

What is a Tongue-Tie?

A “tongue-tie,” otherwise known as ankyloglossia, is an excessive soft-tissue adhesion on the underside of the tongue, which may result in restriction of tongue movement or position depending on severity.

What’s the Big Deal?

Though ankyloglossia can create a significant range of developmental and structural abnormalities in various life stages, it is often poorly understood, even amongst well-educated members of the medical and dental community. To many, it is hard to attribute such a significant effect to what appears to be such a small band of excess tissue. Others, including our doctors, recognize the potential for this small tethering of the tongue to cause or contribute to a worsening of the following:

- Difficulty Breastfeeding
- Problems Introducing Solid Foods
- Swallowing Dysfunction, Including Gagging, Choking, or Vomiting
- Challenges with Speech Articulation
- Mouth Breathing
- Tonsillar Enlargement or a Chronic Sore Throat
- Recurrent Ear/Throat Infections / Need for Ear Tubes
- Restriction of Jaw Growth and Development / Need for Jaw Surgery
- Dental Crowding / Need for Orthodontics / Increased Risk of Orthodontic Relapse
- Bed Wetting
- Snoring
- Restless Sleep / Frequent Awakenings at Night
- Sleep Disordered Breathing
- Excessive Daytime Tiredness
- Decreased or Lack of Dreaming
- Difficulty Awakening in Morning
- Obstructive Sleep Apnea
- Chronic Fatigue / Fibromyalgia
- Cognitive Deficits / ADHD
- Behavior Problems
- Stress, Anxiety, or Depression
- TMJ (Jaw Joint) Dysfunction

How is a Tongue-Tie Treated?

Corrective action for a tongue-tie consists of two necessary components — **lingual frenectomy** (surgical release) and **oral myofunctional therapy** (like physical therapy for your tongue).

Oral myofunctional therapy (OMT) begins before surgery and involves a series of progressing exercises to strengthen the tongue and prepare for its release. OMT is individualized, so the duration of therapy and exercises performed will vary from patient to patient. Once adequately prepared, your therapist will release you or your child to proceed with the frenectomy. A set of post-operative exercises will be given to you by your therapist, to start as soon as possible after the procedure.

A lingual frenectomy is typically done under local anesthesia for adults, though intravenous sedation is available as needed for management of anxiety. In children, the procedure is typically performed under sedation to eliminate tongue movement. The procedure takes approximately 5 minutes, and is only mildly uncomfortable during the delivery of local anesthesia. Once numb, the extra tissue is removed and fascial restrictions are released. The surgical site is then closed with dissolving sutures. Pain medication is typically given, but often is not needed when ibuprofen is taken regularly for the first few days postoperatively.

Most patients require some form of postoperative OMT to fully establish the tongue position in the roof of the mouth.

APPOINTMENT DATE: _____

TIME: _____

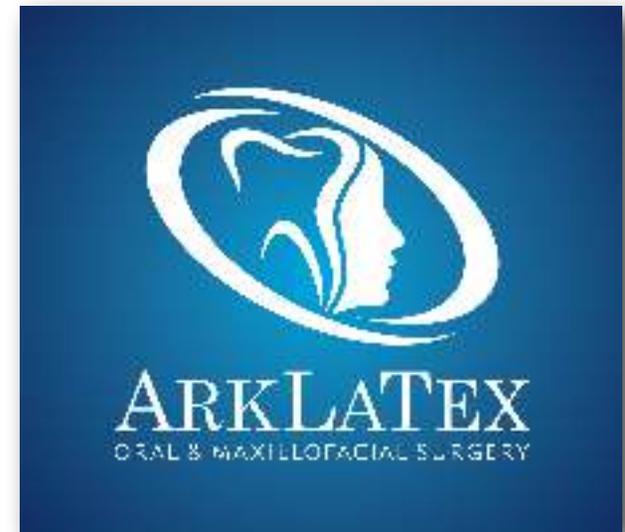
SEEING DOCTOR _____

Shreveport Office:

7600 Fern Avenue
Building 1400
Shreveport, LA 71105
318-797-5812

Bossier Office:

1050 Bancorp South Circle
Suite 400
Shreveport, LA 71111
318-747-5812



A Patient’s Guide to Tongue-Tie

A tongue-tie can have a significant impact on many facets of our health and well-being. This pamphlet only scratches the surface of a very complicated anatomical problem. A tongue-tie can seem insignificant. The potential effects are often poorly understood, even by otherwise qualified health care professionals such as physicians and dentists. At ArkLaTex Oral & Maxillofacial Surgery, we understand the complexities of a tongue-tie and other airway-related problems. We strive to provide an unmatched experience, through patient education, state-of-the-art technology, and exceptional patient care. This brochure is meant to serve as an educational resource to supplement the information discussed during your in-office consultation. Welcome to our practice!

Sincerely,

Brian R. Smith, DDS, MS
Jason H. Lustig, DDS, MD
Andrew R. Banker, DDS, MD

What Does a Tongue-Tie Look Like?



There are two types of tongue-ties, anterior and posterior. The above examples show anterior tongue-ties. A posterior tongue-tie is more difficult to appreciate visually, as it is deeper within the soft tissue of the tongue. Both anterior and posterior tongue-ties can contribute to airway dysfunction.

How Does a Tongue-Tie Cause All Those Problems?

Essentially, our airway is a soft sided tube that runs from our nose to our lungs and allows us to bring oxygen to our body's cells. **It is important to understand that the mouth is *not* part of our airway.** The flow through our airway changes based on its internal volume — a larger volume equals a greater flow. If we think of it as a hose, it helps to illustrate the concept. Comparing a garden hose to a fire hose, the amount of water that flows through a fire hose is far greater than that of a garden hose. When it comes to the airway, small changes in volume can have a dramatic impact on the flow of air. There are multiple points where you can end up with an obstruction, like a kink in a hose, and in many cases these kinks lead to changes in the restorative quality of our sleep. A tongue-tie is just one, albeit a very common one, of these points of obstruction.

As discussed above, the mouth is not directly part of the airway, but it can have some dramatic effects on its function. **The natural and proper position of the tongue is firmly against the roof of the mouth, with no appreciable air space present between the two. When a tongue-tie is present, the tongue will likely sit low in the mouth, with a significant (and useless) air space above it. This air space is at the expense of the airway, as the base of the tongue (within the throat) has no option but to bulge backwards into it. This decreases the volume of the airway thereby decreasing the flow of air, especially when relaxed during sleep.**

When a tongue-tie creates an airway disturbance, our brains initially compensate by altering our sleep cycle to avoid the more relaxed portions of it. This often leads to infrequent or a complete lack of dreaming. Over time, our brains become conditioned to the inadequate airflow, and eventually, our brains allow periods of apnea (a total lack of breathing). **This is the terminal stage of sleep disordered breathing — obstructive sleep apnea — which will ultimately lead to death if left untreated.**

Another common result from a low tongue position is **mouth breathing**. As mentioned earlier, our mouth is not part of the normal airway. The nasal cavity has several benefits that are lost during mouth breathing. The nasal cavity filters particulate matter, including bacteria and viruses, out of the air we breathe. While filtering, we secrete a powerful substance called nitric oxide to kill these bacteria/viruses and further protect our bodies from foreign invaders. The large surface area inside our nasal cavity also moistens the air we breathe. A moistened airway is a healthy airway. When we breathe through our mouths, we lose these protections. Just like the skin on our hands cracks when dry, the lining of our airway will be similarly damaged when the air we breathe isn't being moistened through our nasal cavity. Bacteria and viruses bypass the death trap of our nasal cavity and gain easy access into our bodies through this damaged lining, which leads to **frequent upper respiratory infections**. The **tonsils enlarge** in the process of eliminating the extra load of bacteria and viruses that aren't being eliminated in the nose. Enlarged tonsils become another source of obstruction and further contribute to airway dysfunction.

In addition to frequent upper respiratory infections, those with tongue-ties are at an elevated risk for **middle ear infections**. The middle ear connects to the throat via the Eustachian tube. The Eustachian tubes may not function properly when swallowing is altered by a tongue-tie or the tonsils are enlarged from mouth breathing.

Tongue-ties can have significant effects on the **growth and development of the jaws**. The lips and cheeks create an elastic force pulling in against the outward and forward growth of the jaws. When the tongue is not in the palate to provide the counter balance to this force, jaw growth is unable to progress normally. The lack of forward growth results in less airway space in the throat. The lack of outward growth results in a narrow nasal airway. Once jaw growth is complete, the only corrective remedy to deficient jaw growth is orthognathic jaw surgery. This highlights the importance of recognizing a tongue-tie in children as early as possible.