SLEEP APNOEA TRUST INFORMATION SHEET

SNORING AND OBSTRUCTIVE SLEEP APNOEA

SNORING

Snoring and the disturbance it causes can be a nuisance. It is very common and is usually not caused by anything serious. However it can sometimes indicate that there are problems with airway blockages during sleep – a condition called obstructive sleep apnoea (OSA).

Snoring is caused by your tongue, mouth, throat or the airways in your nose vibrating as you breathe. It happens because these parts of your body relax and narrow when you are asleep. Snoring is more likely if you are overweight, if you smoke, after drinking alcohol, or if you sleep on your back. Losing weight or sleeping on your side can often help reduce snoring.

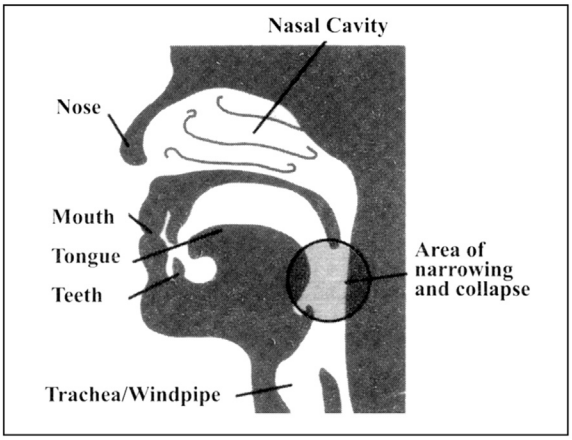
However, snoring is sometimes caused by OSA.

OBSTRUCTIVE SLEEP APNOEA (OSA)

Obstructive sleep apnoea (OSA) is a relatively common condition where the muscles and soft tissues in the throat relax and collapse sufficiently to cause a total blockage of the airway. This blockage is called an apnoea when the airflow is blocked for 10 seconds or more. Apnoeas often cause dips in blood oxygen levels.

People with OSA experience repeated airway blockages throughout the night. During each episode the effort to breathe in against the blocked airway triggers the brain to pull the person out of deep sleep sufficient to reopen the airway and allow breathing to restart.

Sleep is therefore repeatedly disturbed, which can cause sleepiness and memory impairment. The sleep disruption or oxygen dipping may lead to high blood pressure, which could theoretically increase the chance of a stroke or heart attack.



WHO GETS OSA?

It was previously thought that the type of person most at risk of OSA was an overweight middle-aged man with a large neck, usually taking a size 17-inch collar or more. However, it is increasingly the case that many younger and non-obese males are being diagnosed with sleep apnoea, as are females, and children, some quite young. In children with enlarged tonsils, OSA is a common reason for recommending that a young child has a tonsillectomy. If a child has OSA, the symptoms of sleep deprivation can be similar to other childhood conditions such as ADHD (Attention Deficit Hyperactive Disorder). OSA and heavy snoring severe enough to interfere with sleep quality, is more common than was previously realised. Latest estimates suggest that up to 4 million adults in the UK have moderate or severe OSA.

SYMPTOMS OF OSA

Symptoms of OSA, which are often first apparent to a partner or family member, can include:

- Loud snoring
- Noisy & laboured breathing
- Repeated short periods where breathing is interrupted by gasping or snorting

Because sleep can be so disrupted by the body having to wake up briefly to reverse the upper airway obstruction, sufferers can experience excessive sleepiness during waking hours. This can interfere with many activities. Sufferers can fall asleep while talking or eating. Their work performance can be adversely affected, sometimes to the point of putting their job at risk. Sleepiness whilst driving can of course lead to road traffic accidents; OSA sufferers are up to 10 times more likely to have road accidents.

Snoring will usually have been present for many years and have gone well beyond a joke within the family. There are many other symptoms, as one might expect in someone who is seriously sleep deprived, such as memory impairment, irritability and loss of interest in relationships for example. But the symptoms of snoring, laboured and interrupted breathing and excessive sleepiness are the best pointers to the diagnosis.

DIAGNOSIS OF OSA

The presence of significant OSA may be strongly suspected from the symptoms. Often the individual's partner has read an article about OSA and recognises that this must be what their partner has. Once OSA is suspected, then a GP needs to refer the individual for a sleep study to confirm the diagnosis.

A variety of measurements can be made during a sleep study without discomfort. Oxygen levels in the blood can be continuously measured from a clip on the finger, and breathing can be monitored by probes at the entrance to the nose, and/or by electrodes on the chest and tummy. Sleep quality itself can be evaluated from cardiovascular markers (this is the commonest and most important way of evaluating sleep quality). Video recordings with sound are often used so that the doctor can actually see how badly the breathing is obstructed and the sleep disturbed and also to look for other causes of sleep disruption. Sleep studies can be carried out at home or in hospital.

TREATMENT FOR SNORING AND OSA

If snoring is the major problem, and OSA is minimal, simple approaches can help.

Simple things

- Advise your partner to use wax ear plugs rather than foam ones; they work much better if the partner is prepared to wear them. They are the only ones that reduce the low frequencies of snoring.
- Weight loss to reduce the neck size is nearly always helpful but difficult to achieve.
- Reduce alcohol after 6 pm.
- Stop smoking.
- Keep the nose as clear as possible; this may need hay fever type medication such as Beconase.
- Elevate the head of the bed slightly so that one is sleeping propped up, by putting pillows under the mattress. Then put one pillow on the mattress to reduce any kink to the neck

This elevation of the head and shoulders seems to reduce nasal congestion and reduce the gravity effects that tend to narrow the airway.

Dental Devices

Dental devices, known as Mandibular Advancement Splints (MAS), also known as Mandibular Advancement Devices (MADs) can be used at night and can greatly reduce snoring; for some people this is effective at controlling mild sleep apnoea. The best devices are custom- or semi-custom-made and can be obtained either directly from or under the advice of suitably-qualified dentists. Semi-custom fitted devices can be purchased directly from the internet but seeking advice from a dentist is recommended as MADs can cause toothache/jaw ache and alter the position of your bite. If OSA is the prime cause of the snoring the NHS may fund the cost.

Positional therapy

Many people snore mainly when they are lying on their back. Starting the night sleeping on your side is often not sufficient to improve snoring as our body position changes throughout the night. People have tried to use specially designed pillows, backpacks or t-shirts to stop them lying on their back but that these can be cumbersome to use. New active positional therapy devices which are worn on a collar or band around the neck or abdomen, work by vibrating whenever lying on your back to encourage you to sleep on your side without waking you. Two examples are Night Shift and Night balance.

These are sometimes considered in people who cannot use CPAP. If you are interested in purchasing one of these devices you will need to contact the manufacturers and they may ask you to get a prescription from your health care professional. While these have shown some promise in treating obstructive sleep apnoea they need further evaluation to show that they are effective.

Correction by Surgery

Surgery is only an option for snoring people who have severe OSA and are intolerant to CPAP and MAS (MADs). Other surgical options for snoring are not available on the NHS and have doubtful outcomes.

Continuous Positive Airway Pressure (CPAP)

The most effective treatment for OSA is a Continuous Positive Airway Pressure (CPAP) machine. This is a small, quiet, pump beside the bed which continuously delivers slightly pressurised air through a hose to a mask worn during sleeping hours. The mask can take several forms –

- Nasal cushion (over the nose only)
- Nasal pillow (inside the nostrils)
- Full Face (over the nose and mouth)

The principle is the same in each case. Air is pumped continuously through the nose, or nose and mouth, at a pressure sufficient to keep the airways open. Breathing is then able to return to normal, with few apnoeas during sleep. The way a person sleeps decides which mask type is most appropriate for them.

There is also variety in the CPAP machine –

- CPAP - pressure fixed at an appropriate level.
- APAP – pressure automatically varies as the individual needs it.
- BiPAP – where the incoming and outgoing pressures differ.

The combination of mask and machine types give the best experience, and the best chance of treatment success.

RESPONSE TO TREATMENT

The response for many people after using CPAP for the first few times is dramatic, with greatly improved sleep and disappearance of excessive sleepiness. It's therefore important to get support from the clinic in the initial stage, to ensure mask fit and cleaning practices. Although these devices are slightly cumbersome to wear, and it takes some people a few nights to get used to breathing out against the flow of air produced by the CPAP, the benefits far outweigh these slight disadvantages. The majority of people will find their lives much improved, and their families will thank them for it.

The Sleep Apnoea Trust website is: www.sleep-apnoea-trust.org This is where you will find the most comprehensive, current and medically verified information available in the UK, relevant to the UK National Health Service

Working to improve the lives of sleep apnoea patients, their partners and families.

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