



# Obstructive Sleep Apnoea



Feeling excessively tired during the day?

...

Waking up tired?

...

Snoring?

...

Finding it difficult to stay awake?....

Or does your partner say you stop breathing while asleep?

It could be  
Obstructive  
Sleep Apnoea

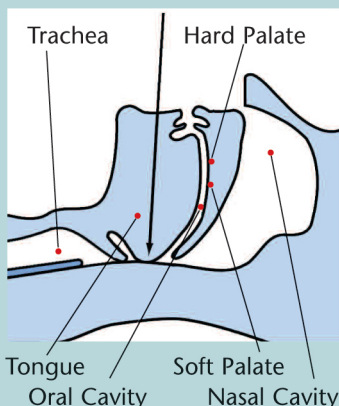
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# What is Sleep Apnea?

Sleep Apnea is the most common sleep disorder, affecting around 5% of men and 2% of women in the 30+ age group. There are an estimated 120,000 sufferers in Ireland, the majority of whom have not yet been diagnosed.

## ***Closed airways in obstructive sleep apnoea***



## ***Resulting respiratory arrest***

Sleep apnea is identifiable in the sufferer's breathing pattern during sleep; they will have periods when they stop breathing altogether and become silent, followed by a significant snore as they suddenly recommence breathing again. The silence is caused by the apnea – the pause in breathing. Snoring is not the problem, but always accompanies sleep apnea and is often quite loud and disruptive. The pauses/apneas can occur hundreds of times per night, and the sufferer will usually be unaware of their behaviour.

These apneas occur when the muscles and tissue relax, which surround the airway at the back of the throat. As they relax they block the narrow airway causing temporary stoppages in breathing.

The brain reacts to the breathing signals – oxygen deficiency and increased irregular heart rate – and triggers a response which is to pull in a breath suddenly. The person snores loudly as they start to breathe again. This event causes what we call micro-arousals, meaning the person has woken up very briefly though the usually are not aware of it. As this behaviour persists all night, sleep quality becomes fragmented and sleep is not as refreshing as it should be.





# Symptoms of Sleep Apnoea

The most frequent symptom of sleep apnoea is tiredness during the day. The most common complaint is sleepiness when driving. Other symptoms may include: dry mouth in the mornings, excessive perspiration, frequent urination at night, headaches, exhaustion, nightmares, sexual dysfunction, irritability, aggression, loss of concentration, depression.

Sleep apnoea can cause not only a drop in quality of life but also a shorter life expectancy due to secondary diseases. If untreated the condition can cause high blood pressure, cardiac dysrhythmia, cardiac insufficiency, apoplectic seizure (stroke), cardiac arrest, psychological problems. Medical studies have shown that 50% - 70% of people with sleep apnoea suffer from high blood pressure, compared to only 10% - 20% of the population at large. Unfortunately sleep apnoea is not usually identified as a cause of these symptoms and so they are treated but not solved.

## Contributing factors:

**Weight:** Tissue in the neck becomes soft, losing its tone and causing airway collapse.  
(Collar size 17 or greater)

**Sedatives and alcohol:** cause airway muscle to relax leading to collapse.  
The consumption of alcohol significantly worsens the condition.

### Smoking

**Upper respiratory tract infection:** e.g. head-cold or nasal allergy, causes swelling of the airway passages and can aggravate the condition.

**Age:** The muscles become more flaccid with age, losing some tone.

## How is Sleep Apnea treated?

Successfully diagnosing and treating sleep apnea begins with visiting your GP who can refer you to a sleep disorder consultant. Should they feel the need, you will spend 1-2 nights under assessment in the hospital. This study can also be carried out at home. The results of this non-invasive study will determine whether you require CPAP therapy. If so, you will be prescribed a CPAP device and referred to a service provider.

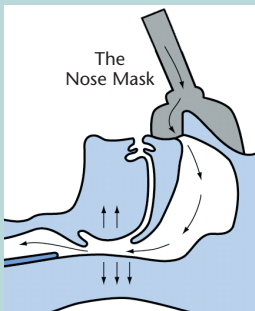
## Using the CPAP device

To prevent the airway becoming blocked as described above, it is necessary to supply a constant flow of air into the airway to keep it open. This is done through CPAP therapy (Constant Positive Airway Pressure). The patient is supplied with a CPAP device which produces a flow of pressurised air, along with a mask. It is very common in Ireland to use a heated humidifier with the CPAP device. This is a built-in water chamber which helps prevent nasal congestion, head-colds or dryness by slightly warming and moistening the airflow from the machine.



## The early stages of treatment

### CPAP therapy



*Air streams into the lungs.  
The apnoea patient can  
again sleep soundly.*

Because it is a strange sensation at first, it may take a few days to get used to the CPAP device. Some people adjust to the treatment in one or two nights and find a considerable improvement in quality of life almost immediately. However, it is not unusual to take a little longer before experiencing the benefits of treatment. You may wake in the morning to find you have unwittingly removed the mask at some point during the night. This is not uncommon and you should find you do it less and less as time goes on. **It is very important to persist and use the device every night.**

## Choosing a mask

The mask and the device are equally important to treatment. There is a variety of masks available – your clinic or technician will recommend a model and size for you. The mask should feel comfortable and secure without being over-tight, must not cause marks or soreness to the face, or allow leaks.



**Nasal Masks** are the most commonly used. Although all sleep apnea sufferers breathe through the mouth before going on CPAP therapy, most will adapt to nasal masks quite easily. If you feel you must breathe through the mouth, a **full-face** mask can be supplied instead.

## Maintaining your CPAP device and accessories

The CPAP machine does not need frequent service. However, regular washing of the accessories will maintain effective use and prolong the life of the mask.

**N.B. Mask & headgear – should be washed in warm soapy water, twice per week**, and towel dried. Use mild soap only. For convenience, the headgear can be left attached to the mask when washing, as the entire mask/headgear must be washed at the same time. Please refer to instructions provided by your technician during installation.

**CPAP machine** – can be wiped down with a damp cloth from time to time.

**Tubing** – can be washed in warm soapy water, rinsed and hung to dry indoors. This should be done every two months.

**Filter** – some devices have filters that are disposable, but most can be washed and re-used. Follow instructions provided with your machine and as advised by your technician. If it is re-usable, **wash it every two months and dry the filter thoroughly** before replacing it into the machine.

## Can I be sure it will succeed?

The good news is that sleep apnoea is almost always successfully treated using CPAP therapy. There is no known cure for the condition, but the symptoms can be eradicated. This means that treatment will usually be long-term. The improvement in quality of life is often dramatic, as people feel an increase in energy and vitality. Of course the level of improvement will depend on how severely the person was suffering in the first place. It is vital to persist with treatment and use the device every night, to eradicate the symptoms successfully. All devices record usage. If something feels uncomfortable or you are not using the device for any reason it is vital to inform the supplier or physician, as there is usually something that can be done to help.

## Travelling with the CPAP device



In our range of products we carry a small lightweight machine, specifically designed to facilitate travel. These can be hired on a short-term basis, or purchased. Please contact us for further details.

We also have a portable battery for use when travelling in places where mains power is not available, or for use during power cuts.

The CPAP device is fully portable and automatically adjusts to the voltage of the country you are in (110-240V). You will of course need the correct plug adaptor to suit the power outlet. The device should always be carried as hand luggage. A 12volt battery cable can also be supplied, allowing the device to be used in a caravan or truck, for example. ***NB: Always empty all water from the humidifier before moving the CPAP device.***



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**To whom it may concern**

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***This is to confirm that the above has been diagnosed***

**by:** \_\_\_\_\_

**at:** \_\_\_\_\_

as having ventilatory deficiency during sleep (Obstructive Sleep Apnoea Syndrome), and has been prescribed a CPAP Device supplied by this company as treatment.

**It is imperative that this be carried as hand luggage at all times.**

**DO NOT PUT IN THE HOLD OF THE AIRCRAFT**

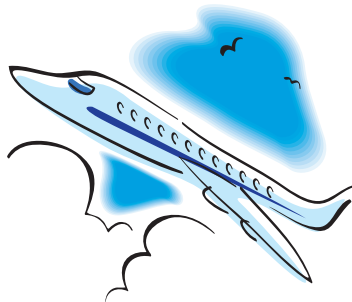
The weight: 2 kg in total.

Carry case dimensions (W x H x D): 260 x 200 x 350 mm

Yours sincerely,

**Paul Braiden**

Director





## Will the machine be noisy during the night?

Once you have selected the correct mask and appropriate size and the accessories are correctly connected, the device should be almost silent. You will hear a quiet turbine sound from the machine and some air released from the front of the mask (to allow carbon dioxide to escape), but these should be minimal. Noise or excessive sound is usually caused by air leaks along the tubing or mask and should be eradicated.

## Possible side-effects of CPAP

Every form of effective therapy produces side-effects. Similarly during CPAP therapy side effects may occur and are listed below in the order of their frequency: **Dehydration** of the mucous membranes of the nose and throat occurs in some 66% of cases and can cause a general malaise and the symptoms of a common cold. This is usually successfully treated, by attaching the integrated **heated humidifier**.

**Pressure marks** on the face and around the nose are caused by over-tightening the mask. Should this occur, loosen the straps slightly. If problems persist contact your service provider.

When irritation of the eyes occurs during therapy it is usually as a result of **leaks** in the mask, as air escapes around the edge of the mask and streams into the eyes during the night. This can be easily prevented by carefully choosing the **correct mask** initially.

**Should you experience these side-effects or have questions or problems regarding the treatment contact your technician, our office, or your sleep clinic without delay.**

## Condensation in the mask/tubing

If you experience moisture/condensation in your CPAP mask/tubing, refer to the user manual supplied with your machine and **turn down** the humidifier heating setting. We usually set the heating element at a setting of 3 (on a scale of 1-10), which will suit most situations, but adjust your own further if needed.





# Dry Mouth & CPAP

It is quite common to experience dry mouth when using CPAP. Below are some of the causes, and possible solutions. It may be necessary to investigate more than one in order to improve the issue.

**Adjust humidifier heating level:** Refer to user manual provided with your machine. The heating element can be set on a scale of 1-10, however setting it higher than 5-6 will likely lead to condensation inside the tubing/mask.

**If using a nasal mask:** It is possible you are opening your mouth during sleep. This is the most common cause of mouth dryness when using CPAP. If the nose is slightly congested, a nasal spray or saline rinse might help. However, some nasal sprays are not intended for long-term use, and 'weaker' sprays may be ineffective.

Switching to a full-face mask might be the best solution, whereby both mouth and nose are contained and there is no air escaping through the open mouth. A chin strap can be used but only if you are sure you have no nasal obstruction/congestion. Otherwise, these are rarely effective as breathing via the mouth is not just a habit but necessary due to a restriction in the nasal passage.

**If already using a full-face mask:** check it is well fitting, as the movement of air from leaks will also remove moisture.

**Medications:** there are some commonly used medications that are known to cause dehydration which manifests in the form of a dry mouth at night. Check with your pharmacy if an alternative brand is available which may not have the same side-effect.

**Hydration/alcohol/diuretics:** make sure you are well hydrated during the day and have taken on enough fluids. Drinking a large quantity of water late in the evening may cause disruption due to bathroom visits. Alcohol/tea/coffee will cause dry mouth and should be avoided before sleep.

**Heated tubing:** If you find the airflow cold or cannot achieve a correct balance between humidifier temperature/dry mouth/condensation, a heated tubing can be connected to most machines to maximise the humidity level at the mask.



**Oral hydrating gel:** available from all pharmacies and commonly used. Some CPAP users have found this to be very effective, others not so. This is simply a gel that is placed in the mouth in a small quantity, and helps the body to create saliva during sleep. It is often needed to counter the side effects of some medications.

**CPAP Pressure:** High pressures can cause a certain amount of turbulence in the mask & mouth. If all other options have been explored, adjusting the pressure setting is the last option, and should be regarded as a last resort as your pressure has been deemed necessary to correct your sleep apnea.

## Cost of treatment

**Medical card holders** – The costs associated with CPAP therapy are covered by your medical card. We will check your machine annually, and will replace accessories on that occasion.

**Private clients** have the option of renting or purchasing their equipment. Costs will be explained fully by our technician upon installation. CPAP rental is covered by the Drugs Payment Scheme. Under this scheme, your CPAP rental is added to any prescription medication cost per calendar month, per family. If the total spend exceeds the limit (€125 as of March 2019), the over-spend is refunded to you. You must claim that back yourself, by submitting CPAP and pharmacy receipts to the HSE along with a claim form which can be downloaded from [www.drugspayment.ie](http://www.drugspayment.ie)

### Example 1:

Prescription medication	€70
CPAP rental	€95
<b>Total spend</b>	<b>€165</b>

Drugs Payment limit	€80
<b>Refund:</b>	<b>€85</b>

### Example 2

Prescription medication	€125
CPAP rental	€95
<b>Total spend</b>	<b>€220</b>

Drugs Payment limit	€80
<b>Refund:</b>	<b>€140</b>



## CPAP service

We contact all rental clients annually with a view to checking their equipment. This involves replacement of accessories, download of the machine and check of all aspects of their CPAP use. The service meeting is held in a hotel locally, and the meetings are arranged by appointment only.

**Notification will be sent by text message or letter.**

**Please bring along your machine and mask.**

**CPAP Service offered annually**

**Location:** \_\_\_\_\_

\_\_\_\_\_

**Next due:** \_\_\_\_\_





# Service Locations



COUNTY	LOCATION	MONTH
Sligo/Leitrim/Donegal	Sligo, Carrick-on-Shannon, Letterkenny	February
Galway	Loughrea, Claregalway, Galway City	May & September
Mayo	Castlebar, Ballina, Claremorris	April
Westmeath/Offaly/Laois Roscommon/Longford	Athlone, Mullingar, Tullamore, Portlaoise, Roscommon, Longford	June
Dublin	Lucan, Stillorgan, Santry	March & October
Wexford/Waterford/Carlow Kilkenny/Wicklow/Kildare	New Ross, Gorey, Arklow, Newbridge, Carlow	July
Louth/Meath	Drogheda, Kells	August
Clare	Newmarket-on-Fergus	October
Cavan/Monaghan	TBC	April
Tipperary/Cork/Kerry/Limerick	TBC	April