

# Diagnosing Infant Ties

## LIP TIES

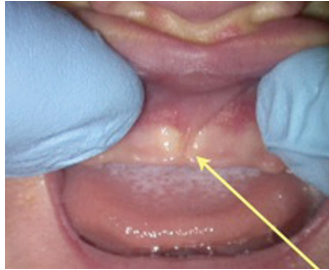
**Lip Tie Definition:** A restrictive attachment of the upper lip to the maxillary gingival tissue. It presents as an unusually short, thick or tight band of tissue (labial frenulum) that tethers the upper lip to the maxillary gingival tissue.

### Classifications of Lip Ties:



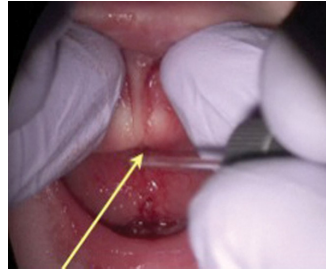
**Kotlow Class I**

Frenulum shows no restrictive attachment of the upper lip to the gingival tissue.



**Kotlow Class II**

Frenulum inserting at the zone of the free and attached gingival tissue.



**Kotlow Class III**

Frenulum inserting at the zone between the areas of the future central incisors.



**Kotlow Class IV**

Frenulum inserting at the zone extending into the anterior palatal area.

## TONGUE TIES

**Tongue Tie Definition:** A condition present at birth that restricts the tongue's range of motion. It presents as an unusually short, thick or tight band of tissue (lingual frenulum) tethering the bottom of the tongue to the floor of the mouth.

### Classifications of Tongue Ties:



**Kotlow Class I**

- The classic heart-shaped tongue
- The tie inserts into the tip of the tongue
- Easiest tongue tie to diagnose



**Kotlow Class II**

- Considered an anterior tongue tie
- This tie inserts just behind the tip of the tongue
- Heart-shaped tongue is not evident but the tie is clearly seen



**Kotlow Class III**

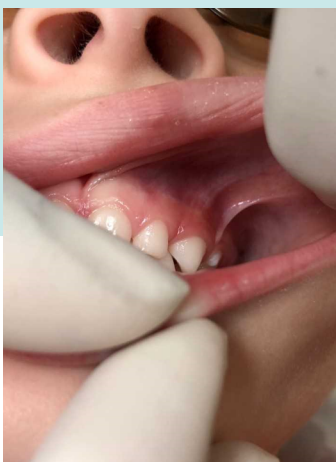
- Considered a posterior tongue tie
- The distinguishing factor between classes III and IV is that class III still has a thin membrane present



**Kotlow Class IV**

- No thin membrane is present
- Tissue tends to be thicker
- The front and sides elevate, but the mid-tongue cannot
- Sub-mucosal, hidden or invisible tongue tie
- Most commonly missed

## BUCCAL TIES



**Buccal Tie Definition:** An abnormal mucosal tether extending from the cheeks to the gingiva.

- Perhaps the least well-known and most uncommon condition among the tethered oral tissues that can affect breastfeeding
- Can be severe and impede latching

**Anterior Tongue Ties:**  
Kotlow Classes I & II

**Posterior Tongue Ties:**  
Kotlow Classes III & IV

**Classifications of Buccal Ties:**  
There are no classifications assigned to buccal ties

- Reflux or colic
- Difficulty latching
- Gumming or chewing nipples
- Gassy
- Poor weight gain
- Clicking noise while sucking
- Excessive drooling
- Choking on milk or popping off the breast to gasp for air

- Cracked, blistered, bleeding nipples
- Plugged ducts
- Discomfort while nursing
- Sleep deprivation (due to nursing more often, especially at night)
- Thrush/mastitis
- Compromised milk supply

### Resources

1. [Tonguetie.net/consequences](http://Tonguetie.net/consequences)
2. [Drghaheri.com](http://Drghaheri.com)
3. [fauquierent.blogspot.com](http://fauquierent.blogspot.com)
4. Oral Motor App
5. YouTube videos
6. [Kiddsteeth.com](http://Kiddsteeth.com)>articles