

## What is ankyloglossia?

Ankyloglossia is often referred to as “tongue tied”, and it is described as an abnormal shortness of the frenum located under the tongue, limiting the tongue’s movement. It can interfere with oral development, feeding, speech and swallowing and can create associated problems. Ankyloglossia affects 4.8% of the population, more often males than females (3:1 ratio).

When you open your mouth and elevate the tip of your tongue, you can clearly see your lingual frenum (also referred to as a frenulum); the little “cord” that attaches your tongue to floor of your mouth. In some cases, the frenum might be visible but too short to allow full tongue movement. In other cases, the shortened frenum might not be visible at all, and is then defined as submucosal ankyloglossia.



On this photo, you can see the frenulum “cord” when the tip of the tongue is elevated



On this photo, you can see the tongue protruding without restriction. Note how the tongue can extend out of the mouth

## What are the causes of ankyloglossia?

The exact causes of ankyloglossia are unknown, but in some cases, it seems to run in families.

## How is ankyloglossia classified?

The severity of ankyloglossia can be classified using various assessment tools. The Kotlow assessment tool categorizes ankyloglossia into four categories or classifications based on the length of the free tongue (the distance from the tip of the tongue to the attachment of the frenum). A distance of > 16mm is considered clinically acceptable.



Fig 1a Normal range of motion.

### Class I:

**Mild Restriction.** The tongue’s free length is 12-16mm. This is considered a mild restriction

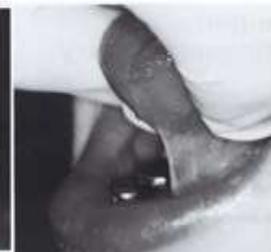


Fig 1b Class I. Mild tongue-tie

### Class II: Moderate

**Restriction.** The tongue’s free length is 8-11mm. This is a moderate restriction.



Fig 1c Class II. Moderate tongue-tie

### Class III: Severe Restriction.

The tongue’s free length is between 3-7mm. This is considered a severe restriction.



Fig 1d Class III. Severe tongue-tie

### Class IV: Complete

**Restriction.** The tongue is attached >10 mm from the tongue tip. Note the restriction causes a classic ‘heart-shaped’ tip.

Pictures of restrictions from: Kotlow, L.A. Retrieved January 2012 from [www.kiddsteeth.com](http://www.kiddsteeth.com)

## Why be concerned with ankyloglossia?

Ankyloglossia can seriously affect people’s health at any age. To experience what ankyloglossia feels like, try to talk and eat while keeping your tongue on the floor of your mouth. You can see it is challenging!

**In infants:** ankyloglossia can be associated with breastfeeding difficulties, failure to thrive and difficulty with the introduction of solid foods.

**In children:** associated with “sloppy” eating secondary to difficulty chewing the food and moving it in the mouth, impaired articulation, poor oral hygiene, dental problems (incorrect teeth eruption or the rotation of bottom teeth inward), change in the development of the face and jaw, and importantly, strong emergence of compensatory incorrect habits such as a tongue thrust.

**In adults:** associated with continued misarticulations of sounds, clicking or pain in the jaws, migraines, effects on social situations (eating out, kissing, relationships) and dental health (inflamed gums, crowding, cavities, extractions).

### **How can we treat ankyloglossia?**

Once a tongue tie has been diagnosed, a recommendation may be made to have the lingual frenum released through a frenectomy; also known as a frenulectomy or a frenotomy. It's a simple procedure that uses local anesthesia to remove the frenum. It lasts generally 5 minutes using a scalpel or a diode laser. A diode laser is the preferred approach as it causes little bleeding, requires no sutures and causes very little post-procedure discomfort. There are rare cases where a patient may need an extensive revision procedure such as Z-Plasty.

### **What is the role of the Orofacial Myologist with ankyloglossia?**

With children, teenagers and adults, it is strongly recommended that you consult with an orofacial myologist before your surgery. Post-procedure, the orofacial myologist prescribes home-based daily exercises to avoid scarring; ensuring the tongue remains long and flexible. Once the frenum is released by the oral maxillo-facial surgeon, the tongue will be able to move around the oral cavity.

In addition, muscles of the tongue might be weak from being anchored to the floor of the mouth. Specific exercises are given to strengthen the muscles of the tongue to assist the tongue moving vertically and achieving appropriate tongue resting postures. Achieving appropriate tongue resting posture and recapturing the dental freeway space is essential.

Thirdly, an orofacial myologist can eliminate a tongue thrust that may accompany a restricted lingual frenum. Improved chewing and swallowing skills are important for a person of any age.

Furthermore, the incorrect speech patterns, incorrect tongue placement at rest and swallowing functions will likely not correct themselves. Over the years, individuals with ankyloglossia develop strong abnormal habits to compensate for the tongue being attached on the floor of the mouth. A habit is not something easy to change, and most people do not know what the correct position should be. An orofacial myologist with experience with resting tongue posture can help with learning correct placement for articulation, at rest, and while eating, drinking and swallowing.

For more information about ankyloglossia, contact:

**Pat Brinkman-Falter, PHRDH, MS, COM**  
*Board Certified Orofacial Myologist*  
(402) 759-2561 or (402) 882-2MYO  
Offices in Lincoln, Omaha and York, Nebraska  
[pat@nebraskamyo.com](mailto:pat@nebraskamyo.com)

## Ankyloglossia: Frequently Asked Questions about Tongue Ties



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