PROBLEM SNORING
What is it?
Signs and symptoms
Social and health consequences
Current snoring treatments

THE SIMPLE NEW SOLUTION
What is aveoTSD and how does it work?
Benefits of the aveoTSD
aveoTSD Health Professional Patient Sizing Kit

Dentists
800-334-1979
glidewelldental.com

Physicians
888-274-2485
getaveo.com
The aveoTSD is recommended for problem snoring because:

- It is simple to use
- It is indicated for patients without teeth
- It can be used for patients with periodontally compromised dentition
- It is ideal for patients with Temporomandibular Joint Dysfunction (TMD/TMJ)
- It holds the tongue forward during sleep to prevent it from obstructing the airway
- It works by increasing the three-dimensional airway space
Snoring is caused by a narrowing of the upper airway during sleep due to large tonsils, a soft palate, a long uvula or excessive flabby tissue at the throat. All of these areas relax during sleep.

In other cases, nasal congestion from allergies or deformities of the cartilage between the two sides of the nose can contribute to narrowing of the airway.

However, the most common cause of narrowing of the upper airway is a tongue muscle that becomes too relaxed during sleep. When relaxed, it gets sucked back into the throat with each breath taken.

Because snoring occurs when air travels faster through a narrow tube than through a broad one, this rapidly moving air causes the relaxed soft tissues of the throat to vibrate. It is this vibration that creates the sound of snoring.

By keeping the airway open, air travels more slowly, reducing throat vibrations and diminishing or eliminating snoring. Holding the tongue forward is one of the most effective ways of keeping the airway open during sleep.
More than 60 percent of the adult population suffers from problem snoring. This percentage increases each year in people aged 50 and older, as tissues in the upper airway lose elasticity and tend to vibrate more during breathing, increasing the incidence of snoring. When the airway is reduced during sleep, the tongue is more easily sucked into the back of the throat and obstructs the airway.

- Sixty percent of men and 40 percent of women over the age of 40 are habitual snorers.
- Snoring is common in children between the age of 2 to 7, particularly if they have a chest infection or enlarged tonsils.
- Snoring is also commonly experienced by women during the later stages of pregnancy.
Common causes of problem snoring

- Supine body position *(lying face up)*
- Large tonsils, soft palate or long uvula
- A tongue muscle that becomes too relaxed during sleep
- Being overweight: A recent study showed that a 10 percent weight gain may lead to a six-fold increase in the likelihood of developing problem snoring
- Nasal congestion from colds, allergies or deformities of cartilage in the nose
- Smoking, alcohol or medication *(which cause drowsiness)*
- Hypothyroidism: Due to lack of thyroid hormone, sufferers tend to have a larger tongue, as well as increased fat deposition in the tissues of the upper airway
- Menopause: Postmenopausal women were shown to have more than twice the risk of problem snoring
Social and health consequences of snoring

- Snoring is number three on the list of reasons for divorce in married couples *(only infidelity and finances are blamed before snoring)*
- Snoring is distressing for sleep partners
- Sleep deprivation has a negative impact on well-being and quality of life
- Snoring is an embarrassment when traveling with others
- Snorers experience tiredness, morning headaches, dry mouth, relationship difficulties, lower blood oxygen levels and other associated consequences
- New research has shown that loud snoring poses serious health risks
Disorders linked to problem snoring

Snoring reduces deep, quality restorative sleep. This results in extreme tiredness throughout the following day, which affects personal, intellectual and physical performance and negatively impacts quality of life.

- Gasping, choking, irregular or stopped breathing during sleep
- High blood pressure
- Diabetes
- Depression
- Morning headaches
- Extreme daytime sleepiness
- Strokes
- Memory problems
- Reflux and heartburn
- Nocturia
- Insomnia
- Impotence
Conducting an aveoTSD® consultation

The purpose of a patient consultation is to better understand the patient’s medical condition. This information allows you to identify the severity of the patient’s problem snoring and to determine if the aveoTSD is a suitable treatment option.

Patients who continue to experience negative health conditions after using the aveoTSD should be referred to a sleep specialist. The patient’s problem snoring condition may require a more intensive treatment, such as CPAP.

Many patients, especially females, may be embarrassed to talk about the symptoms. Remind these patients that 40 percent of adult women snore.

Less than 5 percent of patients will not be suitable candidates for the aveoTSD. These individuals are easily determined by asking the patient to stick out his or her tongue:

1. If the patient’s tongue does not extend beyond the lips, aveoTSD will not be a suitable treatment option.

2. If the patient cannot stick out the tongue beyond his or her teeth, he or she may be tongue-tied. This can be corrected by the snipping of the lingual frenulum under the tongue, and will allow use of the aveoTSD.
The aveoTSD is a simple and noninvasive anti-snoring medical device. It provides an easy solution for the treatment of problem snoring.

Simple, intuitive fit requires no specialist fitting.

The aveoTSD improves quality of life by improving sleeping habits.

Available in three sizes: small, medium and large. The medium size fits 95 percent of patients.

- **Specifications**
  - Material: 0.4 mm thick medical-grade silicone
  - Length: 54 mm
  - Height: 48 mm
  - Weight: 0.42 oz
  - Warranty: 6 months

- **Quick Facts**
  - Fits to the end of the tongue using gentle suction
  - Intuitive fit requires no specialist fitting
  - One size fits 95 percent of patients
  - Requires no impressions or adjustments
  - Use the aveoTSD Health Professional Patient Sizing Kit to help patients achieve a comfortable fit (page 12)
How aveoTSD® works

The aveoTSD opens the airway more than any other oral appliance on a cross-sectional area basis.

In this image, the tongue falls into the back of the airway as a person sleeps. This blocks the airway, leading to snoring.

This image shows the aveoTSD holding the tongue gently forward, preventing it from falling back and obstructing the airway. Note how the airway is now open and clear. This stops or greatly reduces snoring.
The medium-sized aveoTSD fits 95 percent of patients. However, for the most accurate fit, order the aveoTSD Health Professional Patient Sizing Kit.

The kit includes:

- One small, one medium and one large aveoTSD anti-snoring aid
- One 4 mm and one 7 mm clip-on Uni-Spacer for extra titration
- One blue tray that can be autoclaved with individual pieces for reuse

Utilize the aveoTSD Health Professional Patient Sizing Kit to help patients achieve a comfortable fit for clinical efficacy. The kit can be sterilized between patients using autoclave sterilization. The silicone components can be sterilized in the kit tray, or by being placed directly into the autoclave. The aveoTSD medical silicone will change appearance after the sterilization process where the parts will appear opaque; however, the material will return to transparency.
1. Preparing to fit the device
The medium-sized aveoTSD fits 95 percent of patients. Before use, rinse the aveoTSD under warm water. This helps ease the device onto the patient’s tongue. Make sure the V-notch in the aveoTSD is facing down, to fit around the patient’s lingual frenulum. In some extreme cases, a patient may require more room for the frenulum. The V-notch can be modified to provide this room.

2. Attaching the device to tongue
The device attaches through negative suction: Advise the patient to push his or her tongue gently into the aveoTSD, until it touches the sides of the device. Gently squeeze the upper and lower ends of the bulb between the forefinger and thumb. By using a gentle repeated pumping action, the tongue will be drawn gently into the aveoTSD. Draw the tongue into the aveoTSD device until it is firmly attached; make sure it’s not too tight or too loose.
3. Recommend practice

To achieve optimum results:
Help the patient practice getting used to the best fit (correct suction level) to ensure the aveoTSD stays on throughout the night. This will help the patient become accustomed to having the device attached to his or her tongue. To achieve correct fit, it is important for the patient to be absolutely relaxed when wearing the device.

Troubleshooting

Excessive salivation is common during the initial stages. This subsides over time. If the patient finds this to be a problem, recommend placing a towel over the pillow.

If the patient continues to snore or the airway is still obstructed, there may be a need for the tongue to protrude farther. To achieve this, the patient may require a Uni-Spacer for extra titration. If after using the aveoTSD and Uni-Spacer the patient is unable to get a good fit, a different size device may be required. More than 95 percent of patients will fit the medium-sized aveoTSD. However, less than 5 percent of patients will require a small or large aveoTSD.

Checking tongue-tied status:
Ask the patient to stick out his or her tongue to verify it is free-moving and to ensure the aveoTSD will be suitable.

A small percentage of people cannot stick out their tongues beyond their lips. These are highly exceptional but very obvious cases. In such cases, the aveoTSD will not be suitable unless this is first resolved.
Detailed **User Instructions** are included with each aveoTSD anti-snoring aid. Encourage the patient to **READ** them. These instructions cover all areas of use and care so that the potential benefits of the device are met to treat problem snoring.

Advise the patient to run the aveoTSD under hot water. This softens the silicone and makes it slightly easier to position onto the tongue.

It is advised to practice wearing the aveoTSD while watching TV or reading a book. Getting used to the sensation of the device on the tongue will ensure it is comfortable during sleep. Through routine **PRACTICE**, patients will find a position and suction level that will gently hold the tongue forward and prevent it from falling into and obstructing the airway.

Most people will experience hypersalivation during the first week of use. Urge them to continue use, as this side effect will eventually subside. Remind your patients that a quality sleep equals better health!
Ankyloglossia, commonly known as tongue-tied, is a congenital oral anomaly that may decrease mobility of the tongue tip and is caused by an unusually short, thick lingual frenulum, a membrane connecting the underside of the tongue to the floor of the mouth.

The removal of the lingual frenulum under the tongue can be accomplished with either frenectomy or frenuloplasty. This is used to treat a tongue-tied patient. Immediately after this minor oral surgery, the tongue can often dramatically extend out of the mouth, which it could not do before. This can help improve speech, swallowing and allow use of the aveoTSD.

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**Cannot use aveoTSD**

- **Is device too big?**
  - **Cannot fit tongue into aveoTSD**
  - **Can you stick tongue out between lips?**
    - **No**
    - Patient may be tongue-tied,* which is quite common.
    - A simple procedure** can free the tongue.
    - Advise patient of procedure, which can be performed by a dentist or physician.
  - **Yes**
  - **Is device too small?**
    - **Tongue does not physically fit into device**
    - **No**
      - Advise a new size will be supplied.
      - Confirm if device was too big or small.
      - Uni-Spacer may be indicated for extra titration.

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**Can use aveoTSD, but…**

- **Falls off during sleep**
  - **Size issues**
    - Too big
    - Too small
  - **Discomfort & sensation**
    - Too much suction
    - Too little suction
  - If tongue is irritated, stop use and check to see if it’s due to a size, suction or notch issue.

- **Increased saliva**
  - Most patients experience this, it is automatic when object is placed between the jaws.
  - Continue use of the device; salivation will stop with time. Some people place a towel on their pillow for the first few nights of use.

- **Cannot swallow with device**
  - The tongue is too stretched; try moving tongue out of device to give tongue more flexibility.
  - With the initial use and increased salivating, this exasperates the difficulty swallowing.
  - As the salivating reduces, the difficulty swallowing will disappear. With use, the patient will learn to swallow with the device in mouth.

- **Causes gagging sensation**
  - Some people are sensitive to objects placed in the mouth.
  - Encourage to keep practicing; the gagging feeling does go, especially once salivation reduces.

- **Physical changes/odor to aveoTSD**
  - How long has the user been using the device?
  - Does user have daily cleaning regime in place?
  - Has a chemical been used to clean the device?
  - Does the user suffer from reflux/GERD?
  - Does the user have any dental/periodontal problems?

- **Other issues**
  - If device has been used for less than six months and device has changed appearance.
  - Advise patient to see his or her dentist or physician.

- **Increased saliva**
  - Too much suction: move tongue farther out of device or reduce the level of suction with bulb. Too little suction: move tongue farther into device or increase suction with bulb.

- **Physical changes/odor to aveoTSD**
  - Advise new size will be sent.
  - Confirm too big or too small. Decide if Uni-Spacer is needed.

**Note:**
- Discomfort, salivation, gagging will reduce with practice and use.
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Cleaning: The aveoTSD should be rinsed under hot water daily. Instruct the patient to wash the aveoTSD once a week, giving it a thorough cleaning using denture cleaning solution. Using mouthwash to clean or store the device is not recommended because the liquid may contain alcohol that will damage the medical silicone. The aveoTSD can be sterilized by cold sterilant or clinical procedures such as autoclave.

Discoloration: Patients who suffer from GERD may find that the aveoTSD will discolor. This is due to the acidity of the bile that comes from the stomach into the mouth during a nighttime reflux episode. This acidity may discolor the aveoTSD silicone.

Every person’s saliva chemistry is different. Human saliva can vary in pH level from 4.5 pH to 8 pH (which is a huge range); healthy saliva has a pH of 7.4. The medical silicone tends to react to saliva with a low pH level. The low pH saliva may cause the silicone to discolor over time. Some patients may find their device discolors after only a few months, even with a good cleaning regime in place. This is an indication that the individual’s saliva has a low pH level.

If a new device discolors badly after only a few months, it is an indication that the patient’s saliva is more acidic than it should be. Advise the patient to have a full health check, as acidic saliva is an indication of poor health. Research has shown a strong link between acidic saliva and possible cancer, so an aveoTSD that does not last long could be a diagnostic that not all is well with the patient’s body chemistry.

Smell: A device that smells after only a few months of use, even with a good cleaning regime in place, could indicate the patient has periodontal disease. The patient should be advised to visit his or her dentist for a routine dental check-up.
Benefits of aveoTSD®

• Simple to use.

• Intuitive fit does not require specialist fitting.

• Does not fit to the teeth or jaws like traditional mandibular advancement devices.

• It can be given to the patient on the same day they agree to snoring treatment because it requires no impressions, no adjustments and has no moving parts.

• Has the potential to treat more people with problem snoring than any other form of treatment because of its ease of use, affordability and efficacy.

• Comes with a six-month replacement warranty from the date of purchase for product defects determined to be caused by manufacturer.

• The life expectancy of the aveoTSD is 12 months. With proper use and care, this could stretch up to 24 months.