

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

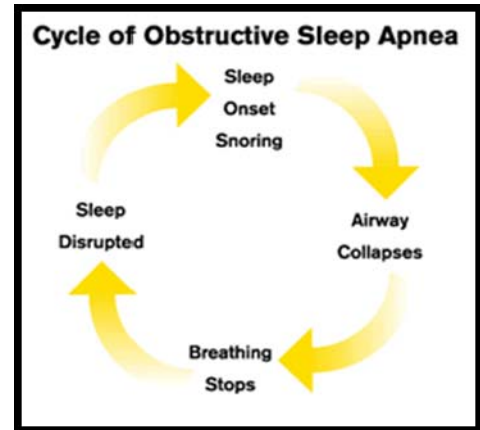
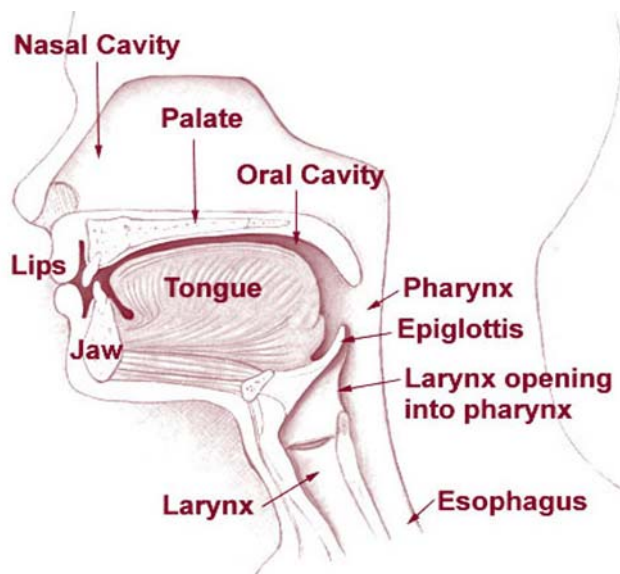
▣ Smokers

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.

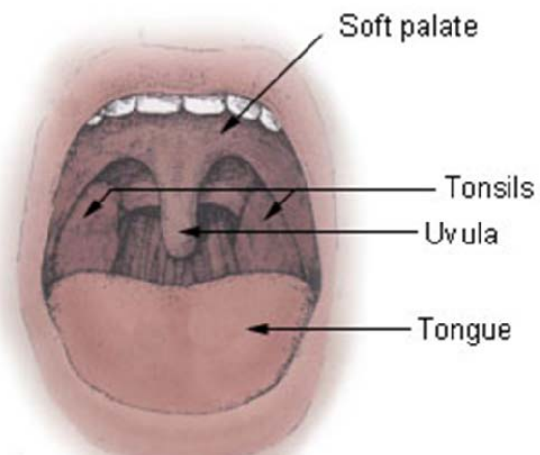
Causes and Risk Factors

- **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.



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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.



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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!



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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.

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](#)

Specific Exercises for Specific Causes of Obstructive Sleep Apnea

Once you've identified the cause of your obstructive sleep apnea, 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."

The following pages contain three oropharyngeal exercises that have been performed in studies. They've all been proven to reduce Obstructive Sleep Apnea.

These sample exercises will give you a flavor of the exercises that are available in [The Sleep Apnea Exercise Program](#). Turn the page to get started!

And when you're ready to jump into The Sleep Apnea Exercise Program, please [click here](#) to learn how you to cure your sleep apnea for good.

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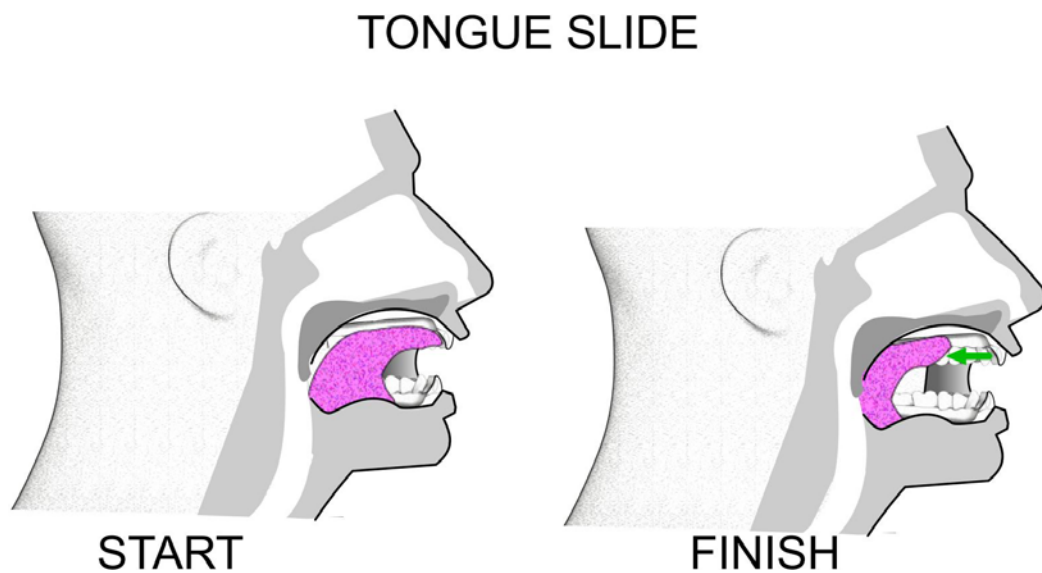
EXERCISES FOR THE TONGUE

➤ 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.



EXERCISES FOR THE SOFT PALATE

➤ SOFT PALATE BLOWING

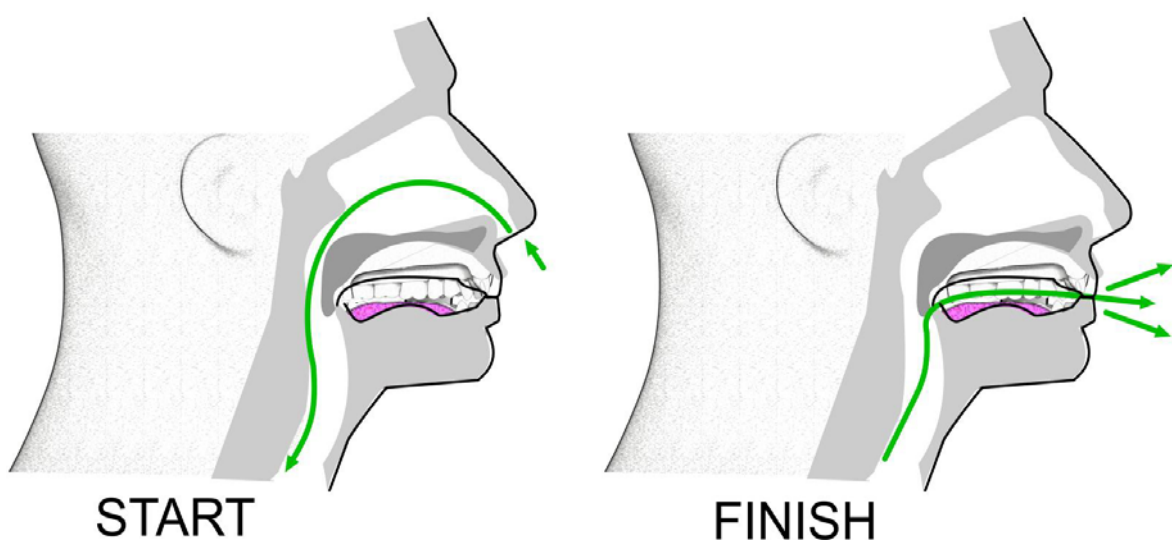
Method:

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



EXERCISES FOR THE THROAT & NECK

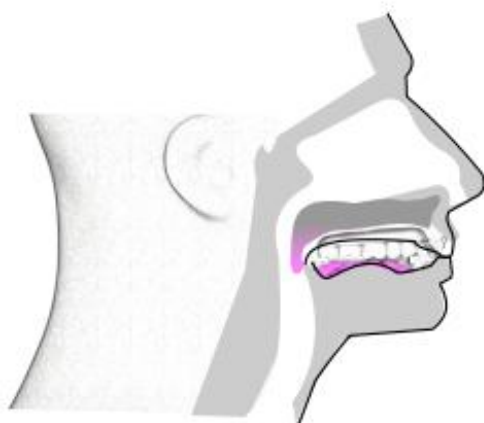
- **THE TIGER YELL** (no actual yelling required! The action of opening your mouth wide mimics a tiger going to yell/roar). Best performed in front of a mirror.

Method:

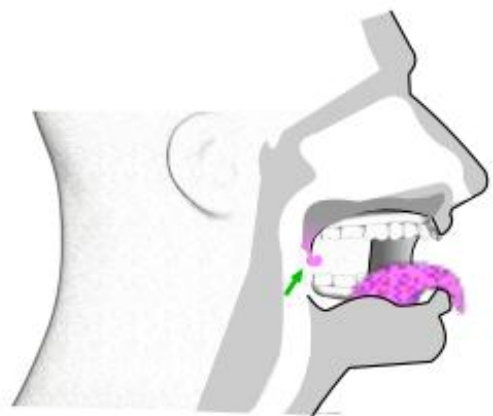
1. Open your mouth as wide as possible, and stick your tongue out in a downward position. Your tongue needs to be stuck out as far as it can be.
2. The uvula, the small fleshy piece in the back of your throat, needs to be lifted upwards as you stick your tongue out.
3. The mirror is used to ensure that 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