

OBSTRUCTIVE SLEEP APNEA EXERCISES:

Orofacial Exercises to Cure OSA

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Disclaimer

This book is intended for information purposes only. The information in this guide is not intended to be, and does not constitute, health care or medical advice, and must not be used to make any diagnosis specific to the user.

Because of the serious, long-term health issues associated with sleep apnea, it is recommended that any treatment be discussed with your physician or health care professional.

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Introduction

The words 'Sleep Apnea' seem so harmless and small-but the effect the disorder has upon its sufferers is anything but harmless or small. People can feel that their Sleep Apnea controls them completely. A good night's sleep and the prospect of ever



sleeping like a baby again seem to fade into the background for sleep apnea sufferers. Those dreams are and are replaced by disturbed, restless sleep and often daytime exhaustion. Many people aren't even aware they have Sleep Apnea and continue feeling tired during the day - simply putting it down to a bad sleep pattern. Sleep Apnea sufferers are akin to hamsters running around on a wheel, attempting desperately to reach a point of calm, but never quite reaching their goal. There are three kinds of Sleep Apnea:

▣ **Obstructive** - the most frequently observed. This type of sleep apnea is often caused when the soft tissue at the back of your throat relaxes and collapses during sleep, causing your airway to become blocked.

▣ **Central** - a Sleep Apnea that concerns the central nervous system – and not an obstruction of the airway. The muscles that control the breathing process aren't signalled by the brain.

▣ **Mixed or Complex** - an amalgamation of both Obstructive and Central Sleep Apnea.

All three have one common factor: a section of the respiratory system somewhere has narrowed, making the oxygen volume that's travelling to the person's lungs decrease; the lowered blood oxygen then works like a trigger system to the brain informing it to notify the person to breathe once again. The sleeping person will gasp and in turn, this begins the breathing cycle. This e-book is going to concentrate solely on Obstructive Sleep Apnea, the most widespread and the most acute type of Sleep Apnea; as with all Sleep Apnea it can affect any person of any age but is typically observed in:

▣ Overweight males

▣ Aged 35-50+ years

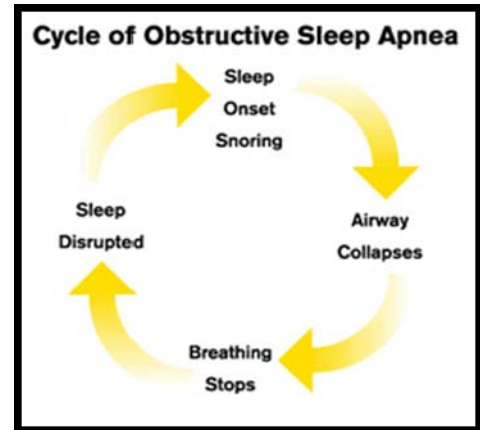
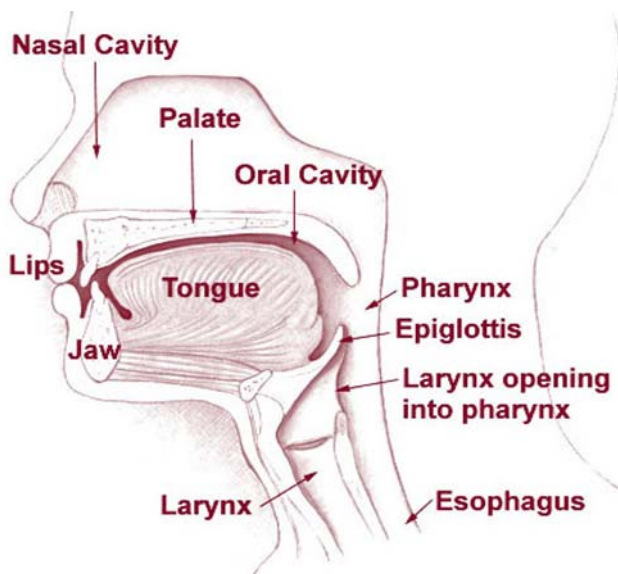
▣ Smokers

The Main Causes of Obstructive Sleep Apnea

→ What Happens

When Obstructive Sleep Apnea occurs, tissues situated within the upper throat relax and collapse together while the person is sleeping, blocking the air's passage temporarily. The normal pattern of events is as follows:

- Travelling to the lungs, the air will make its journey via the nose, mouth and throat (all known as the 'upper airway')
- Normally the rear of a person's throat is soft and naturally falls inward when the person breathes.



- Muscles, designed for widening, will be working against the collapse, maintaining an open airway.
- When the tissues at the rear of the throat collapse and become temporarily blocked off, Apnea will happen and the person's breathing is halted.

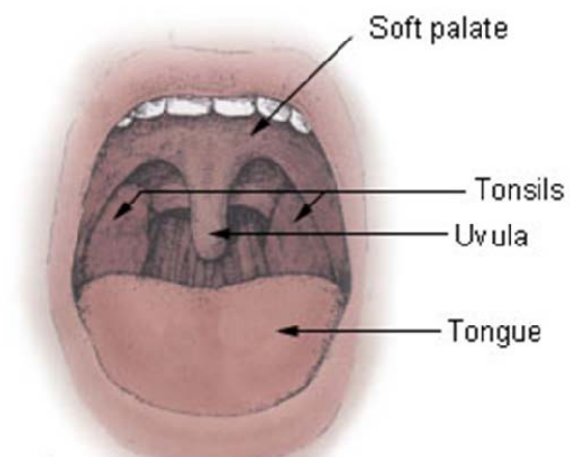
Causes and Risk Factors

- **Large neck** = a 17" or larger neck in a man and a 16" or larger neck in a woman.
- **Soft Palate** = The soft palate is the soft tissue that sits at the back of the roof of the mouth. If the soft palate is stiffer or bigger than normal, it could prove to be a risk factor. If the throat walls surrounding the soft palate and the soft palate itself tend to collapse easily this could also be a cause of Obstructive Sleep Apnea.
- **Skull and Facial Features** = a bigger tongue, an overbite: (when the front teeth noticeably cover the lower teeth), a receding chin, an upper jaw that's narrow, the lower section of the face is long, and Brachycephaly: (a defect of birth where a person's head tends to be wider and shorter than normal).

How Can Exercise Cure My Obstructive Sleep Apnea?

The main purpose of carrying out exercises for Obstructive Sleep Apnea is to build and strengthen the muscles located around the airway. Through doing this the airway is a lot less likely to completely collapse and become blocked off during sleep. The major categories of exercise are:

- The tongue – many people don't realize that the tongue is a muscle. If the tongue becomes weak it can drop into the throat, causing an airway blockage. Tongue exercises assist in building the tongue's tone and strength.
- The jaw - a tense jaw can contribute to Obstructive Sleep Apnea. If the jaw is tight it can place pressure directly on the breathing passages. Jaw exercises will help to loosen and relax the jaw muscles.
- The throat – weakened throat muscles can collapse during sleep, causing the airway to become blocked. Throat exercises help to build, tone and strengthen the throat muscles. The exercises also open the throat up more to prevent it closing upon sleep.
- The soft palate – the soft palate muscles located around the base of the tongue relax during sleep. A weak soft palate can flap around and its tip can fall down onto the tongue. The soft palate exercises will lift the soft palate up. The exercises will offer tone and strength to the soft palate.
- The face – these exercises will help with toning and strengthening many of the areas previously mentioned, including the neck. If the neck muscles are flabby and weak they can push down on the airway. A simple smiling exercise can tighten the neck muscles, for example.



Snoring and Obstructive Sleep Apnea

Firstly let me point out that simply because a person snores it doesn't immediately indicate that they have Obstructive Sleep Apnea. Similarly, if a person does have Obstructive Sleep Apnea it doesn't mean that they'll definitely snore.

Why We Snore

The basic mechanics behind snoring has to do with a person's airway and how they're physically formed. When we sleep the muscles in our throats naturally relax; our throats are then floppy and narrower than when we're awake. If our airway happens to narrow too drastically the normal airflow then turns turbulent, due to the alteration of the flow of air.

In essence, the throat walls start to vibrate as we inhale and exhale air. The vibration in the throat walls result in snoring. The flabby tissues within the airway contribute to snoring. There are many flabby tissues located in the throat and mouth that can also vibrate. In conclusion: the narrower the airways are, the louder the vibration/snore will be-and the various flabby tissues also play their part in snoring.

Snoring & Obstructive Sleep Apnea Similarities

Several causes of snoring are the same as the causes of Obstructive Sleep Apnea, including a large neck with added flab around the front of the neck. The extra flab naturally reduces the air passage space by pressing down onto the airway.

Weak muscles within the throat cause it to close during sleep. The tissues positioned at the top of the airway collapse together, making vibrations.

Many of the jaw and tongue exercises aimed at assisting Obstructive Sleep Apnea sufferers are the same as exercises geared towards stopping snoring; the aim is to strengthen the weak muscles located around the airways.



Cure Your Obstructive Sleep Apnea, Cure Your Snoring

Snoring and Obstructive Sleep Apnea are often interlinked. Associated with both ‘conditions’ are similar causes. Added flab around the neck-especially in the throat region. The throat muscles are weak. During sleep the weakened muscles will cause the throat to close.

The snoring noise comes from vibrations. Located at the top of your airway are tissues, these collapse together and produce the vibrations.

By curing your Obstructive Sleep Apnea through oropharyngeal exercises you’re toning and strengthening vital muscles. The weakened muscles you’ll be working on, are problematic for both snoring and Obstructive Sleep Apnea.

By curing your Obstructive Sleep Apnea you’ll naturally cure your snoring-as the two are often associated.

Perhaps then you
can finally wave
goodbye to
daytime
exhaustion, and
the embarrassment
of falling to sleep
at work!



What is an Exercise for Obstructive Sleep Apnea?

Obstructive Sleep Apnea exercises are all connected with the face, throat, mouth, nose and neck region of the body. The general concept is to strengthen, exercise and train certain muscles, making the airway easier to access during the night while sleeping.

Many sleep apnea exercises involve the tongue receiving its own personal workout! Obstructive Sleep Apnea can be caused by a larger tongue and the tongue collapsing and falling back down the person's throat. The exercises will increase the tongue's strength and overall physical condition and tone. You may feel slightly self-conscious initially sticking your tongue out and producing some very strange noises and sounds; if you do, then simply

carry out your exercise regime when nobody else is around!



The exercises for Obstructive Sleep Apnea are referred to as “oropharyngeal exercises”, meaning exercises relating to the mouth and pharynx. The pharynx is the tube, along with its surrounding muscles, that connects the nasal passages and mouth to the esophagus. Jaw exercises are also included. These will assist with strengthening the weaker muscles and enabling them to open up when required to clear the airway.

There are blowing exercises that involve the person inhaling through their nose but exhaling from their mouth. Pronouncing your vowels properly can even help, when combined with the tongue being in a downward position; this exercise helps both the soft palate and the tongue muscles.

So as you can see, the exercises for Obstructive Sleep Apnea are not so much about you having to become super fit, or taking out a membership with the local gym, they concentrate solely on the face and neck area. Obesity can play a part in Obstructive Sleep Apnea, especially so if there is extra flab surrounding the neck region. So attempting to maintain a balanced weight and certain level of fitness can also have a positive outcome on your sleep apnea.

Along with exercising, there are certain lifestyle and behaviour alterations that can be made and tasks to be completed on a daily basis to assist with maintaining a lower level of Obstructive Sleep Apnea. These are also covered in this guide on page ____.

Proof That Exercises for Obstructive Sleep Apnea Work

It's easy to sit here and tell you that exercises will help your Obstructive Sleep Apnea - but where's the proof behind the statement? There have been numerous academic studies performed to test the effectiveness of Oropharyngeal exercises in the treatment of Obstructive Sleep Apnea; it's an area that many health professionals called "Speech Pathologists" are interested in.

There are two academic studies that I'd like to share with you. One was carried out in the UK and the other in Brazil.

UK Study

Location : Speech Language Clinic in the UK.

Objective : To determine whether there would be any noticeable impact via Oropharyngeal exercises in patients with moderate to severe Obstructive Sleep Apnea.

Method Used : 31 males aged between 40-50 years were subjected to a 2 month clinical trial. 15 of the males involved were administered a "pseudonym" drug and informed that the drug was newly created. The drug, when taken over the course of 3 or more weeks, helped to strengthen the throat muscles and reduce any extra flab within the neck area.

The other 16 males were instructed to carry out Oropharyngeal exercises for the course of the 2 month duration. The exercise routine was done daily, prior to bedtime. The exercises used can be seen in more detail on pages 20-22.

Results

No difference noted in the 15 men administered the "pseudonym" drug. The speech language pathologist leading the study said, "We obviously needed to use a fake product to set against the Oropharyngeal exercises. The 16 men completing the exercise routine, had to feel as though they were competing-as if they were taking part in a challenge. Call it a 'man thing' if you like! The 15 men taking the so called 'drug' thought they had the easy option."

"The other group did all the physical work, we simply sat and took our tablet," one of the men commented, "they certainly drew the short straw."

Of the 16 men completing the exercise routine:

- 2 showed no signs of improvement
- 8 showed minor signs of improvement
- 4 showed major signs of improvement
- 2 showed signs that their Obstructive Sleep Apnea had completely cleared

The minor signs of improvement were:

- Less daytime exhaustion
- Less frequent snoring

The major signs of improvement were:

- Less daytime exhaustion
- Less intense snoring
- Reduction in flab around the neck region
- High quality of sleep achieved

Conclusion

In his findings the lead speech language pathologist says, “The results speak for themselves. This study has been conducted to prove what a lot of speech language pathologists already had an inclination of anyway. Oropharyngeal exercises can in fact help, if not cure, Obstructive Sleep Apnea.”

One of the 2 men that showed no improvement said, “I am disappointed and I would be a liar to say I wasn’t. I completed the exercise routine in the same way as the other guys and have seen no improvement.”

“For the 2 men with no improvement in their Obstructive Sleep Apnea I do feel pity,” said the pathologist, “they worked as hard as the others in their group and have received no reward, that’s not to say if they persevered with the Oropharyngeal exercises they wouldn’t notice an improvement in time. To show the success percentage that we have though is a fabulous outcome. To have 2 with no more episodes of Obstructive Sleep Apnea is a terrific result.”

Brazil Study

Location: University of São Paulo Medical School, São Paulo, Brazil.

Objective: To conduct a series of Oropharyngeal exercises on patients with moderate Obstructive Sleep Apnea - and determine if the exercises make any difference.

Method Used: 50 patients, recently diagnosed with moderate Obstructive Sleep Apnea were screened. The medical school’s exclusion criteria saw 19 patients go - and 31 were accepted for the trial. The trial lasted for three months.

The 31 were split into two groups:

- 15 in the Control Group
- 16 in the Study Group

The control group of patients were given thirty minute sessions of controlled breathing, they had to breathe deeply through their nose. They did this in a sitting position. 10ml of saline was applied in each nostril, three times a day. The study group had to perform a set of daily Oropharyngeal exercises. The exercises used can be seen in more detail on pages ____.

Results

No change in the control group. The study group showed a significant 39% reduction in Obstructive Sleep Apnea episodes. Improvements noted were:

- Decrease in neck circumference measurement
- Reduced snoring
- Better sleep pattern

Conclusion

The study displayed that Oropharyngeal exercises can significantly reduce Obstructive Sleep Apnea severity-and symptoms. The study represents a very promising treatment for those with moderate Obstructive Sleep Apnea.

To read more about this study, please click this link: [Effects of Oropharyngeal Exercises on Patients with Moderate Obstructive Sleep Apnea Syndrome](#).

Who These Exercises are For

To qualify for a program of Oropharyngeal exercises a person needs to have:

- Their sleep apnea or snoring caused by flabby throat tissue, or a large, thick tongue
- A neck size that exceeds 16 inches and/or a body mass index (BMI)¹ that exceeds 25. If your BMI is over 25 this increases the risk of you having Obstructive Sleep Apnea. Elevated weight equals a higher chance of excessive flabby throat tissue. The extra tissue pushes down on your throat. Your airway will then narrow or close.
- Breathe through their mouth when sleeping

The exercises are not for Central Sleep Apnea sufferers. They are also not for those with sleep apnea caused via nasal issues, such as a [deviated septum](#) (i.e. your nose is bent on the inside).

¹ Your BMI is a measure of your body fat. The measure is based on your height and weight. Click this link to determine your BMI: [BMI Calculator](#)

How to Test Yourself at Home

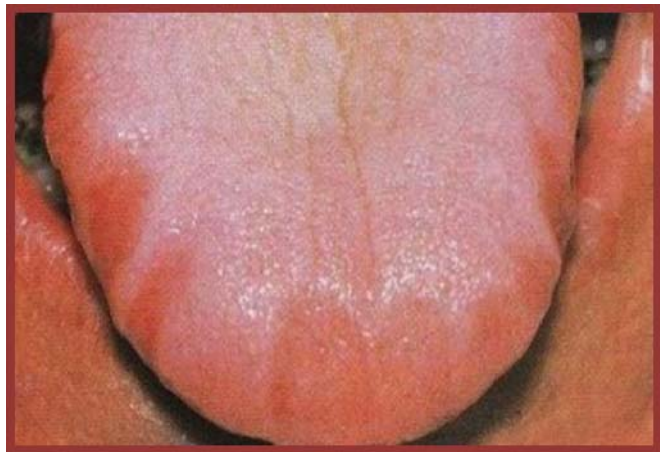
The Tongue

Now you know the chosen criteria, do you meet it? How exactly do you ascertain if your tongue's large or thick-or if your throat muscles are particularly flabby? With the tongue it's vital to know how a normal, healthy tongue looks.

The image on the left shows a normal tongue.

- Texture is soft
- Colour is slightly red
- Edges are smooth
- Motion is free
- Fits the mouth perfectly
- Thin coating of white, neither dry or over moist
- No visible lumps or bumps

The tongue on the right displays 'scalloping.' The indentations on the edge of the tongue have been caused by the tongue resting against the molars. A study has shown that scalloping can positively predict Obstructive Sleep Apnea.



An interesting viewpoint given by a Speech Language Pathologist, disputes the fact that a sufferer's tongue is too large. He states, "This is the traditional reasoning given, the 'normal' explanation but in my own opinion I think it's rather a case of the person's jaw being too small for the normal sized tongue." He concluded, "Potential Obstructive Sleep Apnea sufferers have a number of factors they can look for in deciding whether they qualify for the various programs of Oropharyngeal exercises:

- A smaller than normal jaw-line
- Scalloping marks on the tongue
- A high-arched palate
- A tongue that sits high in the mouth. This can be ascertained by the person looking at the back of their throat. If they can't observe the back properly their tongue is positioned high."

Flabby Throat Tissue



When it comes to home testing for flabby throat tissue it's quite an easy task. You have to be totally honest with yourself-and this could prove problematic for some.

Being overweight is the most common cause of excess flabby throat tissue. You can observe from the image on the left, that the lady has a lot of extra flab around her throat and neck region. It's easy for her to see at a quick glance that her neck circumference is bigger than average. Her throat muscles will be weak as they're not tightly toned.

It isn't only overweight individuals that can be prone to flabby throat tissue - look at the image on the right. The senior man has slightly flabby throat tissue-but mainly his skin has lost its elasticity, due to age. These loose folds of skin can present the same problem as flab. The airway can become blocked as the loose skin pushes onto it.

The image below shows the actress Gwyneth Paltrow. You can observe that there's no flabby throat tissue. The muscles in the neck and throat are completely toned. The appearance is smooth and supple.



This isn't implying that every

overweight or senior person will have Obstructive Sleep Apnea. This section is trying to provide tips of how to test yourself at home. Points to look for that could play a part in you being an Obstructive Sleep Apnea sufferer.

Excess flabby throat tissue and loose skin can contribute to Obstructive Sleep Apnea. Weakened throat muscles need to be strengthened and toned -as this will prevent them collapsing during sleep.





Elongated Soft Palate

The soft palate is composed from muscle fibres. The fibres are encased in mucous membrane. Its function is to shut-off the nasal passages when a person swallows.

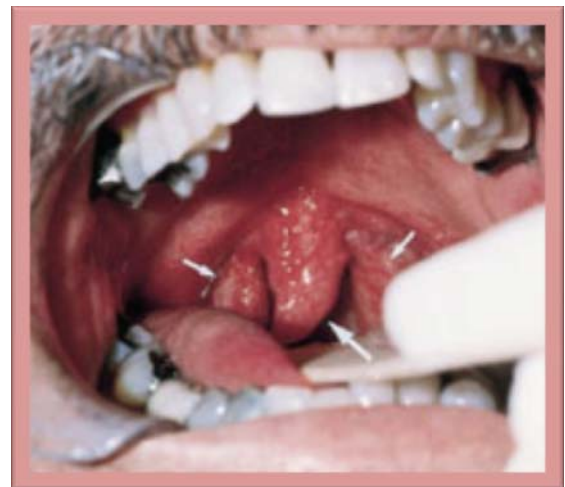
If the soft palate is longer than average, it'll narrow the gap leading from the nose to the throat. The extra length can also be the cause of snoring. It becomes a noisy, fluttering valve during a relaxed state of breathing.

The image on the left displays an elongated soft palate. The palate is resting on the tongue's base, indicated by the white arrows. This blocks off the airway. You can observe in a mirror whether you have an elongated soft palate. Open your mouth wide, stick your tongue out and downward. Look at the back of your mouth. Either side of the uvula (dangly tissue piece) there should be a good clearance. If there's little or no noticeable gap then the chances are high that your soft palate is elongated.

Enlarged Uvula

The uvula is the cone shaped tissue that hangs down from the soft palate. Its function is to work in conjunction with the soft palate. During swallowing they both prevent any food entering the nasal passages.

The image on the right shows a larger than normal uvula (marked by the large arrow). The uvula is resting on the base of the tongue. Like the elongated soft palate, an enlarged uvula can restrict normal airflow by creating a blockage. The airway is closed off, much easier if the person has an enlarged uvula. The added size of the uvula often contributes to snoring. Just like the elongated soft palate - it becomes a fluttering, noisy valve when the breathing is relaxed.



Hypertrophic Tonsils

Hypertrophic tonsils are generally seen in children-but adults can also suffer this condition. The tonsils are so swollen and large that they obstruct breathing. Swallowing can also be difficult. The image above, of the enlarged uvula, also displays hypertrophic tonsils (marked by the two small arrows).

Along with the other two conditions, the diagnosis is often visual. The tonsils will be especially pronounced and naturally bulging out towards the mouth's front. They can be so enlarged that they can touch one another.

Self-Assessed Questionnaire

Many cases of Obstructive Sleep Apnea are discovered by the sleeping partner of the sufferer. They notice the heavy snoring, gasping or choking and generally disrupted sleep pattern.

Another method of home testing for Obstructive Sleep Apnea is via a questionnaire. Completing the form might be easier with the help of your sleeping partner. They'll probably know about your nocturnal habits than you! If you ask your GP they should be able to point you in the right direction to obtain a questionnaire. Don't panic as the form will only ask simple questions, you won't require a degree in English!

General questions could include:

- Do you snore excessively loudly?
- Does your partner complain about your snoring waking them?
- Does your snoring actually wake you up?
- Do either you or your partner notice you gasping or choking when asleep?
- Do you fall asleep during the daytime?
- When you wake in the morning is your throat dry or sore?
- Do you feel tired all of the time?
- When you wake in the morning do you have a headache?
- Do you have a history of high blood pressure?



So as you can see, not tricky questions. They're simply intended to offer a quick evaluation of your sleeping routine. It won't take long to complete the form-and it's another step closer to ascertaining whether you're suffering from Obstructive Sleep Apnea.

The Snoring Severity Scale

Along with the self-assessed questionnaire there are a couple of other self-tests for you to try. The snoring severity scale was developed as a simple screening test, to determine whether snoring patients had Obstructive Sleep Apnea.

The theory behind the screening test, is to develop a method of detecting the presence of Obstructive Sleep Apnea. It's to divide the sufferers into two risk categories, low and high. A regular visit to your GP could include the completion of a few simple paper based tests. The test results would give your GP the relevant information. Your diagnosis of Obstructive Sleep Apnea would then be painless and relatively quick.

The Snoring Severity Scale Test is a personal tool. It's composed of the following 3 questions. The points to award yourself are on the left in brackets:

1. How often do you snore?
 - (3) Every night
 - (2) Most nights (greater than 50%)
 - (1) Some nights (less than 50%)
 - (0) Very rarely or not at all
2. How long do you snore?
 - (3) All night
 - (2) Most of the night (greater than 50%)
 - (1) Some of the night (less than 50%)
 - (0) Hardly or not at all
3. How audible is your snoring (with the door shut)?
 - (3) Can be heard down the hall
 - (2) Can be heard in the next room
 - (1) Can be heard in the same room
 - (0) Barely audible

The Epworth Sleepiness Scale²

Another useful exercise to complete is the Epworth Sleepiness Scale (ESS).

Developed by Dr. Murray Johns in 1990, the scale was created to measure the daytime sleepiness in patients with sleep disorders. The test is a questionnaire with 8 questions. Patients are asked to rate their chance of daytime dozing while in common situations. The higher the score, the higher the level of their daytime sleepiness.

Scores less than 12 are perfectly normal. Scores of 14 or more indicate Obstructive Sleep Apnea - at a moderate to severe level.

The Epworth Sleepiness Scale asks the simple question “How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired?”, and provides you with a range of situations.

Even if you haven’t done some of these things recently try to work out how they would have affected you.

Use the following scale to choose the most appropriate number for each given situation:

- 0 = would never doze
- 1 = slight chance of dozing
- 2 = moderate chance of dozing
- 3 = high chance of dozing

Situations

Sitting and reading

Watching TV

Sitting, inactive in a public place (theatre, meeting)

As a passenger in a car for an hour without a break

Lying down to rest in the afternoon when circumstances permit

Sitting and talking to someone

Sitting quietly after a lunch without alcohol

In a car, while stopped for a few minutes in the traffic

² Copyright © MW Johns 1990-1997. Used under license. Please visit <http://epworthsleepinessscale.com/> for more information.

Specific Exercises for Specific Causes of Obstructive Sleep Apnea

Okay so now you've hopefully ascertained what the main cause of your Obstructive Sleep Apnea is. Once you can identify the cause, you'll know which area to concentrate on more. Now although the cause might be that your tongue's oversized, this doesn't mean the only exercises you should do are tongue ones.

A speech language pathologist stated in a recent interview, "Many Obstructive Sleep Apnea sufferers single out what they believe to be the main instigator, be it a larger tongue or elongated soft palate. They think if they simply work on that one area the cause will be rectified and their apnea will vanish. Not the case I'm afraid." He continued, "An Obstructive Sleep Apnea sufferer requires all their available muscles to be strong and toned. Now I'm not saying it's not a good idea to work a bit harder on a certain area, simply don't forget the other muscles."

To summarize then-it's vital that you do an assortment of exercises. If you look at the initial section of exercises on pages _____, you could select the following routine:

- ❖ Chewing – this is a good warm-up. Great for the jaw muscles
- ❖ Going Up – good as you're not exerting your tongue yet-but it's being worked
- ❖ The Tiger Yell – excellent for the muscles in the back of your throat
- ❖ Reach for the Ceiling – excellent for the muscles in the front of your neck
- ❖ A Smile a Day – perfect for strengthening all your neck muscles

It's not so much the quantity of Oropharyngeal exercises that you complete, it's the quality. The ones you choose to include in your routine, need to be done at least daily. Ideally do them prior to bed and late morning. Before bed is perfect. This will assist with working all those muscles at the time you need them the most. You need them to be at their strongest during sleep. Weak muscles collapse, causing airway blockages. Late morning is a good time too. Your body has had chance to fully wake up before you throw an exercise routine at it! Now referring back to the speech language pathologist's words: if you discover that the main cause of your Obstructive Sleep Apnea is a larger tongue, you could add another couple of exercises to the suggested routine. You could do:

- ❖ Tongue Brushing
- ❖ Tongue Forces

These extra exercises focus specifically on the tongue. Your routine is a good balance. All the muscles are being used-with an extra focus on your tongue. The secret's to discover a well-balanced routine. Pick out certain ones from the next few pages. Select 8-10 exercises, including a couple 'cause specific' ones. Ideally do them twice daily. Four times if you can. A good one to start with is the chewing exercise, a great warm-up provider.

The following Oropharyngeal exercises have been performed in studies. They've all been proven to reduce Obstructive Sleep Apnea. When you're doing these exercises please be aware that you shouldn't feel dizzy. You shouldn't experience any pain or discomfort. If you do, stop. Seek medical advice from your physician or health care practitioner.

The following have been arranged in groups. The groups are the main body part to be exercised. Obviously many of them work for more than 1 area. Refer to the 'purpose' section to see the muscles used.

Turn the page to get started!

EXERCISES FOR THE TONGUE

➤ TONGUE BRUSHING

Method:

1. With your toothbrush brush the top and sides of your tongue, while your tongue is sitting on the floor of your mouth.
2. Repeat the individual sections 5 times each.
3. Complete the exercise three times daily.

Purpose – to strengthen the tongue muscles-with the added advantage of maintaining great oral hygiene!

TONGUE BRUSHING

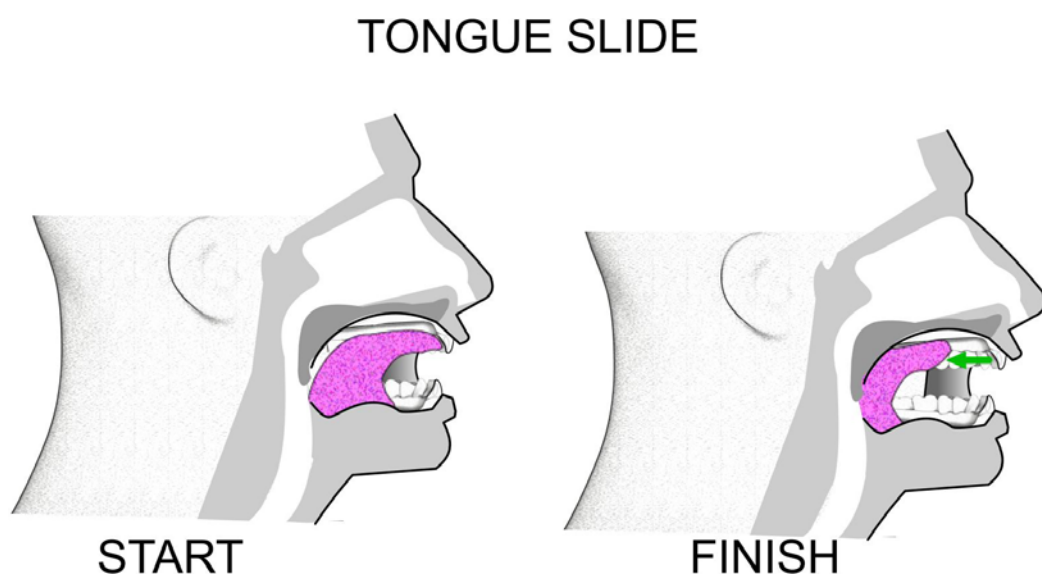


➤ TONGUE SLIDE

Method:

1. Looking straight ahead, position the tip of your tongue against the back of your top, front teeth.
2. Slide your tongue backward.
3. Repeat 10 times.

Purpose – to tone and strengthen the tongue and throat muscles.



➤ TONGUE FORCES

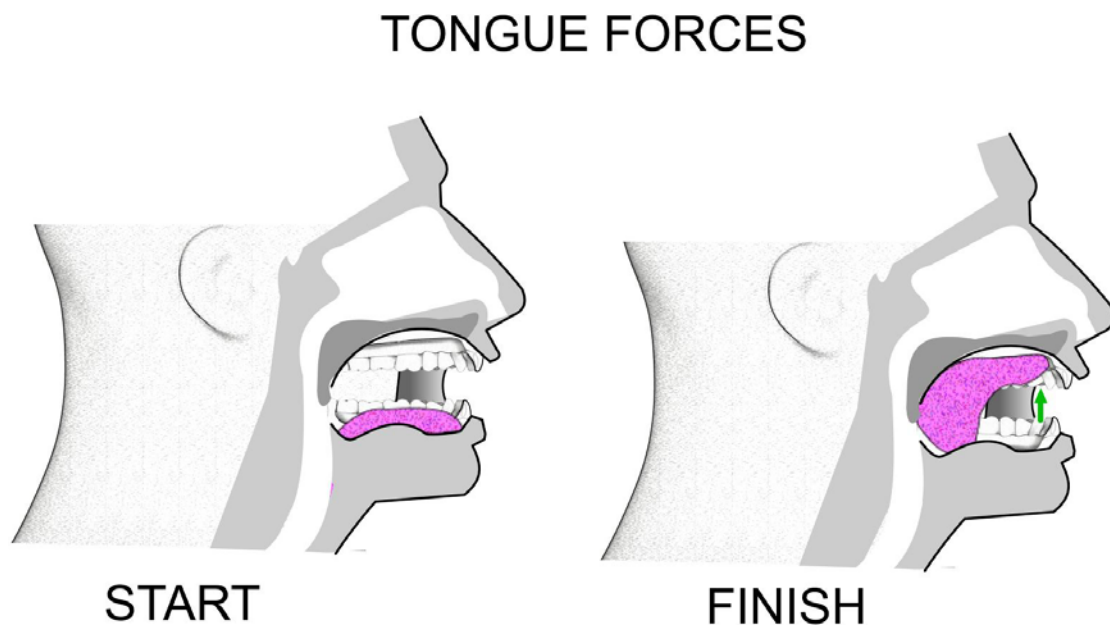
Method:

1. Forcibly suck your tongue upward until the whole tongue is against your palate.
2. Hold this position for 4 seconds.
3. Repeat 5 times.

Method:

1. Force the back of your tongue downward until the whole tongue is resting on the floor of your mouth.
2. Keep the tip of your tongue touching the back of your lower teeth.
3. Hold for 4 seconds.
4. Repeat 5 times.

Purpose - both of these exercises strengthen the tongue and tone your soft palate.



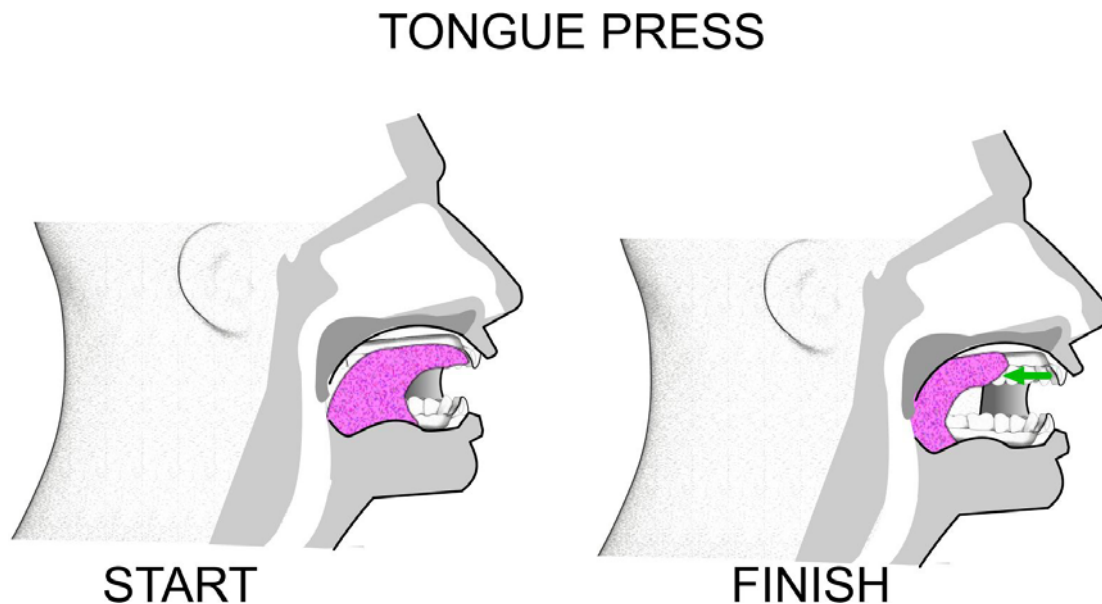
➤ TONGUE PRESS

Method:

1. Push your tongue against your hard palate (the top and front of your mouth).
2. Do this for 5 seconds.
3. Slide your tongue backward to the back of your mouth.
4. The initial third of your tongue should be against your hard palate, not just the tip.
5. Keep your jaw open throughout the exercise.
6. Refrain from biting down - keep your teeth apart.
7. Repeat this movement 10 times.
8. Repeat 4 times a day.

Purpose – to strengthen the genioglossus (the main muscle used for sticking your tongue out), and to increase the strength in the hyoid muscles and bone. The hyoid bone is located in the centre of the neck. It sits between the chin and thyroid cartilage.

The exercise assists by putting the hyoid bone in the correct position and keeping it there³. The hyoid bone is a free moving, u-shaped bone in the neck. The volume of the tongue should reduce too.



³ In people who suffer from Obstructive Sleep Apnea the hyoid bone is sometimes in a downward position.

➤ **TONGUE WORKOUT** – best performed in front of a mirror

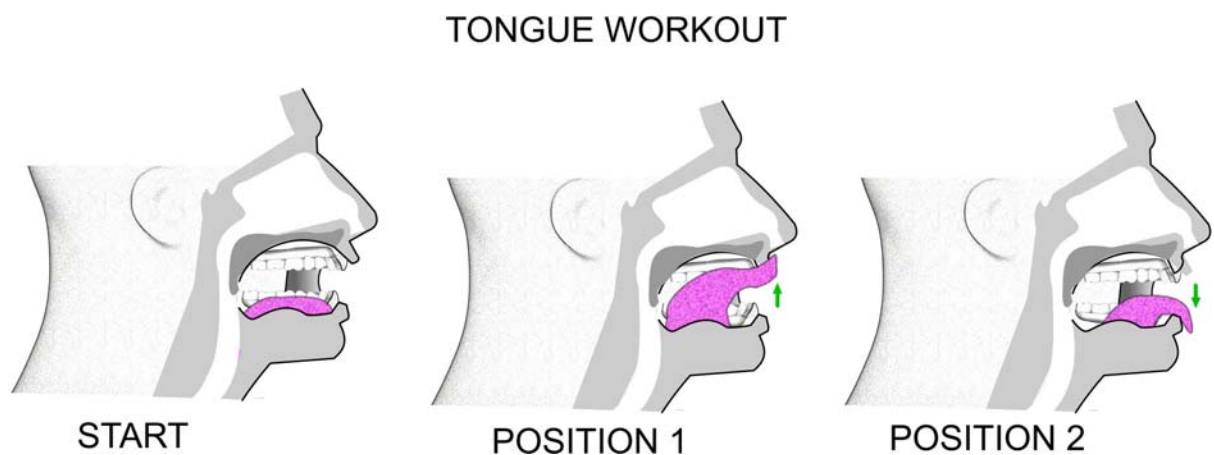
Method:

1. Open your mouth wide.
2. Stick your tongue out.
3. Try to touch your chin with the tip of your tongue.
4. When your tongue is at full stretch, hold it there for 5 seconds.
5. Repeat 10 times daily.

Method:

1. Open your mouth wide.
2. Stick your tongue out.
3. Try to touch your nose with the tip of your tongue.
4. When your tongue is at full stretch, hold it there for 5 seconds.
5. Repeat 10 times daily.

Purpose - to exercise and strengthen the tongue muscles, and to exercise the throat and jaw muscles.



EXERCISES FOR THE SOFT PALATE

➤ BLOWING

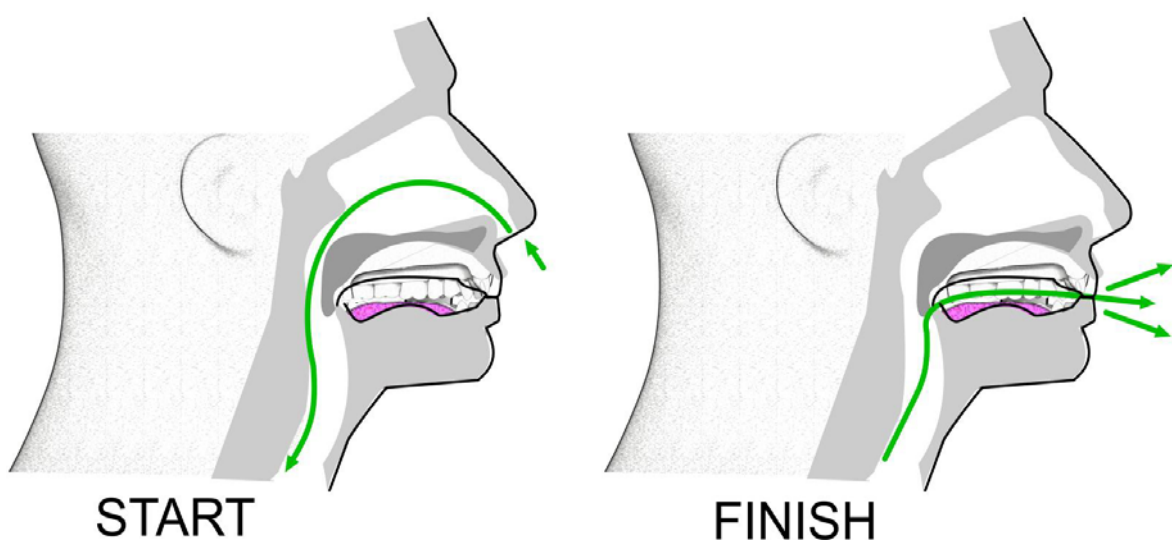
Method:

1. Inhale air through your nose.
2. Exhale via your mouth. As you exhale press your lips together. This action forms a resistance.
3. When you exhale tighten your abdomen.
4. Maintain the blowing for 5 seconds.
5. Repeat 10 times
6. Repeat 4 times a day.

A balloon can also be used for this exercise. Inflate the balloon, stop, remove the balloon-and breathe in deeply through the nose. Then continue to inflate the balloon, stop, remove the balloon-and breathe in deeply through the nose. Exhaling via the mouth and inhaling via the nose, will assist with training the respiratory system.

Purpose – the soft palate and uvula are elevated during this exercise. The elevation process is exercising the muscles. The pharynx will expand and be enlarged. The respiratory system is also being trained in this exercise.

SOFT PALATE BLOWING

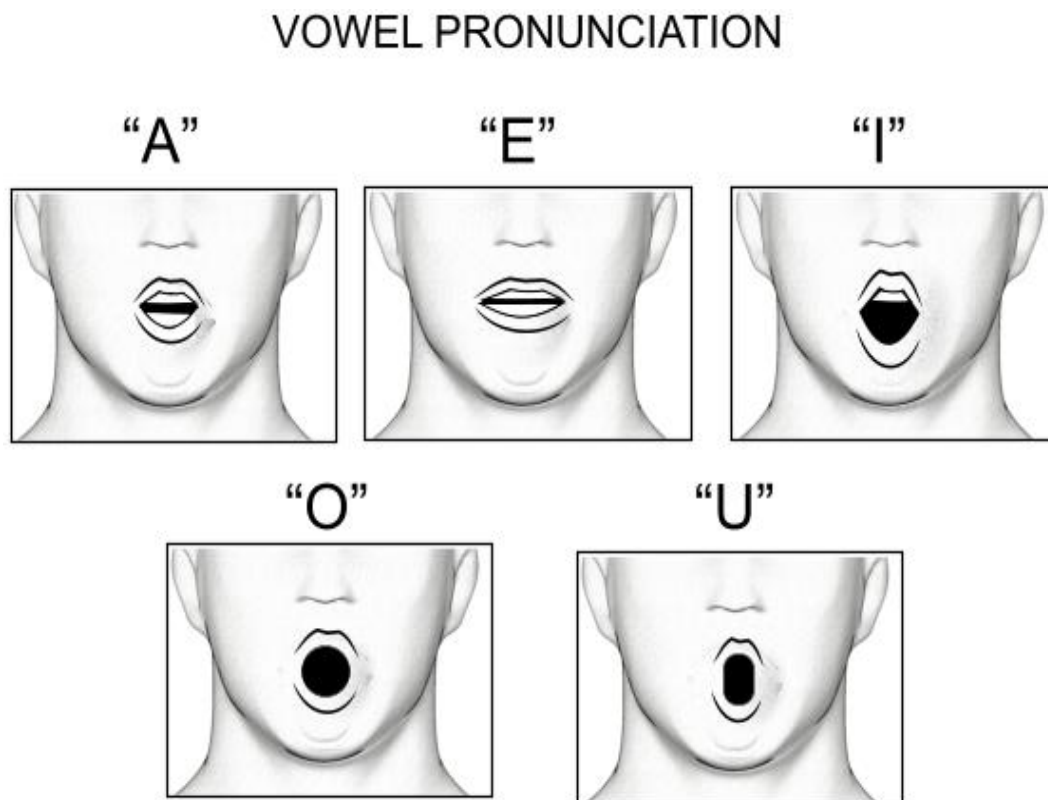


➤ **VOWEL PRONUNCIATION** - best performed in front of a mirror

Method:

1. Standing in front of a mirror, begin pronouncing your vowels.
2. Go through all of them (A, E, I, O, U) and really exaggerate the movement of your mouth.
3. Observe yourself in the mirror and ensure you're forming the vowel sounds by stretching your mouth.
4. Slowly repeat each vowel 5 times.

Purpose – to stretch your mouth and throat muscles-and exercise your soft palate.



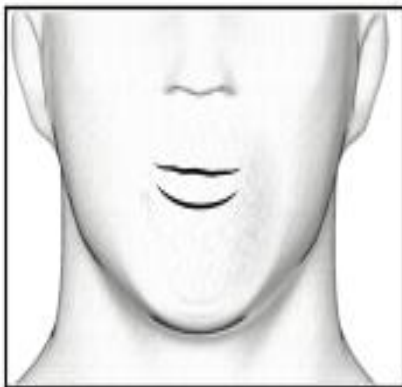
➤ **THE ‘A’ VOWEL** – best performed in front of a mirror

Method:

1. Your tongue needs to face downward, and stay inside your mouth.
2. Clearly say the vowel “A” sound. Hold the sound for 5 seconds. It should sound like “Ahhhhh.”
3. Attempt to push your tongue down, and keep it there. (Sounds simple, but for many Obstructive Sleep Apnea sufferers, this is anything but simple. The sufferer’s tongue is generally in a high position. This task can prove very tricky. The mirror will assist in checking the position of your tongue.)
4. Repeat 10 times. 4 times a day.

Purpose – to exercise the tongue and soft palate muscles.

THE “A” VOWEL



START



HOLD FOR 5 SECONDS

EXERCISES FOR THE THROAT & NECK

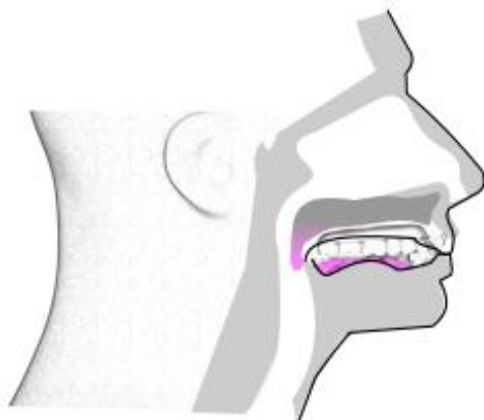
- **THE TIGER YELL** (no actual yelling required! The action of opening your mouth wide mimics a tiger going to yell/roar). Best performed in front of a mirror.

Method:

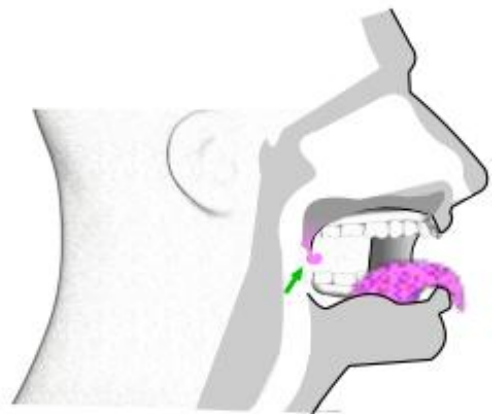
1. Open your mouth as wide as possible, and stick your tongue out in a downward position. Your tongue needs to be stuck out as far as it can be.
2. The uvula, the small fleshy piece in the back of your throat, needs to be lifted upwards as you stick your tongue out.
3. The mirror is used to ensure that you're lifting the uvula up correctly. You'll soon begin to sense that you've lifted it and won't require the mirror.
4. Hold the lifted uvula for 5 seconds and repeat 10 times.

Purpose – to exercise and strengthen all the muscles in the back of your throat.

THROAT/NECK THE TIGER YELL



START



HOLD FOR 5 SECONDS

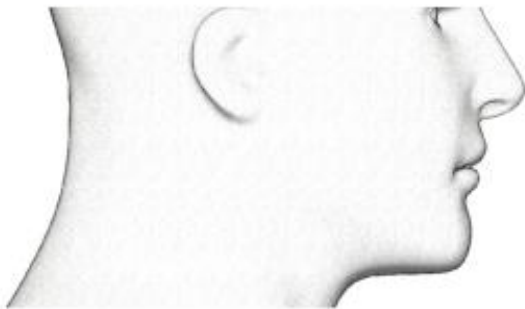
➤ REACH FOR THE CEILING

Method:

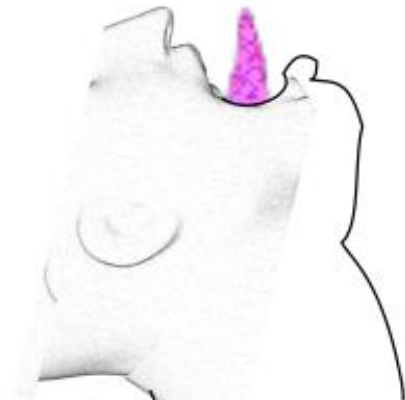
1. Lift your head up as high as you can, looking at the ceiling.
2. Stick your tongue out and upward, as though you're attempting to touch the ceiling with it.
3. Hold the upward tongue position for 10 seconds and repeat 5 times.

Purpose - your trachea will be lifted upward, your throat muscles will contract. All the muscles in the front of your neck are exercised and stretched when the trachea is elevated. Your tongue will remain in a neutral position rather than slipping back inside your throat-and blocking your airway.

REACH FOR THE CEILING



START



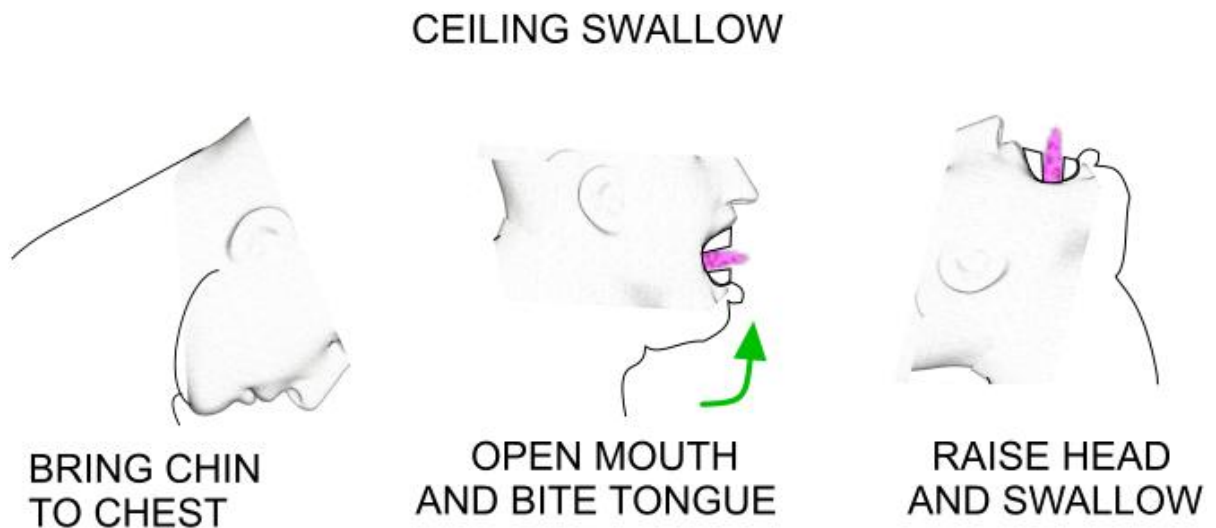
HOLD FOR 10 SECONDS

➤ CEILING SWALLOW

Method:

1. Bring your head right down so your chin is resting on your chest.
2. Open your mouth wide sticking your tongue out as far as possible.
3. Gently bite down on your tongue while lifting your head up towards the ceiling.
4. When you reach the top, looking up at the ceiling and with your tongue still sticking out, you need to swallow.
5. Repeat 5 times.

Purpose - the swallowing action lifts the trachea and the throat muscles contract, exercise and tone.

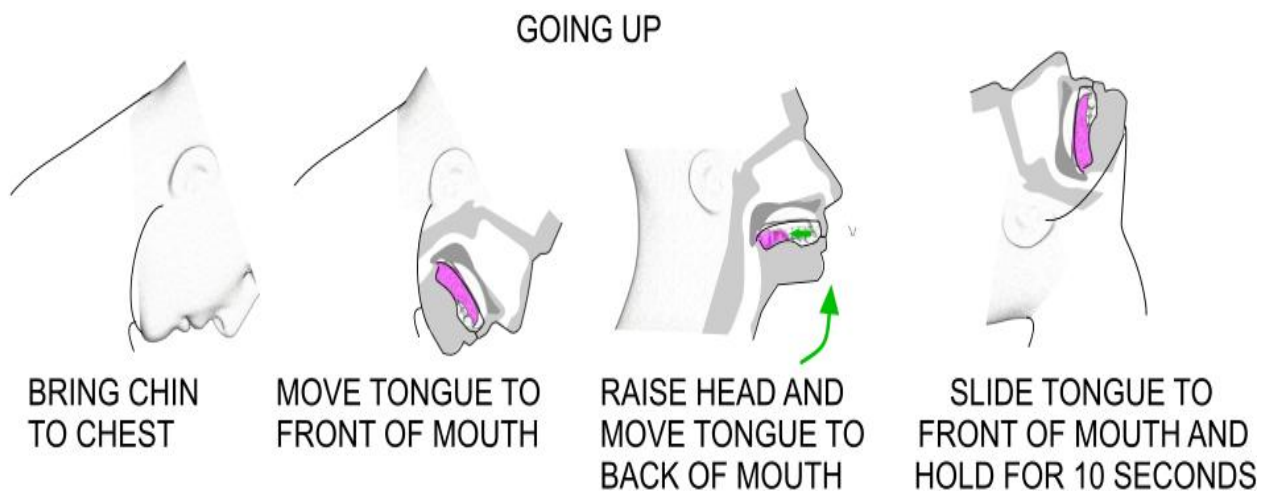


➤ GOING UP

Method:

1. Start with your chin resting on your chest, mouth closed.
2. Place the tip of your tongue behind your top teeth.
3. Slowly start to look at the ceiling.
4. Slide your tongue from behind your teeth to the back of your mouth.
5. Once your tongue reaches the back of your mouth lift it up, move it back to the front.
6. Hold this position for 10 seconds.
7. Bring your head back down until it's parallel with the floor.
8. Repeat 10 times.

Purpose – to tone and strengthen the muscles in the front of your neck and your tongue muscles.



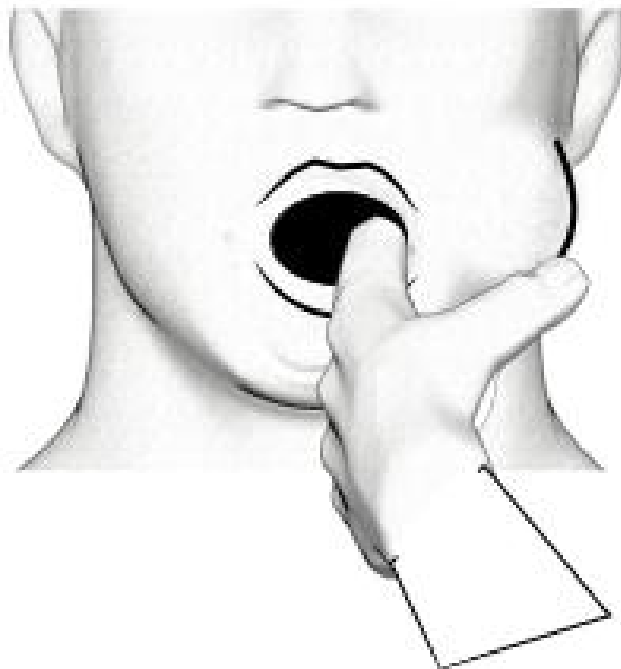
➤ FINGER IN CHEEK

Method:

1. Open your mouth, place your first finger (next to your thumb) inside your cheek.
2. Push your finger so that your cheek moves outward.
3. Contract the cheek muscles to resist the pushing.
4. Repeat 10 times for each cheek.
5. Repeat 4 times a day.

Purpose – to strengthen your facial and throat muscles. Improve the resistance of the buccinator (red on diagram) and orbicular (yellow on diagram) muscles. Better closure of the mouth will be gained. Many Obstructive Sleep Apnea patients breathe via their mouth. This exercise will help improve nasal breathing.

FINGER IN CHEEK



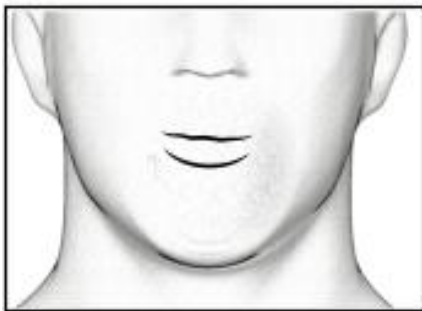
➤ **A SMILE A DAY** – best performed in front of a mirror

Method:

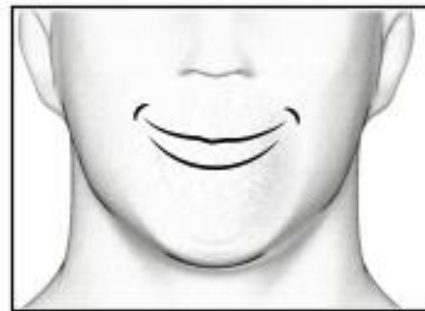
1. Quite simply, smile! Keeping your mouth shut, form an exaggerated smile.
2. Hold the smile for 5 seconds. Repeat 10 times.

Purpose – to tighten and strengthen your neck muscles.

A SMILE A DAY



START



HOLD FOR 5 SECONDS

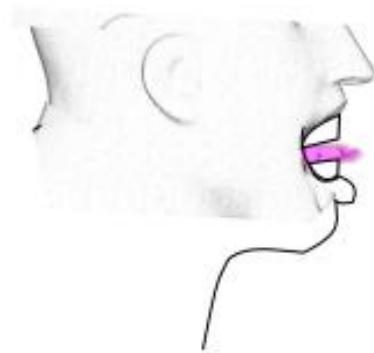
➤ **TONGUE CLENCH** – best performed in front of a mirror

Method:

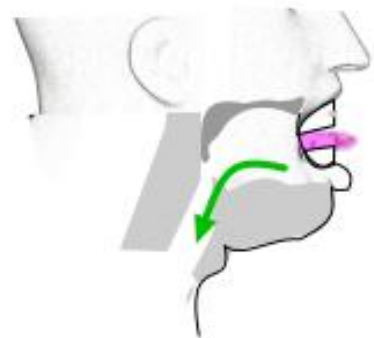
1. Place your tongue between your teeth.
2. Gently bite down and hold the tongue in position.
3. Now swallow 5 times in a row.
4. Repeat 5 times.
5. Repeat 4 times a day.

Purpose – to strengthen and exercise the muscles at the back of your throat.

TONGUE CLENCH



OPEN MOUTH
AND BITE TONGUE



SWALLOW 5 TIMES

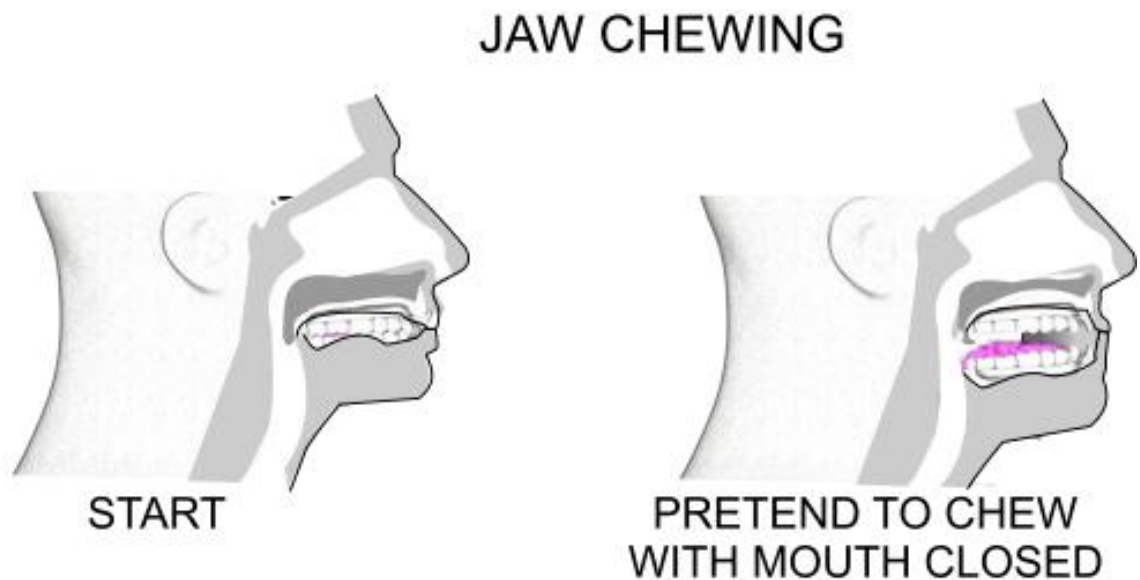
EXERCISES FOR THE JAW

➤ **CHEWING** – best performed in front of a mirror

Method:

1. Close your mouth and pretend that you're chewing a piece of gum.
2. Ensure that your molars are positioned slightly apart during chewing; then let them lightly touch together again.
3. While you chew make an “mmm” sound. The sound will enable your throat to open.
Check that your mouth remains closed in the mirror.

Purpose – to strengthen and tone the muscles in the back of your throat and to strengthen the jaw muscles.



➤ **LIP WORKOUT** – best performed in front of a mirror

Method:

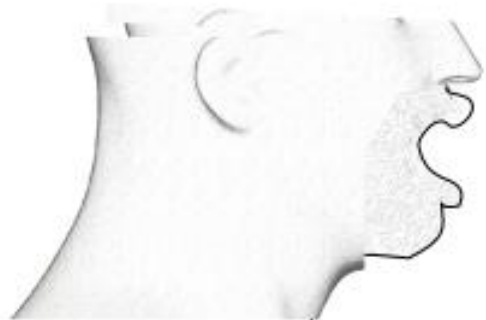
1. Pucker your lips together as though you're about to kiss.
2. Hold the position for 10 seconds.
3. Repeat 5 times.
4. Then do the same but with your mouth wide open. Don't let your lips go together.
5. Hold the pucker for 5 seconds.
6. Repeat 5 times.

Purpose – to exercise, tone and strengthen the jaw and neck muscles.

LIP WORKOUT



**PUCKER WITH
MOUTH CLOSED**



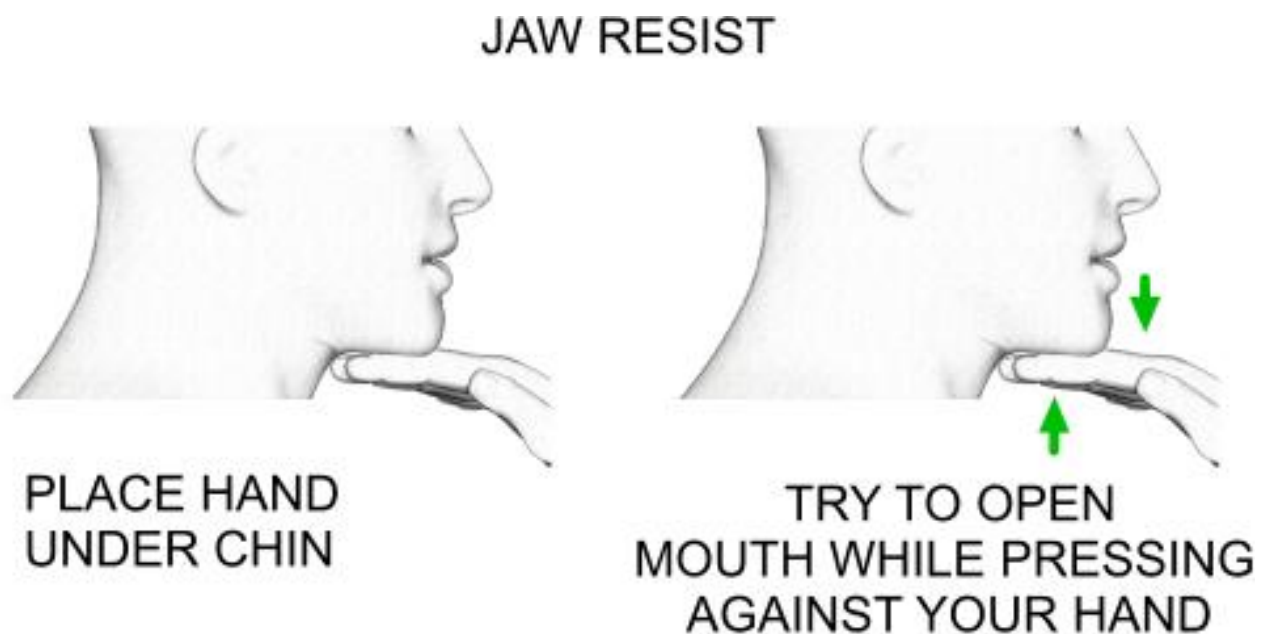
**PUCKER WITH
MOUTH OPEN**

➤ JAW RESIST

Method:

1. Place a hand underneath your chin.
2. Attempt to open your mouth. Your hand needs to push against your lower jaw. The hand's trying to stop your mouth opening.
3. Repeat 10 times.
4. Repeat 2-4 times daily.

Purpose – to strengthen and exercise the jaw muscles.



Will I Have to Do These Exercises Forever?

The most common question to be asked is the one above. “Will I have to do these exercises forever?” The answer seems to be mixed. Some people think you shouldn’t stop them. Some think you can do the exercises on and off. I asked some Obstructive Sleep Apnea sufferers their opinion on this-and living with their apnea.

Case Studies

◆ Nick...aged 43...Lincolnshire, UK

◆ Obstructive Sleep Apnea patient for 4 years

“My GP recommended a CPAP machine to begin with, I hated it and couldn’t sleep with it on. It felt very restricting. I tried various other methods, even yoga! Then a friend mentioned they’d heard about a study regarding Oropharyngeal exercises. Desperate to be rid of the CPAP machine I went via my GP to a speech language pathologist and enquired about the exercises.

I started a routine of 8 exercises” (not called the same as the ones listed-but the same principle). We’ve called them the same in the case studies. Then they can be easily recognized.

Exercises used by Nick:

- Tongue Clench
- Finger Cheek
- Going Up
- Chewing
- Vowel Pronunciation
- Tongue Press
- Tongue Brushing
- Ceiling Swallow



“I was instructed to do these 4 times daily” Nick continued “and in the initial week I noticed a difference. I continued with them each day. Then I cut them down to twice daily. Now I do the routine just once a day. Personally I wouldn’t stop them completely for fear of my Obstructive Sleep Apnea returning to the same level that it was prior to the exercises. I do still have the odd bad night and when that happens I simply up the routine for the following few days.”

I asked Nick if he had any advice for other Obstructive Sleep Apnea sufferers who are considering the exercises. He replied, “Don’t hesitate, just go to your GP and ask to be recommended to a speech language pathologist. Make it clear that you’re interested in trying some Oropharyngeal exercises. Stick to your guns as believe me you don’t wish to wear a CPAP mask every night of your life. It takes self-discipline at times to adhere to the exercises daily, it’s so worth the effort though. Trust me, you’ll be so glad that you started them within about a week.”

◆ Colin....aged 56....Birmingham, UK

◆ Obstructive Sleep Apnea patient for 8 years

“I would never give my Oropharyngeal exercise routine up, even if you offered me money! They’ve transformed my life. I complete a set of 6 exercises, mainly tongue based, twice



daily. I have reduced my Obstructive Sleep Apnea attacks by half since doing them. Whether it will go completely one day, who knows. If I stop the exercises there’s no chance of it going away, so no, in my own opinion, don’t stop them once you start.”

Exercises used by Colin:

- Chewing
- Tongue Brushing
- Tongue Slide
- The Tiger Yell
- Tongue Press
- Vowel Pronunciation

“I was very sceptical initially-but then I am quite a reserved person. New things scare me to be honest! My GP suggested the Oropharyngeal exercises after he’d heard about them on a news report; personally I think I was his guinea pig. He needed someone to experiment with the exercise method-that someone was me! Well, if I was his guinea pig then what a happy one I am. If you’re the same and a bit doubtful, don’t be. Easy to say I know, but I’ve been standing exactly where you are now my friend and in a turmoil of what to do for the best.”

Colin continues “What have you to lose? Some of your time, but you’ve been losing precious sleep all of this time. You lose sleep and you lose your good health, they go hand in hand with one another. When I started the exercises I felt so self-conscious and pretty daft, my

wife did them with me for encouragement; then we both felt daft together! If you're in two minds and not sure if the exercises are for you, at least try them. Give them a go, even for a few days. They do work and that's from someone who thought simple exercises-and making daft faces, could make any difference at all."

◆ Linda....aged 35....Yorkshire, UK

◆ Obstructive Sleep Apnea patient for 3 years

"My husband complained about me snoring each night. I was so fed up with his constant nagging that I went to my GP who suggested it might be Obstructive Sleep Apnea. She recommended I see a speech language pathologist. The pathologist literally transformed my life so much I'd marry him tomorrow! I follow a programme of 6 Oropharyngeal exercises, twice daily. The ones I do are a mixture to strengthen my throat, tongue and neck muscles."

Exercises used by Linda:

- Reach for the Ceiling
- Ceiling Swallow
- Jaw Resist
- Tongue Clench
- Finger Cheek
- The Tiger Yell

"My Obstructive Sleep Apnea has been reduced by roughly 60% since starting the exercises." Linda says "My husband has, at last, shut up about my snoring! A tip from me if you're going to start some Oropharyngeal exercises: gargle with some lukewarm water for a minute prior to exercising. I find this helps to relax my throat. I would never stop my exercise routine, my life's so very different now. I am more awake and full of energy for my daughter, apparently now I'm "the best mummy in the world" before I was the "grumpiest."

I never wished to follow the CPAP route as the thought frightened me, to sleep with a mask on must just feel so restricted. I was willing to try and alternative to that. I would strongly advise trying the Oropharyngeal exercises, it's worth a shot surely, if they don't work then what have you lost really, other than your time. I've not heard one person say that they haven't worked to some degree for them."





◆ Mike....aged 67....Kent, UK

◆ Obstructive Sleep Apnea patient for 12 years

“My Obstructive Sleep Apnea was destroying my life and my marriage. My wife couldn’t sleep and we ended up in separate bedrooms. The snoring was an issue true enough-but she couldn’t sleep next to me out of fear. She honestly thought I was going to pass away in my sleep and hated the CPAP machine as much as I did.

My GP suggested seeing a speech language pathologist. Well, I have to admit I had my reservations but I’m so glad I went. I would never stop my Oropharyngeal exercises. I started doing them 4 times daily and now do them twice daily. I do a series of 8 exercises.”

Exercises used by Mike:

- Chewing
- Finger Cheek
- The ‘A’ Vowel
- Tongue Press
- Blowing
- Reach for the Ceiling
- Jaw Resist
- The Tiger Yell

Mike continues “My snoring has all but stopped now and I’m not gasping for breath as I was, my wife and I now share the same bed once again. The CPAP machine has become redundant and now lives in the back of our wardrobe! My advice to anyone, young or old, no matter how long you’ve been a sufferer for, go along to your GP and enquire about seeing a speech language pathologist. The Oropharyngeal exercises are such a natural ‘treatment’ compared to the CPAP mask, they are well worth the effort. My apnea has been reduced by approximately 70-80% since completing the exercises regularly.”

So as you can tell from the case studies, people do have success with the exercises. I asked a speech language pathologist his view. “Many Obstructive Sleep Apnea patients will not stop their Oropharyngeal exercise routine for fear of the apnea returning at a higher level. It’s really a personal choice. Many will start their exercise routine 4 times daily and when a result’s noticed ease off to twice or even once daily. I know a few that do the exercises on alternate days. If they experience an apnea attack they’ll up the routine once again.

I think it's a case of what works for the individual in this case. There's no right or wrong. I would however suggest that the exercises aren't stopped completely, reduced yes-but not entirely stopped. If they're working then why would you wish to stop something that's having a positive effect?"

Other Behaviours That Can Help Reduce Your Obstructive Sleep Apnea

Smoking/Drinking

We don't require a new flash to tell us that smoking isn't good for us. It's been proven that smoking increases the risk of sleep apnea in general. Smoking creates a blockage in the upper airway. Smoking can also irritate the respiratory system. It causes inflammation in the throat. Fluid retention occurs in the throat and upper airway.

Drinking alcohol prior to bedtime can increase the risk of Obstructive Sleep Apnea. Alcohol will suppress the nervous system and relax the airway muscles. When the muscles are relaxed they will collapse together, a blockage will be caused.

Losing Weight/Bedtime Tips

Many Obstructive Sleep Apnea patients are overweight. Losing weight will not only make the person feel healthier and better about themselves but also assist with their apnea. Overweight people have excess flabby tissue around the throat area. When the person sleeps the airway muscles relax. The extra weight in the flabby tissue pushes onto the airway causing a blockage.

Some bedtime tips to try:

- Sew a tennis ball into the back of your pyjamas. The ball will stop you rolling onto your back. Sleeping on your side is a better position. Gravity works against you when you're on your back. Your muscles collapse together. Your tongue falls back and obstructs your airway.
- Elevate the end of the bed that your head goes. Lying completely flat only helps your airway to become blocked.
- Try to keep a regular sleeping pattern. Adhering to a sleep routine helps your body relax. You'll naturally become tired at the same time each night.
- Avoid eating heavy meals and drinking caffeine, within 2 hours of your bedtime.
- Try opening your nasal airway with a saline spray-or breathing strips.

Daily Tasks to Keep Your Obstructive Sleep Apnea at a Low Level

Some daily tasks to try:

- When you eat, chew on both sides of your mouth. The term 'bilateral chewing' means using both sides. Keep your tongue on your palate. Keep your mouth closed when you're chewing.

The concept is to reinforce the way your jaw and tongue function together.

- Now here's a weird daily activity for you: playing the Didgeridoo! A 2005 study carried out in Switzerland showed that playing the wind instrument daily for 25 minutes reduced moderate Obstructive Sleep Apnea.

After 4 months of daily playing, apnea occurrences were reduced even more. Thoughts are that the upper airway muscles have been exercised, toned and strengthened.

Due to being stronger the upper airways are less likely to collapse during sleep. Just ensure you check with your neighbours prior to learning the Didgeridoo!

- Using a saline solution (like the one pictured below) will help to open the nasal airway. Used daily - or twice daily - it will assist mouth breathers to breathe easier via their nose.





- Try taping your mouth shut (as all the wives and husbands of snorers cheer everywhere!). Not with harsh tape, but with a “micropore” tape. It’s a lightweight, breathable paper tape. Hypoallergenic (so it’s also good for sensitive skin) micropore tape works on damp skin and has a secure adhesive action. Using this tape can teach



you to keep your mouth closed. The idea is to train you how to nose breathe, and to stop breathing through mouth.

- Another way to try and teach yourself how to mouth breathe is this: spread your tongue as much as you can. Make it broad and flat. Relax your jaw, making a small gap between your teeth. Push your tongue slightly forward. Your tongue will naturally make a ‘plug’ around the roof of your mouth and the rim of your upper gum and teeth. The tip of your tongue should just be showing, between your teeth. Attempt this during the day initially. When you do it breathe out quite hard via your nose. You’ll note how your tongue becomes a very soft plug.
- Attempt to keep your tongue against your hard palate (roof of your mouth) when breathing. This is the normal position. Many Obstructive Sleep Apnea patients place their tongues in a downward position. When the tongue is down, the space between the soft palate and the tongue is reduced. A smaller space during sleep can encourage snoring and sleep apnea. By doing this during the day, the position should improve. The muscles should strengthen, making them less floppy at night. The tongue muscles will strengthen due to being in an upward position.

Do I Have to Do All the Exercises, Or Can I Choose the Ones I Like?

The simple answer to this question is no, not all the Oropharyngeal exercises need to be completed. You can choose the ones you like. The ones you select have to present you with an assortment. It’s vital that you’re working all the relevant muscles (tongue, throat, neck etc, etc).

It’s generally advised that a good routine contains approximately 8-10 exercises. When you choose from the selection, think about each area of your mouth/throat. Opt for a good warm-up exercise and then go on from there. The exercises you should consider adding to your routine are:

- 1 or 2 from the jaw section....as these are all simple. They’re perfect for warming up the mouth and throat areas.

- 3 or 4 from the tongue section....as the tongue is the main focus for many Obstructive Sleep Apnea sufferers. If the tongue isn't the cause (i.e. the tongue being too large), it usually at least contributes to obstructive sleep apnea, by falling back during sleep and blocking the airway. The tongue is an important muscle to strengthen and exercise.
- 1 from the soft palate section....you only need 1 from this group. Many of the other exercises throughout the other sections also work the soft palate.
- 4 or 5 from the throat/neck section....whatever your main cause of Obstructive Sleep Apnea is, the throat/neck region will play a part. All the muscles in the area of the throat and neck need to be strong.

Of course, you also have the option of alternating exercises. Just because you start with a certain routine doesn't mean you can't change it. Still adhere to a mixture from the 4 groups:

- Tongue
- Soft Palate
- Throat/Neck
- Jaw

Just change then around slightly if you wish. This is a good idea as then your routine won't become tedious. It's simply all about finding that perfect balance of exercises.

Summary and Words of Thanks

Well, here we are at the end of the guide!. Hopefully you're jumping for as much joy as the people pictured, because you've found the information to be helpful – and you're going to use it to overcome your sleep apnea!

Obstructive Sleep Apnea doesn't have to be a life sentence. It can be controlled, and more importantly, controlled by you.

Many people that are diagnosed with OSA are initially informed about the CPAP mask. This fills most with dread. The thought of wearing a restrictive mask while sleeping doesn't make many people feel elated!

The Oropharyngeal exercises offer an alternative 'treatment' and a chance for hope. You can conclude from the case studies that the exercises do work. The level of success can vary from person to person - but the general consensus is a positive one.

Regardless of whether you've just discovered you're an Obstructive Sleep Apnea patient, or if you're a long time sufferer, Oropharyngeal exercises can be commenced at any stage. They're simple to complete and take minimal effort and time. A routine can be easily tailored to fit around your busy day.

Obstructive Sleep Apnea is just as daunting for those living with you - and scary. Many people fear for their partner's life, due to them gasping for air. The Oropharyngeal exercises in this guide are a small solution to a potentially big problem.

I hope this guide has offered you a ray of hope, and given you insight into the world of Oropharyngeal exercises.

One final piece of advice from me before I go: don't face your Obstructive Sleep Apnea alone. If you feel you have nobody then call a support group. Speak to your GP or health care practitioner. Use the resources in the Annex of this guide to reach out to professionals or others in your situation. Remember: you're not alone. There are many others facing the problems associated with Obstructive Sleep Apnea on a daily basis.

Finally, I would like to thank the following people who participated in the creation of this guide:

- Dr. Wright, the speech language pathologist who carried out the oropharyngeal exercises study described in this guide.
- Ms. Danielle Barreto e Silva Pitta, Clinical Phonoaudiology Professor at the Sleep Laboratory of the University Hospital of Brasilia University, and Ms. Sabrina Cukier Blaj, Sleep Laboratory, University of Sao Paulo Medical School, for their feedback on this guide.
- Nick, Colin, Linda, and Mike, the four people involved in the case studies.
- The speech language pathologists in the US and UK who have permitted me to disclose their email addresses (which you'll find in the Annex to this guide).

Last but by no means least, a huge thank you to you (the reader) for taking the time to read this guide!

ANNEX A- Speech Language Clinics

USA Speech Language Clinics

Joy Hesse is the speech language pathologist at:

ENT Clinic of Iowa

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<http://www.entclinicofiowa.com/index.html>

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Suite 375,

Carmel, IN, 46032

Phone: 317.926.1056

<http://www.centadocs.com/index.htm>

There are several speech language pathologists at:

Division of Speech Pathology

203 Lothrop Street,

Pittsburgh, PA, 15213

Phone: 412.647.6439

www.upmc.com/Services/Otolaryngology/ServicesandSpecialties/SpeechLanguagePathology/Pages/ContactUs.aspx

Some of the pathologists include: Sara Byers, Danielle Columbe and James L.Coyle

UK Speech Language Clinics

Speech and Language Therapy

Level 7, Derriford Hospital,

Plymouth,

PL6 8DH,

Phone: 0845 155 8084

<http://www.plymouthhospitals.nhs.uk/ourservices/healthcareprofessionalsguide/Pages/RespiratoryMedicine.aspx>

Kathryn Head

Speech and Language Therapist,

Abergavenny, Wales,

Phone: 01873 851716

E-mail: kathryn@speech.org.uk, <http://www.speech.org.uk/index.html>

ANNEX B - Speech Language Pathologists

The following individuals agreed to have their email address included in this guide, and are fully trained speech language pathologist/therapists:

USA Based

Peggy Arnold
E-mail: peggyarnold@msn.com

Kimberly Cali
E-mail: kimcali@hotmail.com

Dan McLellan
E-mail: danmclellan@msn.com

Holly Monarski
E-mail: flatironstherapy@mho.com

Christine Livingston
E-mail: livingstons1@juno.com

Lowry Speech Therapy (Debra Fenton)
E-mail: info@lowryspeechtherapy.com

Brian Heskin
E-mail: bheskin@mywdo.com

Dr Patricia H.Killian
E-mail: pkillian@inerfold.com

UK Based

Ms Emma Richards
E-mail: emmarichards@tiscali.co.uk

Mrs Claire Otton
E-mail: info@infiniatraining.co.uk

Mr Robin Simpson-Green
E-mail: robin.s.green@hotmail.co.uk

Miss Gilly White-Cooper
E-mail: gillywc@yahoo.co.uk

Ms Rachel Kennedy
E-mail: reception@thespeechclinic.co.uk

Mr John Tuffney
E-mail: goodcomgroup@blueyonder.co.uk

Dr Morwenna Collins
E-mail: morwenna.j.collins@talk21.com

ANNEX C - Obstructive Sleep Apnea Support Groups

Sometimes the biggest help can come from the smallest actions. Simply chatting to someone who has experienced the same problems can lift a weight from your shoulders. Support groups are terrific places to visit. You feel instantly at home, in the company of others like yourself.

We all need a friendly shoulder to lean on from time to time. That's exactly what support groups are there for.

UK Sleep Apnea Support Groups

East Kent Sleep Apnea Support Group,
Ancona,
Belcaire Close, Lympe, CT21 4JR.
Phone: 01303 269830

Derriford Sleep Apnea Support Group,
4 The Spinney,
Ivybridge, PL2 9TU.
Phone: 07880 706803

Silent Nights

47 Chapel Street,
Portmadog,
Gwynedd, LL49 9DN.

Bristol Sleep Unit Patients Association,
Tanglewood West, Hay Road,

Wrighton, North Somerset,
BS40 5NR.
Phone: 01934 862502

USA Sleep Apnea Support Groups

Awake and Aware Sleep Apnea Support Group,
Carle Foundation Hospital,
611 W.Park Street, Urbana, IL, 61801
Phone: 217.383.3198
E-mail: sleep.lab@Carle.com

A.W.A.K.E. Support Group,
Parrish Healthcare Centre,
Port St. John,
5005 Port St. John Parkway.
Phone: 321.268.6408
Sleep Apnea Support Group,
Fremont Centre,
3200 Kearney Street,
Fremont, CA, 94538
Phone: 510.490.1222

[Sleep Apnea Support Group - Daily Strength](http://www.dailystrength.org/c/Sleep-Apnea/support-group)
<http://www.dailystrength.org/c/Sleep-Apnea/support-group>

An online forum support group-with most members in the USA. Perfect if you don't wish to 'face' other people and chat.

[Sleep Apnea Support Forum Index](http://apneasupport.org/)
<http://apneasupport.org/>

An online forum support group. Live chat options available most evenings.