Snoring Appendix

Introduction

Who snores?

It's estimated that 40% of people will snore at some point during their life, and 25% of people throughout it. Men have been proven to be more prone to snoring than women, and the propensity to snore increases with age, although some studies show it then decreases again around the age of 70.

How loud is snoring?

The loudest of snorers have been shown to produce a noise level of up to 80 decibels. This is the noise equivalent of a loud alarm clock or functioning dishwasher. It is therefore not difficult to see why snoring can so easily disturb others sleeping in the same bed! Snoring over a long period of time can cause damage to the blood vessels and muscles within the nose, meaning it can get louder over time.

Can snoring be cured?

Anti-snoring products and techniques control snoring, but do not cure it.

Is snoring really a problem?

If your sleep isn't disturbed by your snoring, and you don't have a partner who is disturbed by it, then it can be. You shouldn't allow your sleep quality – or anyone else's – to be disturbed by snoring Surveys have shown that sleeping partners of people who snore can genuinely suffer ill health if their sleep is disturbed on an ongoing basis. The most common remedy is to sleep elsewhere, which shouldn't ever need to happen.

Does medical research happen into snoring?

The medical causes of snoring are well enough understood that there's little research currently being undertaken into them, as well

as very little research taking place into methods for controlling snoring.

Some of the current research that is being undertaken is sponsored by the manufacturers of snoring-control products and so have yet to be peer reviewed.

What actually causes snoring?

Snoring is caused by the vibrations of soft tissue within a person's nose or mouth as they breathe in or out. During sleep, breathing is heavier than when awake and normal air passageways can be reduced in size depending on sleeping position.

The actual vibration causing the noise can come from the soft palate, the tonsils, the tongue or the uvula, as well as the nose passageways. The most common is the latter, as the muscles relax and can restrict in size. The increased pressure of the body forcing breath through these reduced airways gets louder and louder.

Nose passageways and airways may also reduce in size due to other medical conditions, including the common cold and tonsillitis.

What's the difference between snoring and sleep apnea?

Sleep apnea is a medical sleep disorder, and is often confused with just snoring. However, it's unlikely individuals will receive a diagnosis for sleep apnea until medical help is sought for snoring as a full specialist sleep assessment will be required.

Sleep apnea causes an individual to stop breathing whilst asleep, and can have serious long-term health implications. Indeed, if anyone notices a sleeping partner does at any point stop breathing whilst they are asleep, it is important to seek medical advice as soon as possible.

Testing to identify the cause of snoring

There are numerous approaches to dealing with snoring, but each relies on targeting a certain cause of it. Therefore, it's important to identify the cause of the snoring before a technique or product is tried to ease it.
There are several simple tests that can be carried out to identify the snoring cause.

Open Mouth Test

Whilst many people breath primarily through their mouth rather than their nose, a mouth dropping open during sleep can lead to snoring.

To test if the mouth dropping open is the culprit for the snoring:

- The subject should open their mouth and attempt to make snoring noises
- Close the mouth and attempt again to make snoring noises.
- If there is audible noise with the mouth open but not closed, it is likely that the mouth is the origination of the snore.

Tongue Test

A vibrating tongue can also be the source of snoring. To test if this is the case:

- The subject should make a snoring noise with their mouth open.
- Instruct them to stick their tongue out and gently bite it with their own teeth to keep it protruding slightly.
- The subject should now again attempt to make a snoring sound.

- If the subject reports it being easy to snore with their tongue out, it is not the snoring source. However, if it was hard compared, it may well be.

Nose Test

To identify whether or not the nose is the snoring source, a test can be carried out in front of a mirror:

- Close the mouth and keep it closed throughout.
- The subject should push a finger into one side of the nose to block it and attempt to breathe through the other.
- Observe the collapse or pull of the nostril.
- Attempt again with the other side.
- If nostrils collapse during inhalation, and breathing is easier with it pulled open, the nose is likely to the cause.

This test should not be completed when the subject is suffering from a cold or blocked nose, as it will give inconclusive results.

It may be that an individual finds more than one of the tests demonstrates a cause for them.

Products to Stop Snoring

There are plenty of techniques and products that can be used to combat snoring. This section will address some of the most popular ones, and explain how they work.

Anti-snoring mouthpieces

If snoring is caused by the mouth or tongue, inserting a mouthpiece can help prevent snoring noises. There are many different mouthpieces on the market, but all fall into three categories:

Vestibular Shield – this shield limits the amount of air that can enter the mouth, forcing breath to pass through the nose.

Mandibular Advancement Device – this device pushes the jaw and tongue forward, reducing space restriction within the throat.

Tongue Retaining Mouth Piece – re-positioning the tongue, a tongue-retaining mouthpiece ensures it cannot block airways and therefore decreases the air pressure on it, reduces vibrations.

All mouthpieces have their own endorsements, but the mandibular advancement devices are the most likely to be recommended by healthcare professionals.

Mouthpieces can be uncomfortable to wear, particularly for new users, as they feel unnatural and adjust the mouth to an unnatural position. However, users are likely to ease into the shape of their mouthpiece and find the comfort increases over time as they get used to it.

Dentists can construct custom mouthpieces for those who find off-the-shelf products uncomfortable, and a doctor may be able to refer users to a specialist. Many users report stopping usage quickly due to comfort issues, so it is always recommended that a trial period is undertaken.

Chin Straps

A simple and effective solution for mouth-snorers, chinstraps are widely available. However, the effectiveness is lowered if the user suffers from a congested nose, and should never be used by sufferers of sleep apnea unless specifically recommended by a health professional.

Chinstraps keep the jaw firmly in place, reducing the risk of the tongue and throat tissues flopping back and restricting airways. Whilst not particularly appealing to look at, there are many different manufacturers and models on the market. Chinstraps are, for the most part, low cost and easy to buy.

Again, users may complain of comfort issues during the first few uses, but this is likely to ease off over time.

Nasal Devices

Those who snore through their nose may find that a nasal device effectively treats their snoring. There are two main types of these devices:

> Nasal Strips – adhesive strips applied to the outside of the nose, these aim to pull the nostrils wider apart than they are set naturally, thus allowing air to pass through more easily.
>
> Nasal Dilators – a device that sits inside of the nose, a nasal dilator flares the nostrils open from the inside to allow a freer flow of air.

Nasal devices are also broadly low cost and easily available.

Despite being obviously focused on the nose, nasal devices may also aid mouth-snorers. It may be that snoring caused by the mouth is because breathing is forced through due to a restricted or blocked nasal passage, so nasal devices can solve this issue by equalising the breathing.

CPAP (Continuous Positive Airway Pressure) Machines

CPAP machines are designed for sufferers of sleep apnea and are normally prescribed by a doctor. They have been proven to reduce snoring in some people.

To buy a CPAP machine without a prescription from a medical professional wouldn't be easy and would be expensive, and so should be used only a last resort for snoring (and if tested successfully). Even if not prescribed by a professional, it is recommended that a CPAP machine should only be used after having sought medical advice.

Lifestyle Changes to Stop Snoring

There is medical evidence that shows snoring can be related to the general health and lifestyle of an individual, with several factors increasing the risk of snoring. These are addressed below.

Losing weight

Individuals who are overweight often have more soft tissue around the neck and the base of the tongue, with less muscle tone around them. This increases restriction on airways. Medical evidence shows that a neck circumference of over 17 inches (43.2cm) for men and 15 inches (40.6cm) for women greatly increases the risk of both snoring and, more severely, sleep apnea.

Reducing alcohol intake

Having alcohol in the system relaxes muscles, which increases the risk of snoring as muscles loosen around the neck, mouth, throat and nose. This is easy to judge, based on whether the individual snores once alcohol has been consumed.

Discontinuing the consumption of sedatives or anti-depressants

The side effects of medication vary between individuals, but for some, sedatives and anti-depressants cause muscle relaxation. This, in turn, results in the muscles loosening around the throat, neck and mouth, which can cause or aggravate snoring.

Stopping smoking

Smoking causes the inflammation of the throat and nose, particularly over a prolonged period of time. This restricts airways and results in breath being forced through as air pressure increases. The result of this is quick vibration of the tissues as air passes through, creating snoring sounds.

Management of allergies

If an individual suffers from allergies (even hay fever), a common side effect of these is for the nasal passages to swell. This forces the person to breathe through the mouth instead of the nose, resulting in snoring.

Seeking medical advice for snoring will likely result in lifestyle and basic medical checks being completed before any further action is recommended or prescribed.

Sleeping Positions to Reduce Snoring

Sleeping on the side

People are more likely to snore when lying on their back as the head is pushed towards the chest, constricting the airways. When lying on either side, the muscles can still completely relax but the head and neck have more space without restriction. It can even be comfortable to flay the neck somewhat backward – which can result in airways restriction but in the opposite way.

Many individuals move whilst asleep, meaning that even if they fall asleep whilst lying on their side, they later roll onto their back. Some individuals find sewing a small ball into the back of their sleeping shirt makes it uncomfortable to roll over, thus enforcing the training of sleeping on the side.
Specialist pillows for side sleepers are available for purchase, including cuddle-type pillows that give the user something to embrace whilst asleep, which for many is a comfort allowing deeper and better-quality sleep.

Raising the head

Lying fairly flat in bed can allow the head to roll back, allowing the tongue and soft tissue to drop and restrict airways. Using an extra pillow to raise the head can combat this.

There are specialist anti-snoring pillows available that raise the head quite high, but these are often expensive. Medical professionals will normally advise to introduce lifestyle changes before any money is spent, but individuals may find this beneficial.

Surgical Intervention

In extreme circumstances, surgical options may need to be explored to resolve snoring. These must be considered an absolute last resort for any individual and should only be undertaken where snoring is having a severe impact on the person's health or wellbeing.

Around the world, surgical intervention is often not covered by medical insurances and state-sponsored programmes, as it is frequently not considered life-threatening. Therefore, these procedures are often expensive and completed infrequently, and only by specialist surgeons.

Uvulopalatopharyngoplasty (UPPP)

A mouthful to say and spell, UPPP surgery involves the removal of excess soft tissue from the mouth, the tonsils and the uvula. The procedure is carried out under general anaesthetic and comes with a 50% success rate. However, it can take weeks for the mouth to heal and so many consider this an inefficient risk to take in solving snoring surgically.

Uvulopalatoplasty

A uvulopalatoplasty surgery is similar to UPPP procedures, but using lasers and high-frequency radio waves to remove the tissue as opposed to surgically cutting it out. However, this is less effective than UPPP surgery and requires a long and uncomfortable healing period after.

Soft palate implants

If the cause of snoring has been established to be the vibration of soft tissue at the back of a mouth, a soft palate implant may be installed. Special materials are injected into the roof of the mouth whilst the patient is under local anaesthetic. These materials stiffen the tissues in the roof of the mouth to reduce vibrations, and in turn, noise.

Radio-frequency ablation

Another technique aimed at stiffening the soft palate to stop vibration, a radio-frequency ablation uses radio waves to shrink and stiffen the tissues rather than by an injection.

Tricks and Tips to Ease Snoring

There a number of other treatments available for snoring that don't involve buying a product to insert into or onto the body or having full surgery.

Blocking out the noise

A simple solution, but only for those disturbed by the noise of snoring rather than those producing it are earplugs! Basic cheap earplugs should block out enough sound that all but the loudest of snoring should cease to become a disruption. Noise-cancelling headphones and relaxing music may also help to muffle, if not block, the snoring sounds.

Mouth and nose sprays

Mouth and nasal sprays aim to shrink and stiffen the surrounding tissues to ease the vibration as a cause of snoring. These are available over-the-counter in most countries around the world but their effectiveness is often questioned.

Mouth exercises

There are several mouth and tongue exercises aimed at firming up the surrounding tissues, also in order to reduce vibrations. These need to be completed often and over a prolonged period, but may help strengthen the mouth to reduce snoring if the source is correctly identified.

Approach to Stop Snoring

If an individual is unsure of how to proceed with solving their snoring, there are a series of steps they can follow to identify the cause and get the relevant advice and help.

It’s important to remember here that there is no miracle cure, and many choose to just live with snoring. Finding the right solution may be a matter of trial and error.

If at any point there is question as to whether the patient may be suffering from sleep apnea, seek medical assistance.

Try each of the causal tests as listed above to identify the source of snoring.

If a sleeping partner has noticed snoring sounds, gain as much information as possible from them. Is the snoring worse when lying on the back? Does alcohol intake affect the noise? Is the snoring source obvious from the noise or action?

If the snoring source is a mouth or tongue, regardless of the sleeping position, or if the individual is unable to sleep on their side, trial a mandibular advancement device or tongue retaining mouth piece. If these products don’t work, try a chinstrap or vestibular shield.

If the snoring source is the nose, or the mouth because of a congested nose, try a nasal device.

Consider making serious changes to any lifestyle choices or medical conditions that may impact on snoring.

As always if in doubt seek medical advice and help.