in 5-minute increments), or Auto. The standard in Sleep SMART is to start with Auto.

- Trouble falling asleep - If the subject has trouble falling asleep with high pressure, turn on Auto Ramp or increase Ramp Time.
- Bloating feeling - If they are experiencing a slightly bloated feeling from swallowing air, turn on Auto Ramp or increase Ramp Time.
- Feeling of not getting enough air - If they feel like they are not getting enough air, turn Ramp Time to Off.

To change the Ramp Time:

MY OPTIONS: View and adjust therapy settings (eg, Adjust Ramp time)



## Climate Control

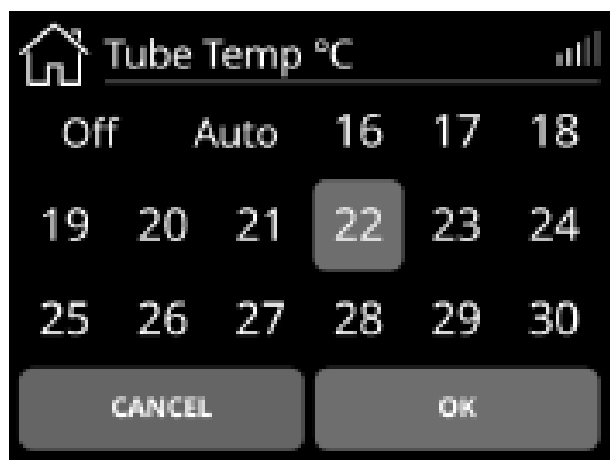
### Humidity Level

The humidifier moistens the air and is designed to make therapy more comfortable. If they are getting a dry nose or mouth, turn up the humidity. If they are getting any moisture in the mask, turn down the humidity.

Users can set the Humidity Level to Off or between 1 and 8, where 1 is the lowest humidity setting and 8 is the highest humidity setting.

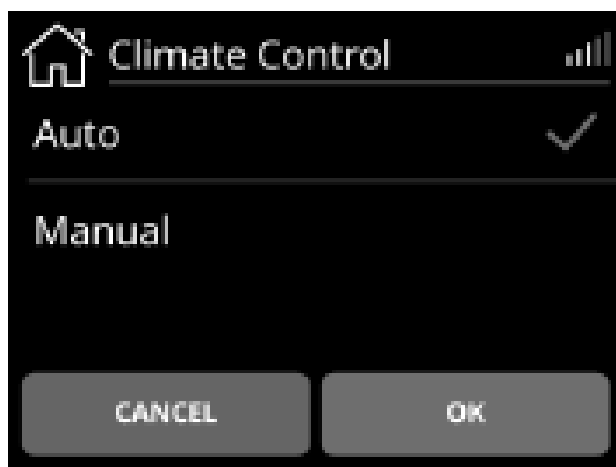
To adjust the Humidity Level:

### Tube Temperature



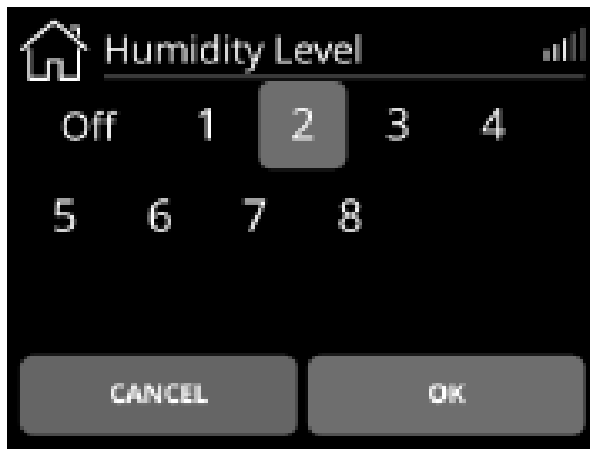
1. Tap Tube Temp.
2. Tap the preferred setting.
3. Tap OK to save the change.

### Climate Control



1. Tap Climate Control.
2. Tap Manual.
3. Tap OK to save the change.

## Humidity Level



1. Tap Humidity Level.
2. Tap the preferred setting.
3. Tap OK to save the change.

## 5. Proper Cleaning Techniques for the S11

### Daily:

- Empty the humidifier tub and wipe clean with a lint free cloth.
- Place it back into the device to allow the device to evaporate the water droplets left over from the previous night.
- Before going to bed, refill the tub with distilled water to the max line.
- If you have a silicone style mask cushion - wash with warm soapy water (Ivory soap or baby shampoo is preferred).

### Weekly

Wash the ClimateLineAir 11 tubing with a mild soap and warm water.

- Gently press the release buttons and pull the ClimateLineAir 11 from the device.
- Holding the cuff of the tubing and the mask, gently pull apart.
- Holding both ends of the ClimateLineAir tube in one hand, pour approximately a 1 cup of a diluted distilled white vinegar/water solution (about 1 part vinegar to 9 parts water) into the tubing.
- Swish the solution thoroughly around the tubing to fully coat.
- Pour out the solution and rinse thoroughly with warm water.
- Hang the tubing upside down over the edge of the shower or tub to fully dry.
- Allow to dry. Not in direct sunlight.

#### Humidifier tub

- Wash the tub in warm soapy water.
- Pour one cup of a diluted distilled white vinegar/water solution (about 1 part vinegar to 9 parts water) into the tub.
- Let it sit for at least 30 seconds.
- Swish the solution around, then pour out.
- Rinse thoroughly with warm water.
- Allow to dry. Not in direct sunlight.

Check the filter to make sure it is free of dust or dirt build up.

- The filter is not reusable or washable
- When you use the last filter, call your CareTeam member to reorder.

Wipe the exterior of the device with a lint free cloth.

Mask: (Daily) Clean the mask in the sink. Use Ivory Soap or baby shampoo to clean the cushion.

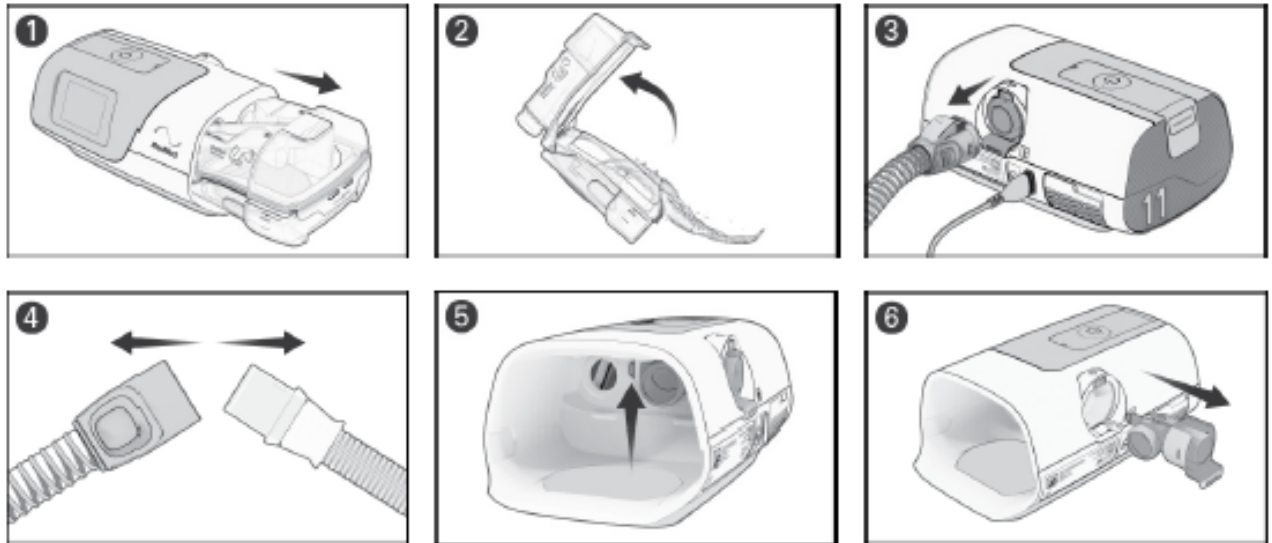


Subjects can also take the mask into the shower and clean it in the same way. Rinse well with cool water and hang to dry, with both openings of the tube hanging downwards on the towel rack in the bathroom.

Never use an alcohol-based product on the mask interface or nasal pillows. The alcohol will cause a quicker breakdown of the materials. CPAP supply cleaning wipes are available online.

Remember, we are here to help! Please follow these suggestions and the PAP treatment will benefit the subject and their health. If subjects have any questions or concerns, encourage them to contact the Sleep SMART Care Team at **470-655-6688**.

## Disassembling



1. Hold the humidifier tub at the top and bottom, press it gently and pull it away from the device.  
**Note:** take care when handling the humidifier tub as the humidifier tub may be hot. Allow 10 minutes for the heater plate and any excess water to cool.
2. Open the humidifier tub and discard any remaining water.
3. Pinch the cuff of the air tubing, and gently pull it away from the device.
4. Hold both the cuff of the air tubing and the swivel of the mask, then gently pull apart.
5. Locate the outlet connector on the inside of the device and release it by pressing the clip firmly.
6. Remove the outlet connector by pulling it out through the outlet connector socket at the rear of the device.

## Cleaning

The following instructions are for home cleaning. Instructions for reprocessing devices intended for multi-patient re-use can be found in the clinical guide.

You should clean the device, humidifier tub, air tubing, and outlet connector as described. For cleaning your mask, refer to the mask user guide for detailed instructions.

### Daily:

1. Empty the humidifier tub and wipe it thoroughly with a clean disposable cloth. Allow it to dry out of direct sunlight.
2. Refill the humidifier tub.
  - Use distilled water.

### Weekly:

1. Wash the components as described:
  - Air tubing - in warm water using a mild dishwashing liquid.
  - Humidifier tub - in warm water using a mild dishwashing liquid OR in a solution with a ratio of 1 part vinegar and 9 parts water at room temperature.
  - Outlet connector - in warm water using a mild dishwashing liquid OR in a solution with a ratio of 1 part vinegar and 9 parts water at room temperature.
  - Components should not be washed in temperatures higher than 131°F (55°C).
2. Rinse each component thoroughly in water.
3. Allow to dry out of direct sunlight or heat
4. Wipe the exterior of the device with a dry cloth.

## Troubleshooting

Issue	Possible Solution
Frequent Awakenings	Try to determine cause, and respond as listed below if any of these more specific problems are identified. Contact Sleep SMART Care Team.
Air leak from mask seal with nose or face	Tighten headgear that holds mask, within tolerated range; change from nasal pillows or full face mask (which tend to leak more especially with high pressures) to nasal triangle mask. Contact Sleep SMART Care Team.
Air leak through mouth	Add chin strap; if chin strap does not eliminate mouth leak, replace mask with a full face mask that covers the mouth (if no contraindication to full face mask).
Dry mouth / Nasal dryness	Add chin strap as these could suggest mouth leak; consider increase in humidifier setting. Contact Sleep SMART Care Team.
Mask uncomfortable	Adjust headgear to improve fit; loosen headgear just short of allowing leaks at edges of mask; change to different mask type or model. Contact Sleep SMART Care Team.
Nose stuffiness	Increase humidification; consider chinstrap as congestion can occur with mouth leak; consider full face mask (if no contraindication). Contact Sleep SMART Care Team.
Too much pressure	Determine if leak is a factor. Verify that Ramp is in Auto. Contact Sleep SMART Care Team.
Not getting enough air with PAP	Turn Ramp off. Turn EPR off, if it has been on. Contact Sleep SMART Care Team.
Difficulty exhaling	Verify EPR is ON and set to 3. Verify Ramp is ON. Contact Sleep SMART Care Team.
Air swallowing / Bloating (Aerophagia)	Verify EPR is ON and set to 3. Elevate the head by adding pillows. Contact Sleep SMART Care Team.
Facial Sensitivity / Desensitization	Consider switching to less obtrusive mask (e.g., nasal mask instead of a full face mask, or nasal pillows instead of nasal triangle mask). Contact Sleep SMART Care Team for desensitization techniques.
Condensation in mask/tubing	Increase tube temperature setting by 1-2 degrees, can consider lowering the humidifier setting, and contact Sleep SMART Care Team

## Frequently Asked Questions by PAP Patients

Q: Why is air still blowing from the Automatic Positive Airway Pressure (aCPAP) machine after I turn it off?

A: The aCPAP machine will blow a small stream of air to cool the heating element. The aCPAP machine will turn itself off after 20 minutes.

Q: Do I have to use my aCPAP every day?

A: Yes, aCPAP therapy treats sleep apnea, it does not cure it. When you do not use your aCPAP therapy, you may have pauses in breathing (apneas) as you did before you started aCPAP. There may be times when you may not be able to use aCPAP therapy such as during a power outage or if your nose is stuffed up from a cold or flu. Please let the Sleep SMART Sleep Coach know as soon as possible if ANYTHING interferes with your aCPAP use. You should try to use your aCPAP whenever you sleep - all night, and during any daytime naps.

Q: Will I suffocate if the electricity goes off during my normal sleeping time?

A: No. If you realize that power has been lost, you should take off the mask. A sudden loss of power may wake you up, but you will still be able to breathe without the device running. If you wake during a power outage, you can turn your alarm or radio on loud. When the electricity is restored, the radio will wake you. Then you can put your aCPAP back on.

Q: Why is my mouth dry when I wake up?

A: Your humidifier may be set too low. Every night increase the humidity level by 1 until your symptoms are gone. If this doesn't work, you may need a chin strap to help keep your mouth closed or other treatments to stop the problem. Contact the Sleep SMART Sleep Coach if you continue to experience a dry mouth.

Q: How long before I feel a difference during my waking hours?

A: It depends on each individual; some people feel the effects after the very first time, and for some people it can take a few weeks. If you still feel sleepy despite seven or more hours of sleep with the aCPAP, contact the Sleep SMART Sleep Coach to make sure the machine is working properly. Some people who use aCPAP effectively may still have symptoms of obstructive sleep apnea, such as daytime sleepiness. However, such people may still experience health benefits from avoiding the pauses in breathing during sleep.

Q: How often do I get a new mask?

A: The typical lifespan of a mask is at least six months. The inner, soft, flexible seal is often replaced every 3 months. However, this can vary from one person to the next. If your mask or any other components become ineffective or seem damaged, contact the Sleep SMART Sleep Coach for replacements.

Q: Why does the inside of my nose feel dry and tender after using the nasal pillows?

A: Some people have dryness or tenderness inside the nose during the first few weeks as they

get used to aCPAP. Using water-soluble gel or spray may help for some people. If the discomfort continues, contact the Sleep SMART Sleep Coach. You may need a different mask.

Q: I don't think the humidifier is heating the water in the tub. What should I do?

A: Check the humidifier to make sure it is properly attached to the aCPAP device. Turn up the humidifier's humidity dial and turn on the aCPAP. Feel the heating plate for warmth, taking care not to burn yourself. You should not feel a lot of heat from the heating plate. It only needs to warm the water to work effectively. Also, there may still be water in the humidifier chamber at the end of your normal sleeping time. If the hot plate is cold to touch, then you may need a humidifier replacement. In this case, contact the Sleep SMART Sleep Coach to exchange or repair the unit.

Q: I am having difficulty using this mask. I do not think this mask will work for me. What should I do?

A: You may need a different mask. Contact the Sleep SMART Sleep Coach for another mask.

Q: I am having trouble using this mask. I sometimes wake up to find that I have taken off the mask in my sleep. Is this normal?

A: It is normal for this to happen while you get used to wearing the mask. As time goes on, it should happen less and less. You may wear a chin strap over the headgear to keep the mask in place. Or, you may need a different mask. Contact the Sleep SMART Sleep Coach to discuss options.

Q: I feel like I cannot breathe properly while using the aCPAP device. It's difficult to exhale against the pressure or I cannot get comfortable with the pressure of the aCPAP device.

A: It is normal to feel this way while you're awake. This sensation of breathing trouble usually will not happen once you fall asleep. With time and patience, most people become comfortable especially after falling asleep. If after several attempts, this does not improve, you may find a full face mask more comfortable if not contraindicated. We encourage you to continue your aCPAP therapy even if you are struggling a bit. Adjusting to aCPAP can take a few weeks in some cases, so don't give up. Contact the Sleep SMART Sleep Coach if you continue to have trouble adjusting to therapy. They are here to help.

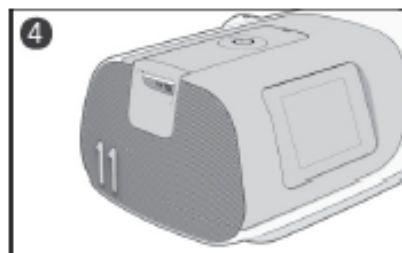
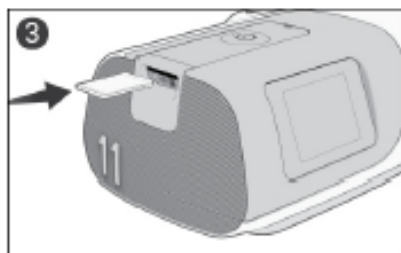
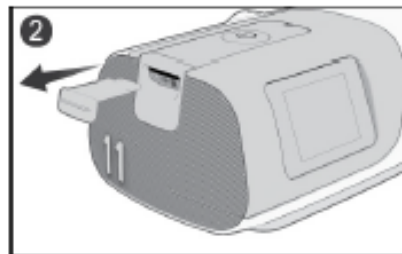
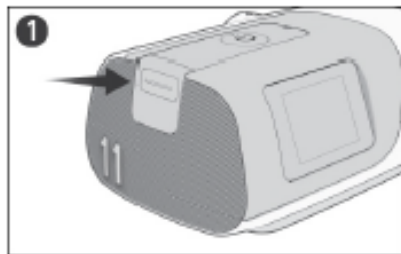
## Appendix

### SD Card S11

Left side is where the SD slot is located. (Left side upper portion).

- The SD card is locked in via a spring device (**The AirSense 11 will still operate and save data for 365 days via internal memory**).
- Push in the SD card to release it.
- Have the replacement SD card ready. You will insert the new SD card and push it into the SD slot until it locks in place.

To remove the SD card cover and insert SD card:



1. Push the SD card cover.
2. Remove the SD card cover and keep the SD card cover in a safe place.
3. Insert the SD card.
4. Push in the SD card until it clicks in place.

To remove the SD card:

1. Push in the SD card to release it.
2. Place the SD card in the protective folder and follow your care provider's instructions.

For more information on the SD card, refer to the SD card protective folder provided with your device.

## Maintenance Checklist

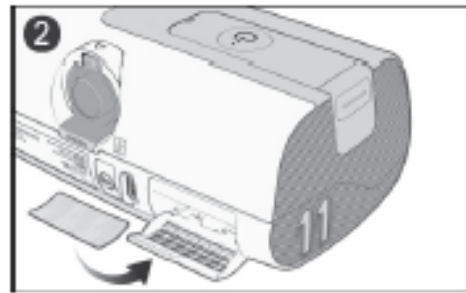
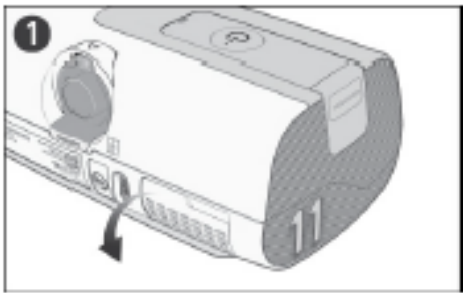
- Inspect the water tub and flip lid seal for wear and deterioration.
- Replace the water tub if any component is leaking or has become cracked, cloudy or pitted.
- Replace the flip lid seal if cracked or torn.
- Clean white powder deposits in the water tub by using a solution equal parts household white vinegar and water.



## Replacing the Air Filter

Replace the air filter every month.

1. Open the air filter cover and remove the old air filter. The air filter is not washable or reusable.
2. Place new air filter onto the air filter cover and then close it. Make sure the air filter is well fitted at all times to prevent water and dust from entering the device.



## Glossary of Terms

**Apnea** - literally means “no breath”; the pausing of airflow at the nostrils and mouth for a least 10 seconds.

**Apnea Index (AI)** - total number of apnea events per hour.

**Apnea-Hypopnea Index (AHI)** - the number of apneas and hypopneas per hour of sleep, used more loosely in Sleep SMART to refer to the number of apneas and hypopneas per hour of recording by the Nox T3 sleep apnea testing device, which records breathing, but not sleep. In general: 5-15 suggests mild, - 16-30 moderately severe, and  $\geq 30$  severe obstructive sleep apnea.

**Arousal** — abrupt 3-15 second changes in brain wave activity from a “deeper” stage of sleep to a “lighter” stage without waking up.

**Auto-Adjusting Positive Airway Pressure Device (aCPAP)** — a type of PAP delivery system that monitors breathing and adjusts automatically by making appropriate changes in pressure.

**Central Apnea** — absence of airflow without trying to breathe; apnea caused by irregularity in the brain’s control of breathing.

**Continuous Positive Airway Pressure (CPAP)** — a device used to treat sleep apnea by sending positive airway pressure at one consistent pressure to keep the upper airway open.

**CPAP Setting** — pressure needed to maintain an open upper airway in a sleep apnea patient treated with CPAP, expressed in centimeters of water (cm H<sub>2</sub>O). The positive pressure can range from 4-20 cm H<sub>2</sub>O. Different people require different pressures.

**Excessive Daytime Sleepiness (EDS)** — self report of difficulty staying awake, to a point that daytime activity or safety is affected, and often accompanied by repeated episodes of dozing off when the individual is not active.

**Fatigue** — a feeling of tiredness usually associated with decrease in performance.

**Gastroesophageal Reflux Disease (GERD)** — (acid reflux) flow of stomach acid into the esophagus that can disrupt sleep.

**Home Sleep Apnea Test (HSAT)** - an overnight test for obstructive sleep apnea. In contrast to a polysomnogram, an HSAT is generally unattended: performed in a patient’s home; and focused on measures of breathing without monitoring of sleep and wake states. In Sleep SMART, the Nox T3 is an HSAT that is used in the hospital or rehabilitation unit rather than at home.

**Hypertension** — high blood pressure.

**Hypopnea** — period of diminished breathing, for at least 10 seconds during sleep. Hypopneas lead to drops in oxygen or arousals from sleep, and like apneas can be associated with snoring.

**Hypoxemia** — a reduced level of oxygen in the blood.

**Insomnia** — difficulty falling asleep, difficulty staying asleep, and/or feeling unrefreshed from sleep even after adequate sleep time.

**Mixed (Sleep) Apnea** — an episode of cessation of breathing during sleep, for at least 10 seconds, with features of a central apnea followed by features that suggest obstructive apnea.

**Obstructive Apnea** — a pause of airflow (at least 10 seconds) in the presence of continued effort to breathe; a pause of breathing during sleep due to a blockage in airflow.

**Obstructive Hypopnea** — an episode of partial closure of the airway during sleep, for at least 10 seconds resulting in reduced air exchange, blood oxygen drops, and/or brain arousals.

**Polysomnogram** — often called a “sleep study,” this test is attended by a technologist, in a sleep laboratory. A polysomnogram is used by Sleep Medicine Physicians to diagnose and treat some sleep disorders. The test usually shows information such as brain waves, eye movements, muscle activity, heart rate, nasal and oral airflow, respiratory effort, snoring, body position, pulse oximetry, and other types of data.

**Restlessness** — frequent body movements or the patient perception of feeling like movement is necessary.

**Sleep** — a process marked by the absence of wakefulness, and restorative changes in metabolism and cellular function.

**Sleep Apnea** — pausing of breathing for 10 or more seconds during sleep.

**Sleep Deprivation** — lack of sufficient sleep.

**Sleep Disorders** — a broad range of illnesses, diseases, and syndromes from many causes, including dysfunctional sleep, abnormalities in physiological functions during sleep, abnormalities of the biological clock, and sleep disturbances that are caused by factors unrelated to the sleep process.

**Sleep Hygiene** — sleep habits, conditions and practices that affect the ability to obtain continuous and effective sleep. Good sleep hygiene typically includes a regular bedtime and wake time; sufficient time in bed to avoid sleepiness when awake; restriction of alcohol, tobacco, and caffeine in the period prior to bedtime; and exercise, nutrition, and environmental factors that lead to restful sleep.

**Sleepiness** — a sense of needing to sleep; difficulty remaining awake. Sleepiness is different from fatigue, tiredness, and lack of energy, though sleep disorders such as obstructive sleep apnea can be associated with any or all of these symptoms and patients sometimes use these terms interchangeably.

**Snoring** - noise produced by vibrations of the walls of the upper airway (throat) during sleep. Snoring occurs because a constricted upper airway leads to turbulent as opposed to smooth (laminar) air flow. Snoring is common but not universally present among patients who have obstructive sleep apnea. Not all patients who snore have obstructive sleep apnea.