

# Information for patients with possible Obstructive Sleep Apnoea Syndrome

Taken from the Scottish Intercollegiate Guidelines Network

## ***What is Sleep Apnoea Syndrome?***

In normal sleep air moves through the throat and in and out of the lungs at a regular rhythm. In an individual with sleep apnoea this flow of airway is periodically diminished or stopped. This can happen many times during the night. It results in poor sleep leading to excessive sleepiness during the day.

As these events occur during sleep, a person suffering from OSAS is often the last one to know what is happening. In deep sleep, the muscles of the throat relax. Normally this doesn't cause any problems with breathing. In OSAS, complete relaxation of the throat muscles causes blockage of the upper airway at the back of the tongue. Normal breathing then slows or stops completely. Such an episode is called an apnoea. During an apnoea, people with OSAS make constant efforts to breathe against their blocked airway until the blood oxygen level begins to fall. The brain then needs to arouse the person from deep relaxed sleep so that the muscle tone returns, the upper airway then opens and breathing begins again. Unfortunately, when a person with OSAS falls back into deep sleep, the muscles relax once more and the cycle repeats itself again and again overnight.

In OSAS, the apnoeas can last for several seconds and in severe cases the cycle of apnoeas and broken sleep is repeated hundreds of times per night. Most sufferers are unaware of their disrupted sleep but awaken unrefreshed, feeling sleepy and in need of further refreshing sleep.

## ***Who gets OSAS?***

Whilst OSAS is more common in overweight middle-aged males who snore, it can also affect females. Female hormones and a difference in throat structures may protect women until the menopause. Narrowing of the back of the throat and the upper airway can also contribute to the risk of getting OSAS, even in people who are not overweight or middle-aged. In such people a small jaw, enlarged tongue, big tonsils and big soft palate help to block the upper airway in deep sleep, making OSAS more likely to occur. Several of these problems can be present in any person at the same time.

The use of alcohol, sleeping tablets and tranquillisers prior to sleep relaxes the upper airway muscles and make OSAS worse. Alcohol can also reduce the brain's response to an apnoea which in turn leads to longer and more severe apnoeas in people who would otherwise have only mild OSAS or who would otherwise only snore.

## ***What are the symptoms of OSAS?***

Most people with OSAS snore loudly and breathing during sleep may be laboured and noisy. Sleeping partners may report multiple apnoeas which often end in deep gasping and loud snorting. Sufferers may report waking for short periods after struggling for breath. Symptoms are often worse when lying on their back in deepest sleep. Although a person with OSAS may not be aware of the many arousals from deep sleep, they suffer from poor quality sleep in spite of long periods of time spent in bed. Such people wake feeling that they haven't had a full refreshing night's sleep. They report difficulty maintaining concentration during the day, have a poor memory, and suffer from excessive daytime sleepiness.

At first an OSAS sufferer may be sleepy only when seated and relaxed, e.g. watching TV, but eventually sleepiness becomes so severe that car accidents and accidents in the workplace can occur. Other symptoms of OSAS include morning headache, nocturia, depression, short temper, grumpiness, personality change, and impotence in males, leading to loss of interest in sex.

### ***What are the consequences of untreated OSAS?***

The most serious potential consequences of untreated OSAS are road traffic accidents and accidents at work because of sleepiness. Untreated OSAS is associated with a six fold increase in the risk of such accidents. Patients may also experience difficulties with concentration due to tiredness, increased irritability and depression. There is evidence that patients with OSAS have an increased risk of high blood pressure and may have a slightly increased risk of angina, heart attacks and strokes.

**Obstructive Sleep Apnoea Syndrome significantly increases the risk of road traffic accidents patients must not drive if experiencing excessive daytime sleepiness or sleepiness whilst driving. Patients must inform the DVLA in Swansea following a diagnosis of the condition.** In most cases, the DVLA are happy to allow car drivers to continue driving once they are established on a successful therapy.

### ***How is OSAS assessed?***

When a person is suspected to have OSAS, their doctor will ask questions about waking and sleeping habits and will make a physical examination. Reports from the sleeping partner or household member about any apnoeas are extremely helpful. Referral to a sleep disorders centre for an overnight sleep study will probably be required to confirm the diagnosis of OSAS and to allow its severity to be measured.

Initial assessment is likely to be with overnight oximetry which can be performed at home. This study measures oxygen saturations and heart rate and in most cases provides sufficient information to make a diagnosis. If a more detailed assessment of sleep is required you may be asked to attend the hospital for an overnight assessment. This assessment monitors oxygen saturation, heart rate, nasal airflow, chest and abdominal movements, snoring and body position. None of these procedures are uncomfortable or painful.

### ***How is OSAS treated?***

The simplest treatment is to lose weight. This is best done by cutting down on all foods, especially fatty foods, sweet things and alcohol. Alcohol within six hours of bedtime should be avoided as it contributes to OSAS symptoms.

### **Mild OSAS**

This can be successfully treated with conservative measures including

- Weight loss
- Elevation of the head of the bed by 15-30 degrees
- Steroid nasal spray
- Mandibular advancement device (this works by moving the lower jaw forward and widening the oropharynx).

### **Moderate to severe OSAS**

This is usually managed with continuous positive airway pressure (CPAP) therapy in which a gentle flow of air is applied through the nose via a mask at night keeping the pressure in the throat above atmospheric pressure and stopping the throat narrowing to prevent breathing pauses and snoring.

Surgery to remove excess tissue from the throat is another option, but it is not recommended. CPAP is the most effective form of treatment but, unless the OSAS is severe, other measures should be tried first.

### **Advice from Royal United Hospital whilst awaiting outpatients**

- If you are overweight (body mass index (BMI) greater than 25) weight reduction is **crucial**.
- Reduce alcohol intake before bedtime.
- Discuss use of any tablets that might increase night time sleepiness, especially sleeping tablets.
- Ask your GP to check your thyroid function (maybe low), fasting lipids/glucose and blood pressure (maybe high), if not done already.

**If you experience excessive sleepiness whilst driving  
it is your responsibility to inform DVLA**