

# Tongue & Lip Tie Atlas© for

## Parents & Custodians

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**American Board of Laser Surgery**



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The following Pictures were organized to be representative of Tongue & Lip Tie as they relate to infants and long term oral consequences.

**How they relate to your specific breastfeeding condition *will be determined on an individual basis by a physical exam and a complete medical, birthing and breastfeeding history.***

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# Hi Everyone!!

I was treated... notice my eyes and face



# Before & 12 Hour After Release

improved airway & sleep posture  
picture sent by mother



# American Academy of Pediatrics Breastfeeding Recommendations

## Physician guidelines

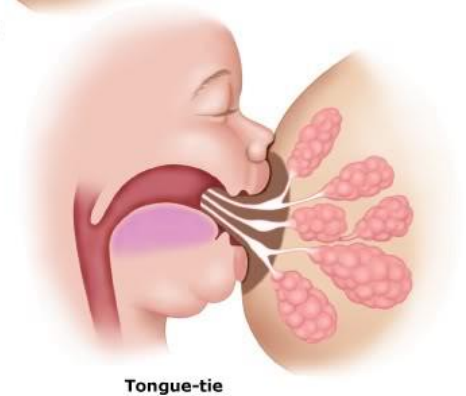
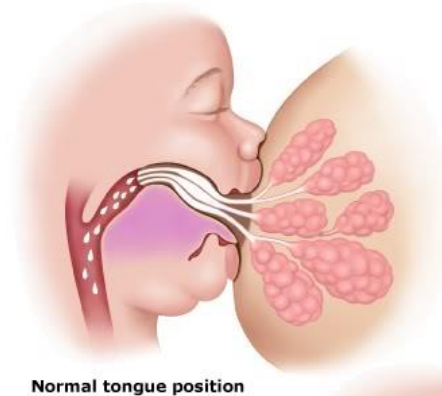
- **Exclusively** for about the **first 6 months** of life
- Continuing for at least the first year of life,\*\*  
with addition of iron & complementary solids
- Thereafter, for as long as **mutually** desired by  
mother and child

AAP: Breastfeeding and the Use of Human Milk. *Pediatrics* 2012;129:e827-41.

\*\*WHO Recommends 2 years minimum

# Simple Head & Neck Anatomy for Infant to **Latch** **requires:** “Suck-Swallow-Breathe” coordination *ALL IBCLC’s know this!*

1. 60 muscles
2. 22 cranial bones
3. 34 articulations
4. 6 of the 12 cranial nerves
5. Cascading effects when structural problems

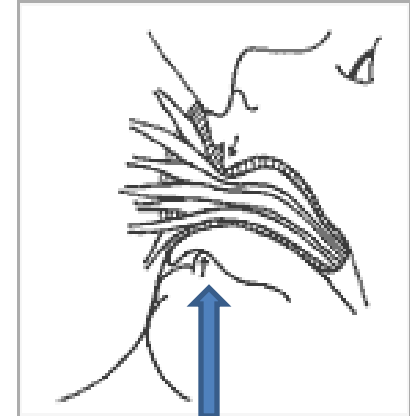
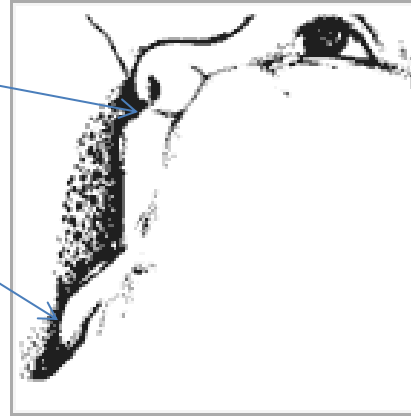


# Good vs. Poor Latch

- **Wide gape**

- The nipple is far back in the mouth

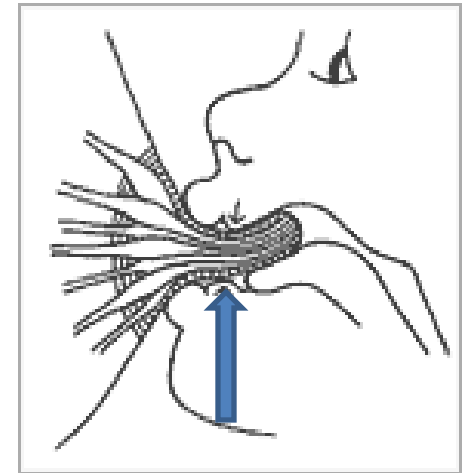
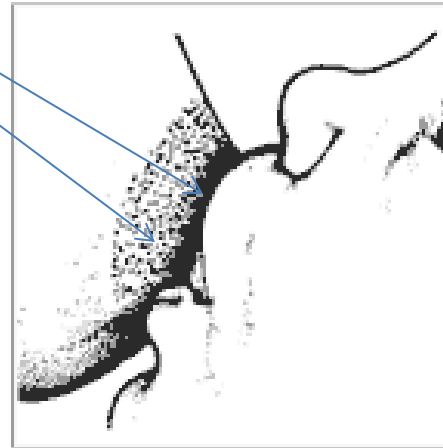
- Note **tongue over alveolar ridge**



- **Short or Small Gape**

- Baby grasps only nipple and **tongue cannot reach over the alveolar ridge & under the nipple**

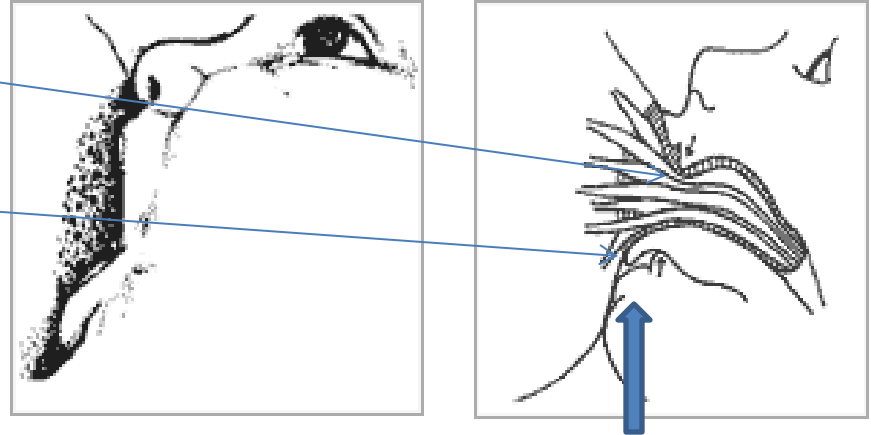
- Baby will not be able to use the jaw and tongue to remove milk and the nipple will get sore



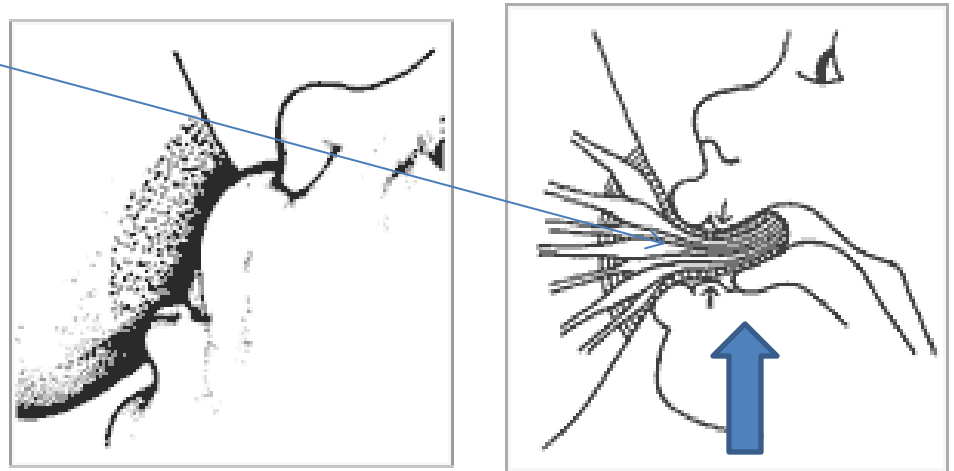


# Good vs. Poor Latch

- **Wide gape**
- **The nipple is far back in the mouth**
- Note **tongue over alveolar ridge**



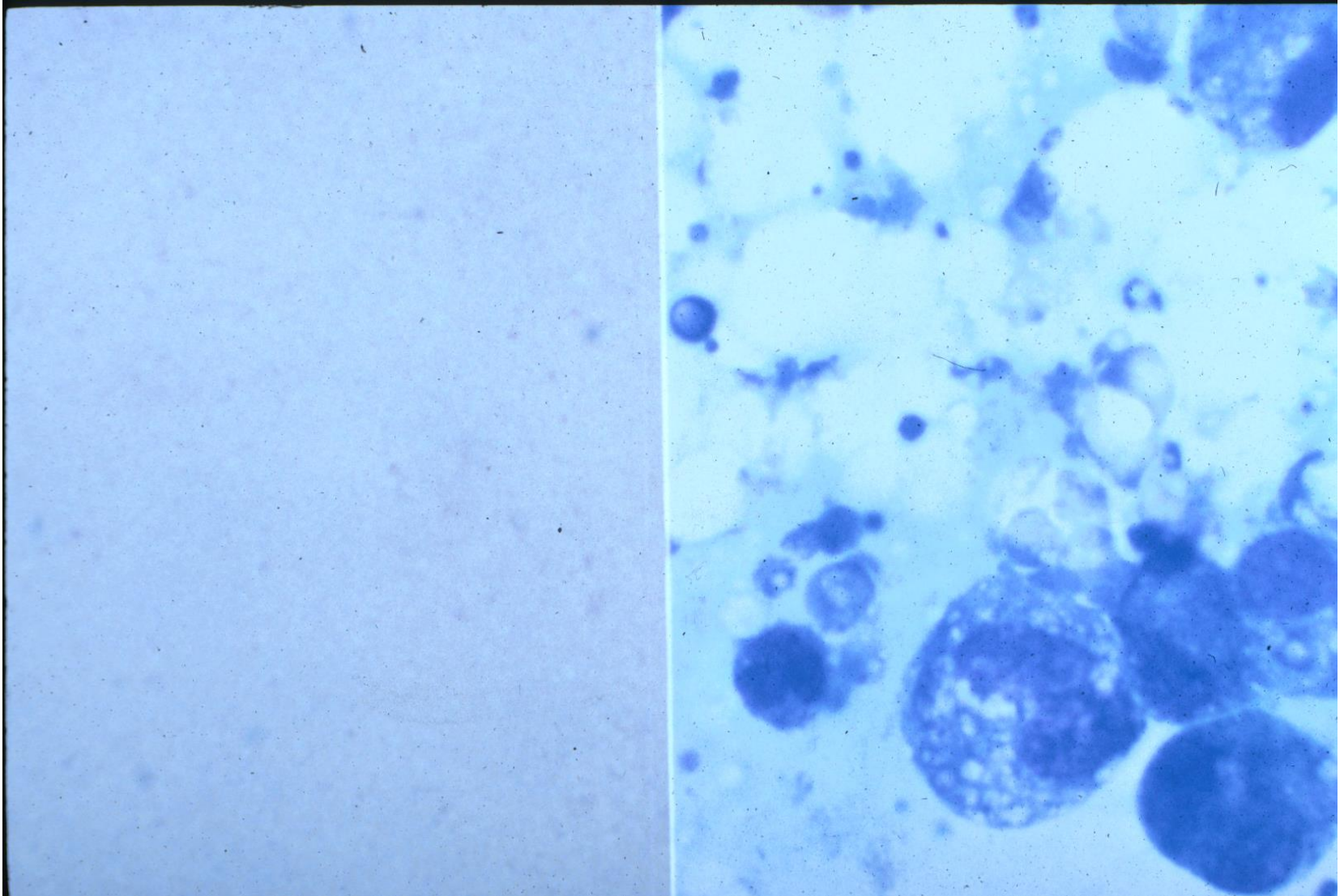
- **Short or Small Gape**
- **Baby grasps only nipple and tongue cannot reach over the alveolar ridge & under the nipple**
- Baby will not be able to use the jaw and tongue to remove milk and the nipple will get sore



INFANT FORMULA/ artificial



HUMAN BREAST MILK/live cells



***Any*** formula use is associated with an increase in the risk of:

- Non-specific gastroenteritis
- Asthma
- Obesity
- Type 1 diabetes & Type 2 DM
- Childhood leukemia
- Necrotizing enterocolitis
- Severe lower respiratory tract infections
- Otitis media
- Atopic dermatitis

WHO Systematic Review

- Hypertension and high cholesterol

**However, at times it will be needed.**

**Make feeding decisions considering risks & benefits.**

# **We NEED a Treatment TEAM *when* treatment is indicated**

- **IBCLC**
- **Provider Surgeon – MD, DMD, DDS**
- **Bodyworker**
  - Infant Chiropractor
  - Pediatric Osteopath
  - Pediatric Physical Therapist or Occupational Therapist
  - Pediatric CST or MFT
  - Feeding Specialist
  - Speech Language Pathologist

# Tongue-Tie and Breastfeeding: Assessment: **Requires an IBCLC**

To Rule-Out **other** possible causes  
of breastfeeding concerns.

Such as:

- **Sub-optimal breastfeeding management**
- **Emotional Issues - i.e. past abuse or depression**
- **Poor technique**
- **Maternal or infant illness**
- **Other neurologic or developmental anomalies**
- **Poor milk supply for other reasons e.g. medications, breast surgery etc.**

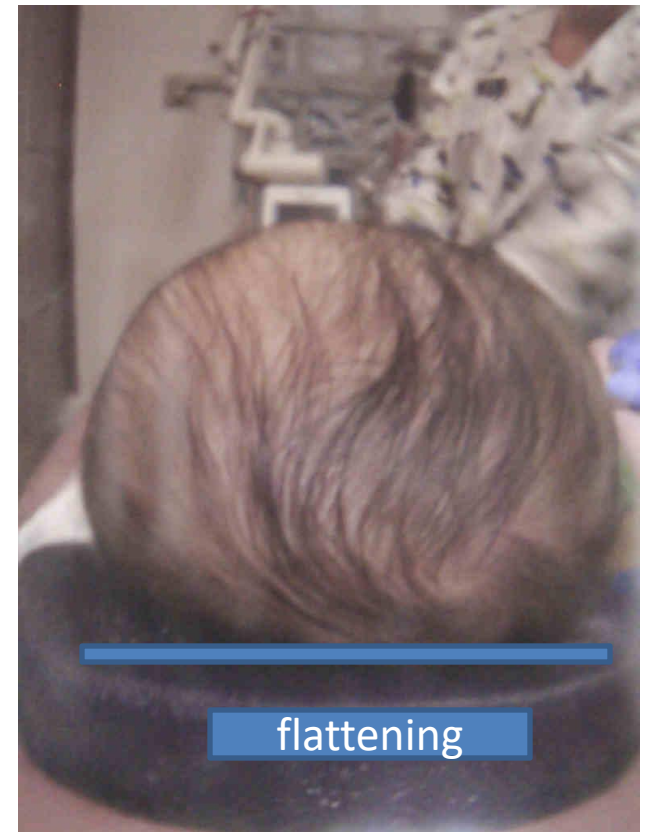
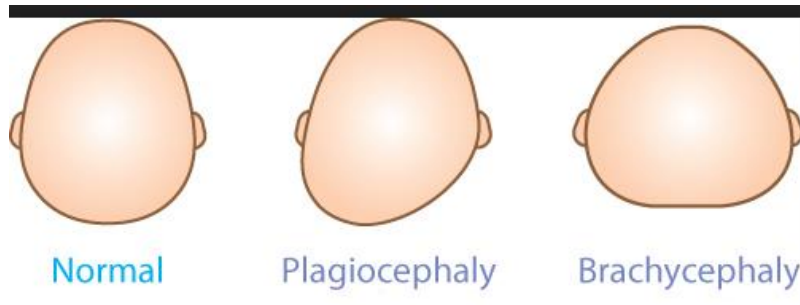
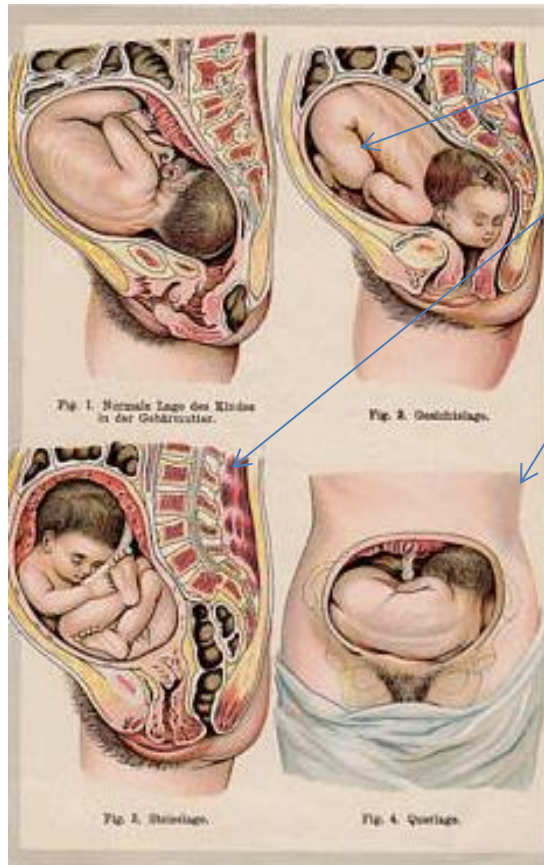




# In-utero position & Delivery can have an effect on Breastfeeding:

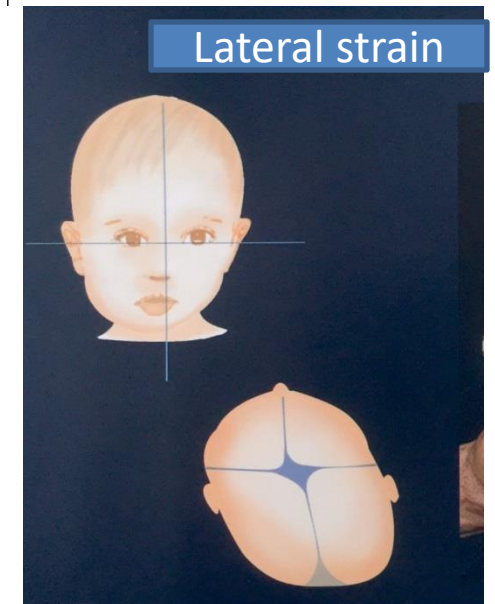
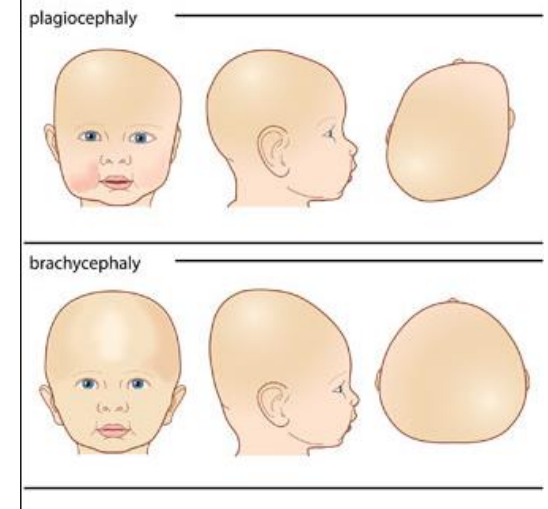
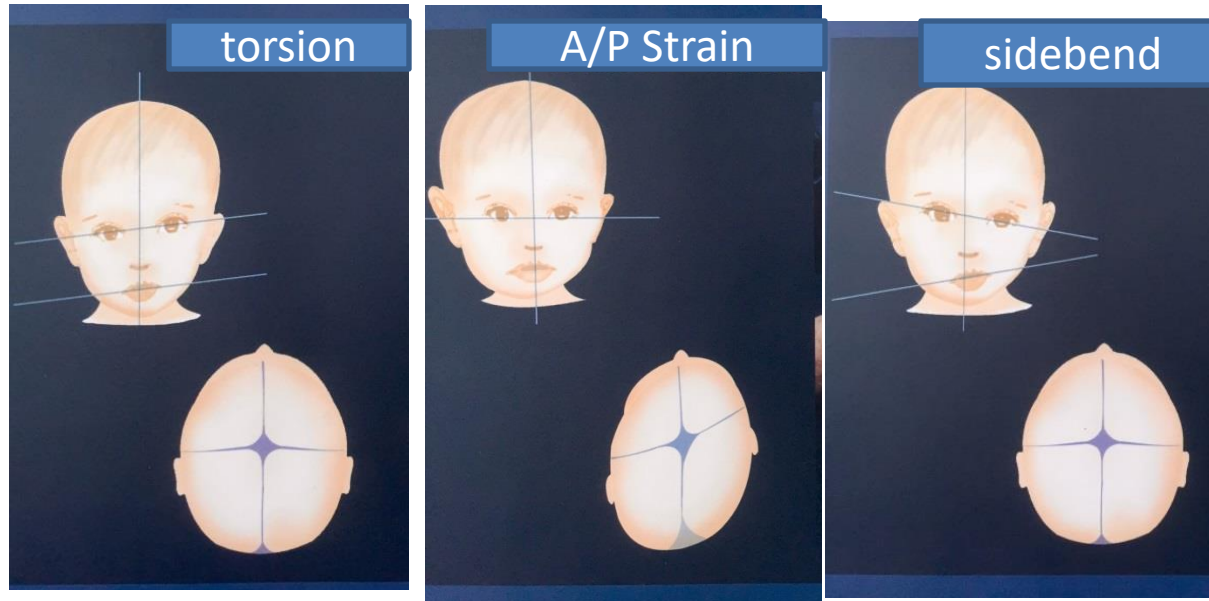
**pregnancy in-utero position can** affect structure & function

- Plagiocephaly



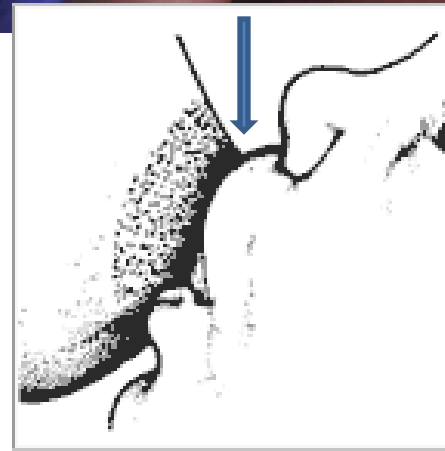
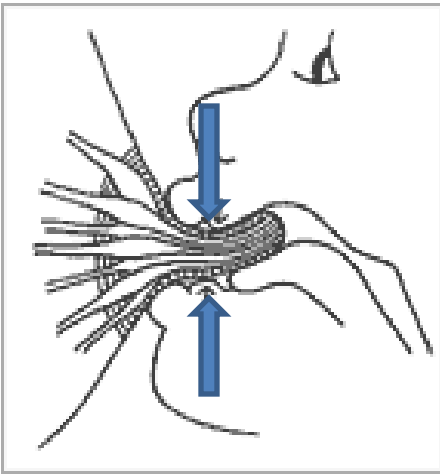
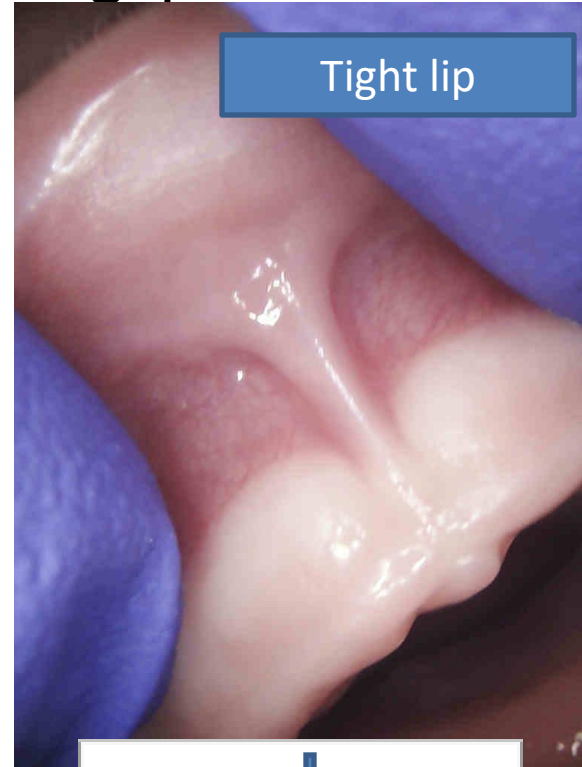
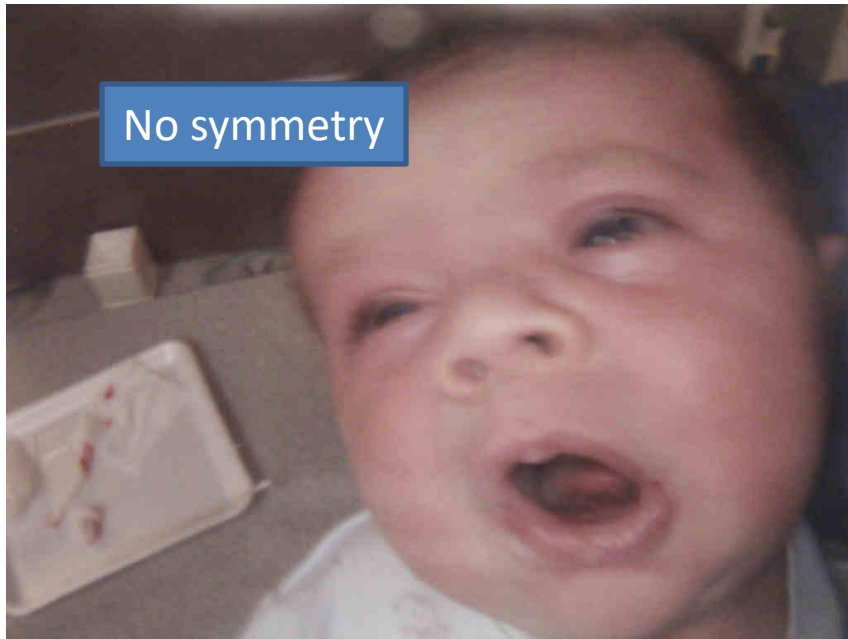
# Common-Structure & Function

## Physical Appearance examples



# Structure & Function

tight, pursed, & no gape





# Tongue Tie Presentations

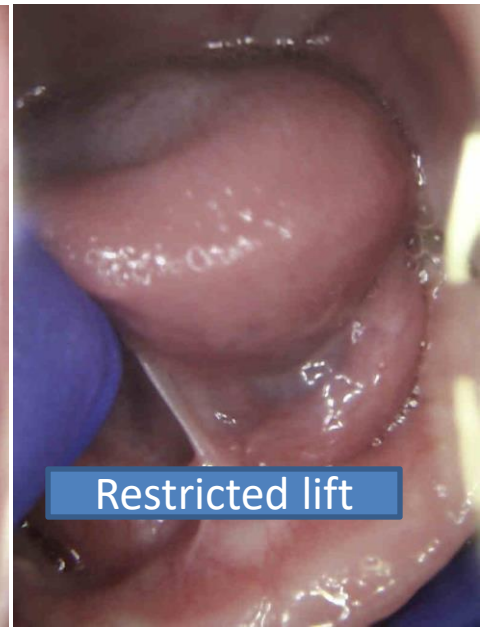
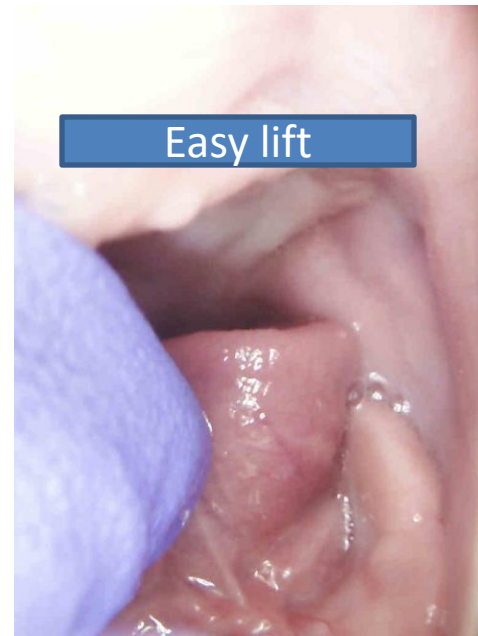
Normal  
Anterior  
Posterior  
Submucosal

**Tongue Frenum:** Normal-healthy-elevates at least  $\frac{1}{2}$  of the way to the roof of the mouth with jaw open.  
Normal V-shape of Wharton's Ducts.



# Normal vs. Restricted Tongue **Example**

- Blading-thin vs.  
Non-blading thick
- Easy elevation vs.  
Restricted elevation or lift



# Anterior Tongue Tie/ *Classic*

**Another presentation (thin & tented)**



**Severe ATT with callus**

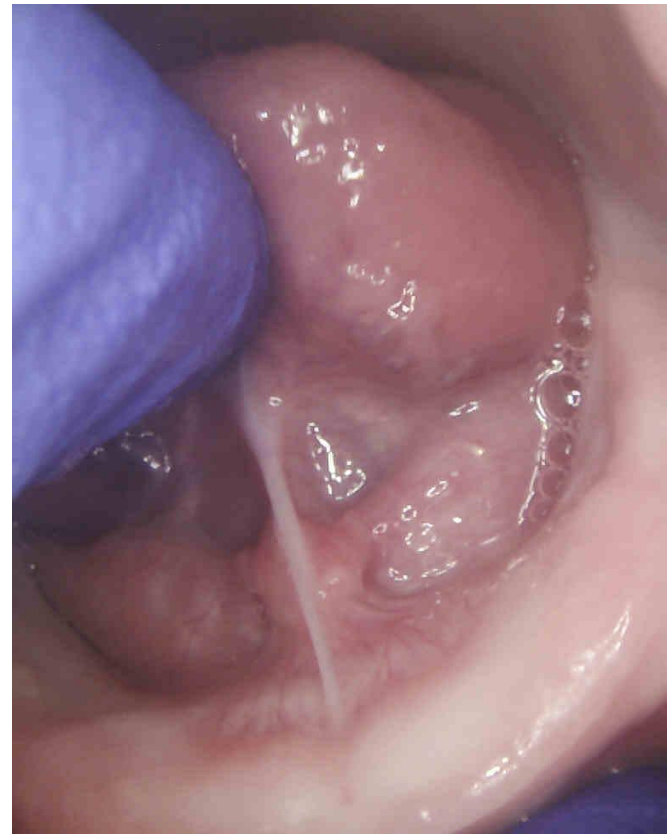


# Anterior & Posterior Variations

**Anterior - callous & blister**



**Posterior - thin and tight**

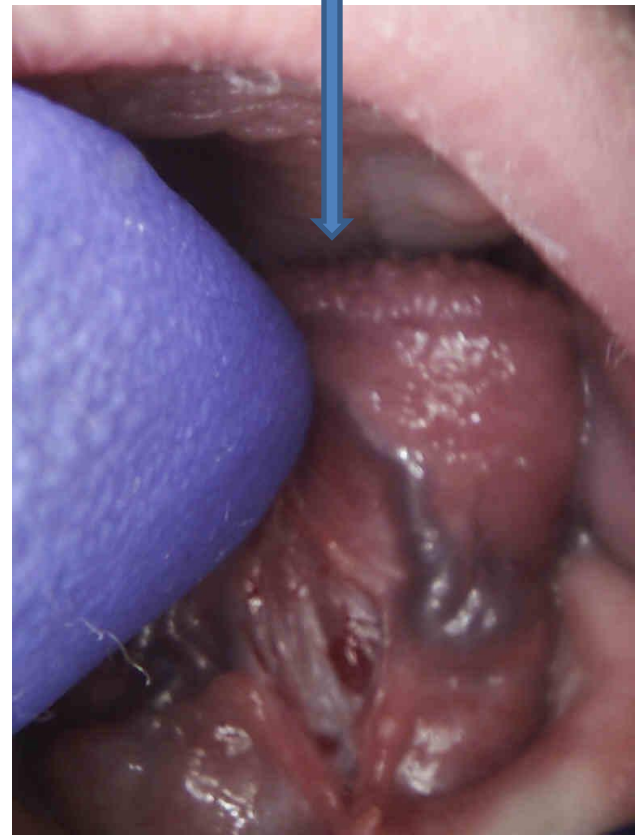


# Immediate after treatment

Pre-op/ **humps, restricted**  
**no lift**



Post-op/ **lifts & elevates**



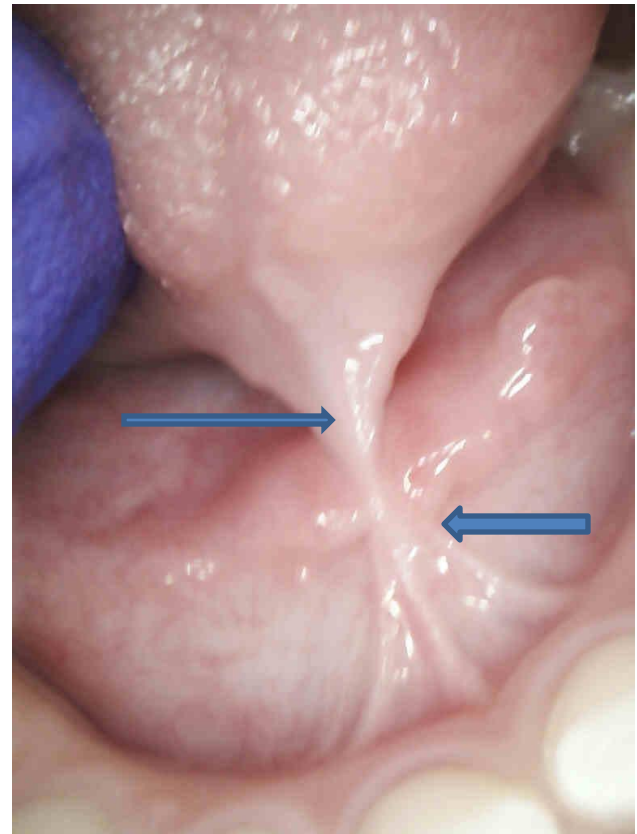


# Complex Tongue Tie

**Visual** (*cannot extrude and point tongue*)



**Digital exam** (*with obvious tension lines*)



# Lip Tie Appearances

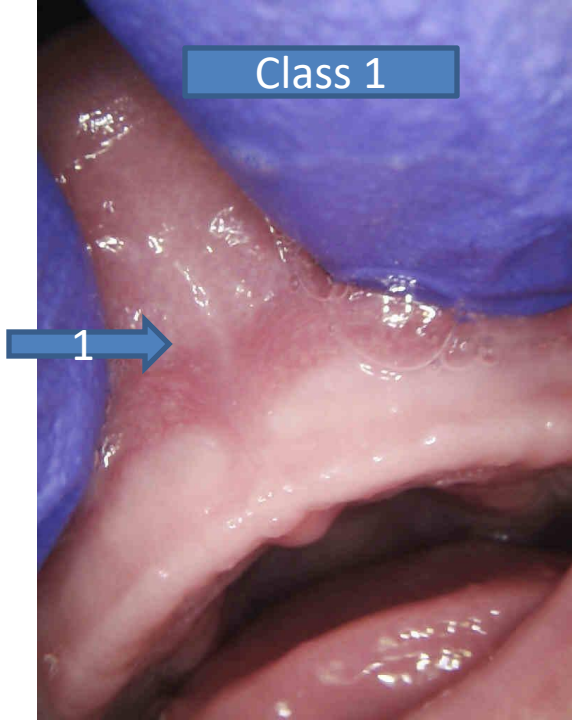
Classification by insertion 1-2-3-4

**NOT diagnostic for a treatment.** Just  
a classification for appearance



# Classifications with insertion point(arrow)

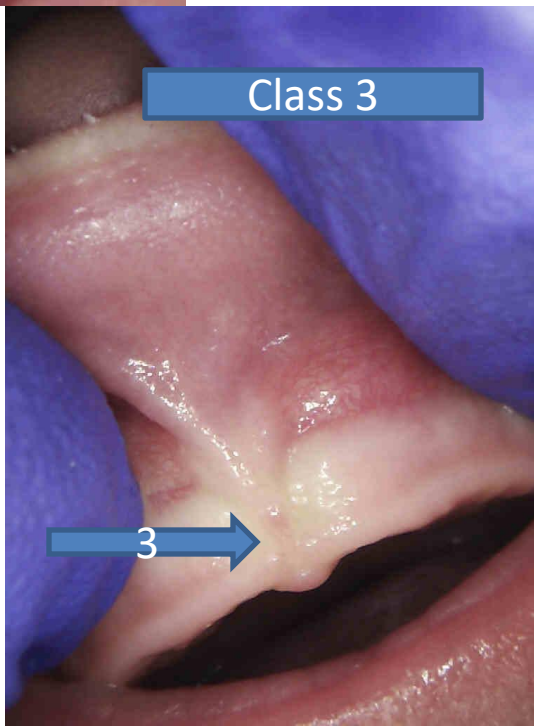
Class 1



Class 2



Class 3

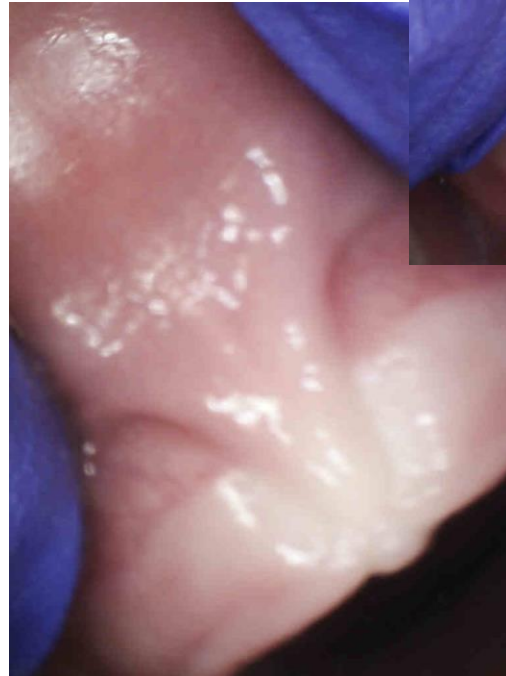


Class 4

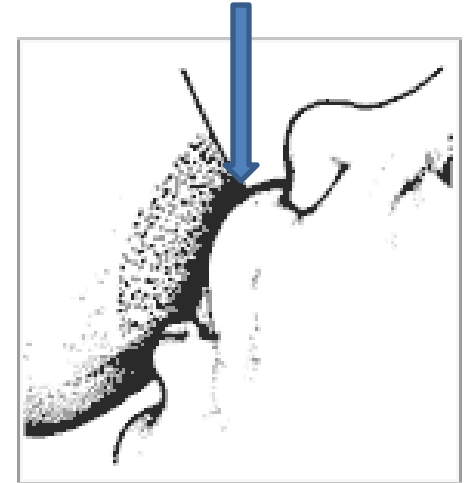


# Class 4 tissue types EXAMPLES:

**corded**, fleshy, **triangular**, taunt



# Nursing Blisters



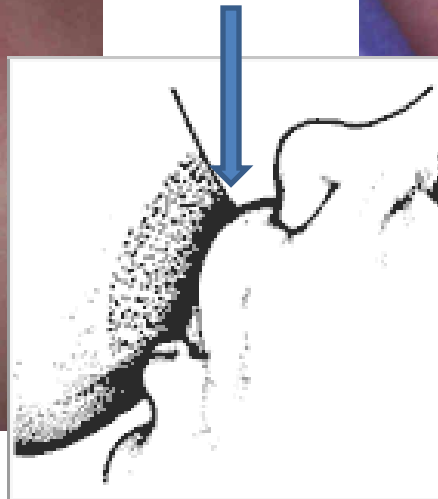
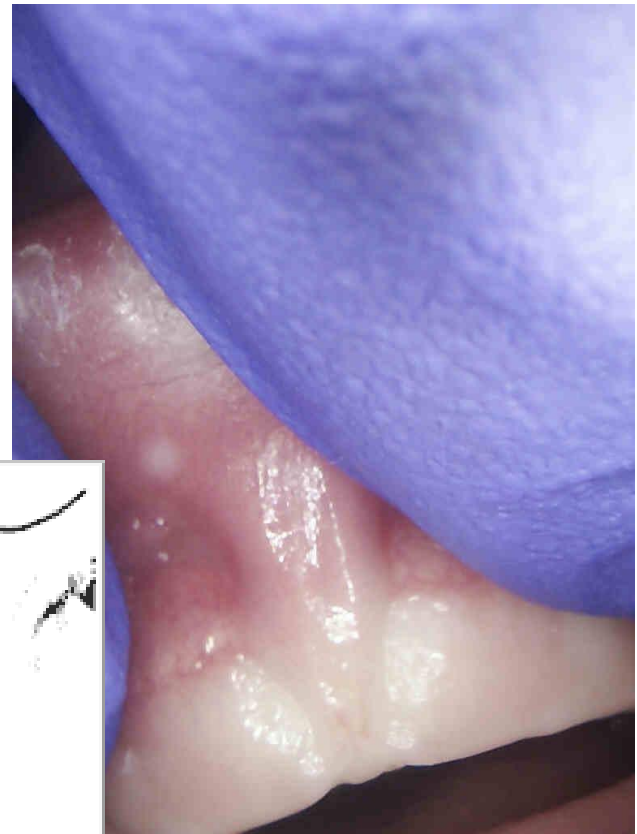
**Shallow latch, weak suck,  
tongue tie snap back, no  
flange**

# Blisters/friction

**Moderate-severe blisters**



**wide, tight, restricted & blanching**

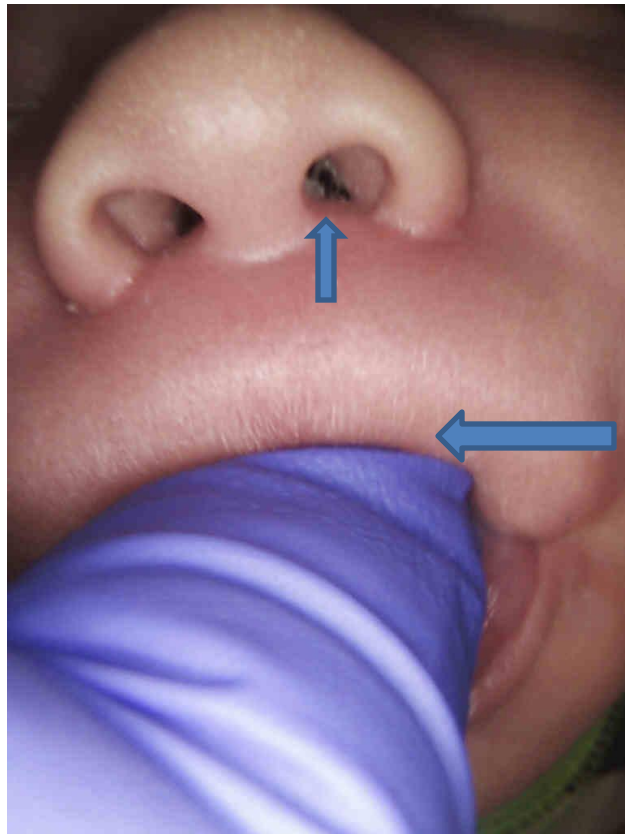


# Some Considerations

Tight Pursing Lips & Noisy Breathing,  
laser-healing, decay, speech, apnea,  
spacing and orthodontics

# Pursed Lips-affects Breathing & Bobbing

**Pursed lip and compresses nostrils**  
(limiting respiration through nose)



**Profile view** (narrow lip and full philtrum)

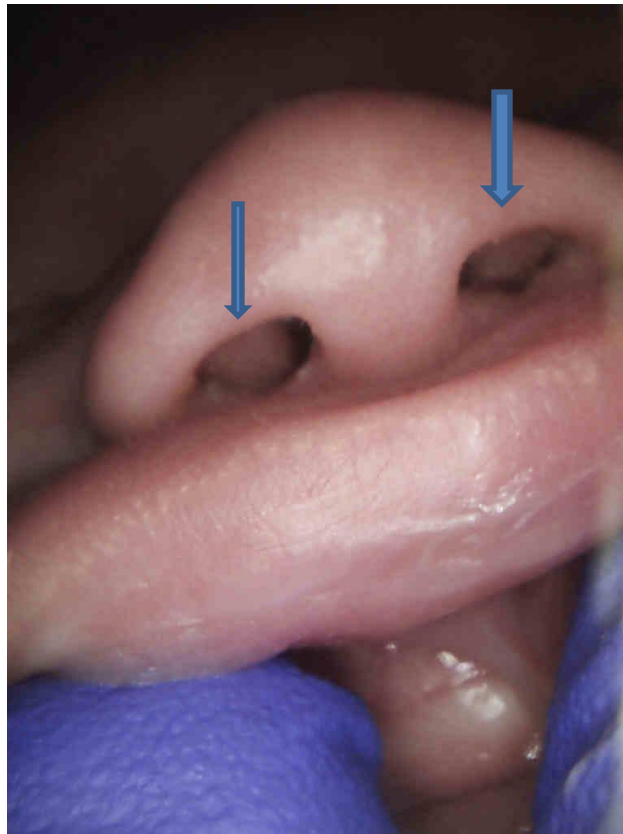




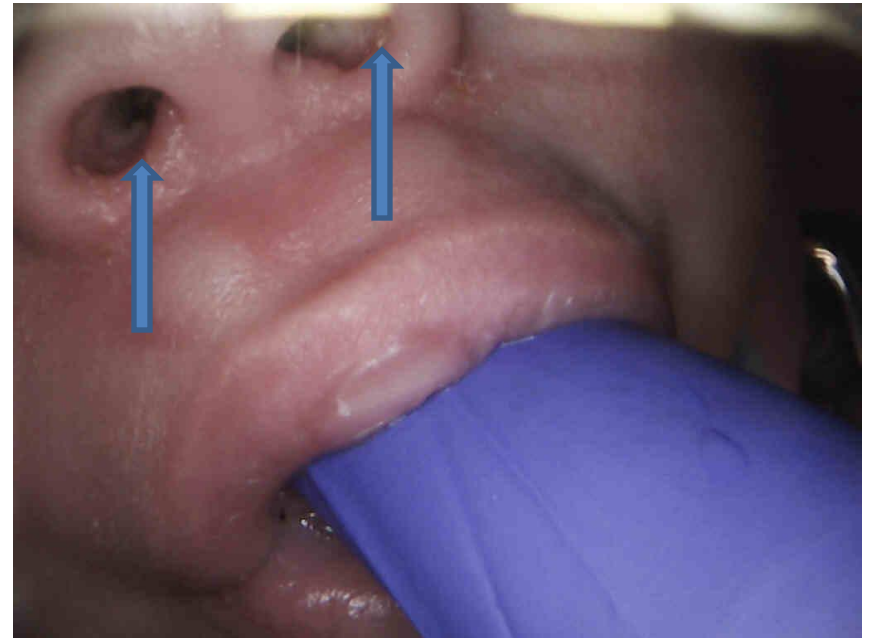
# Improved Nasal Breathing

after compression release

**compressed**



**Open**



# Palate

Roof of Mouth

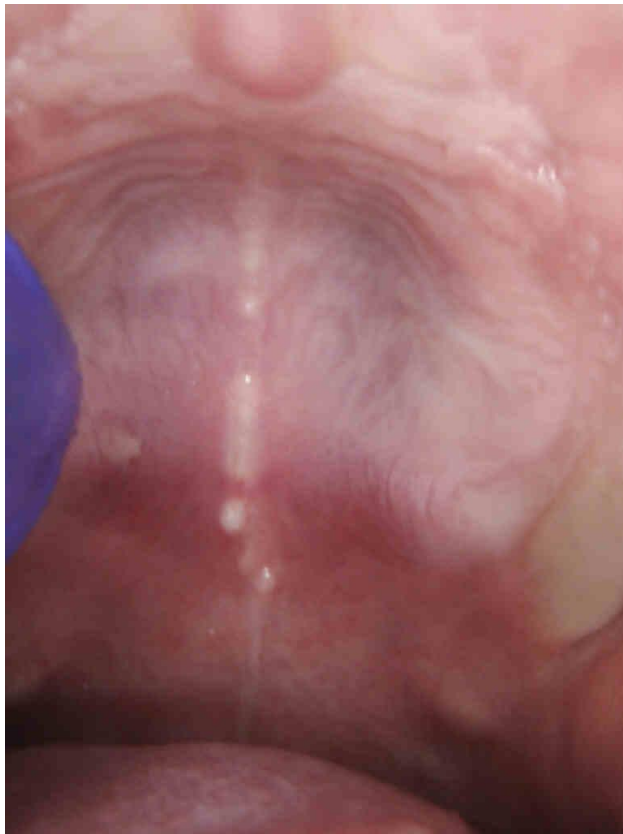
Normal

Variations

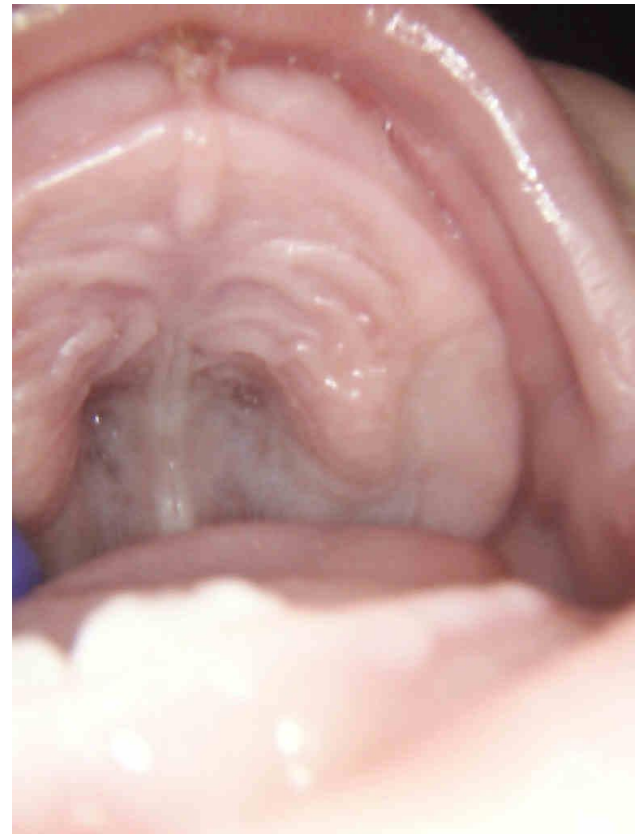


# Palate Shapes

**Normal** with salivary glands and Epstein's Pearls

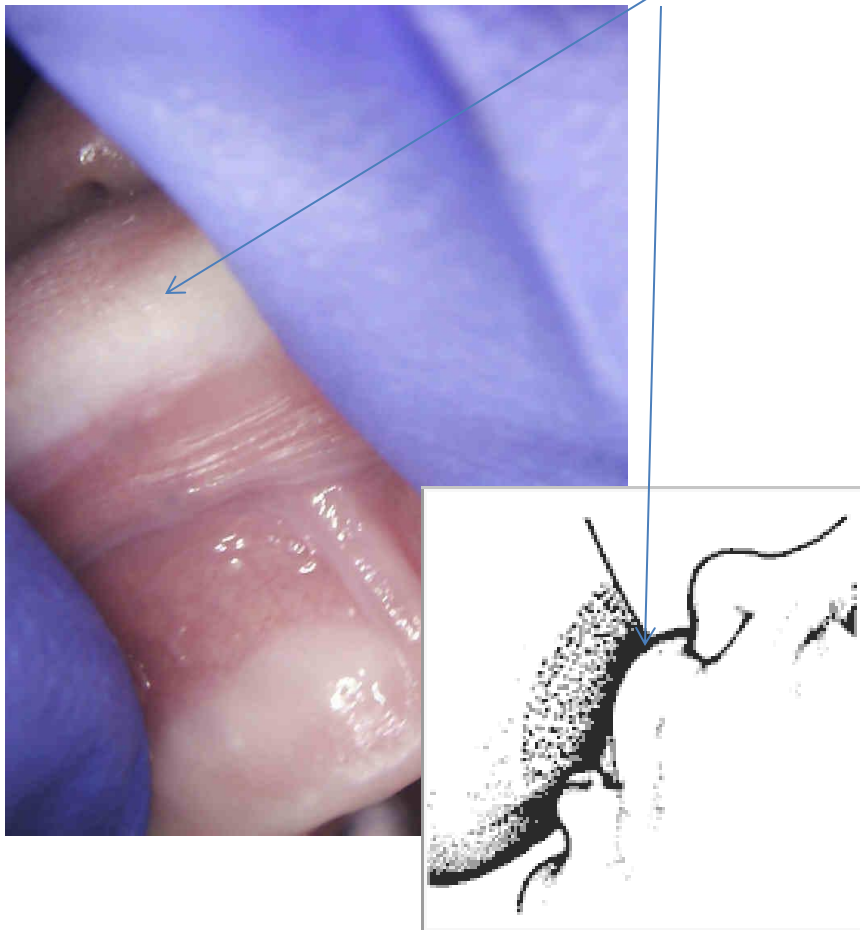


**Compressed** and shallow palate from compression

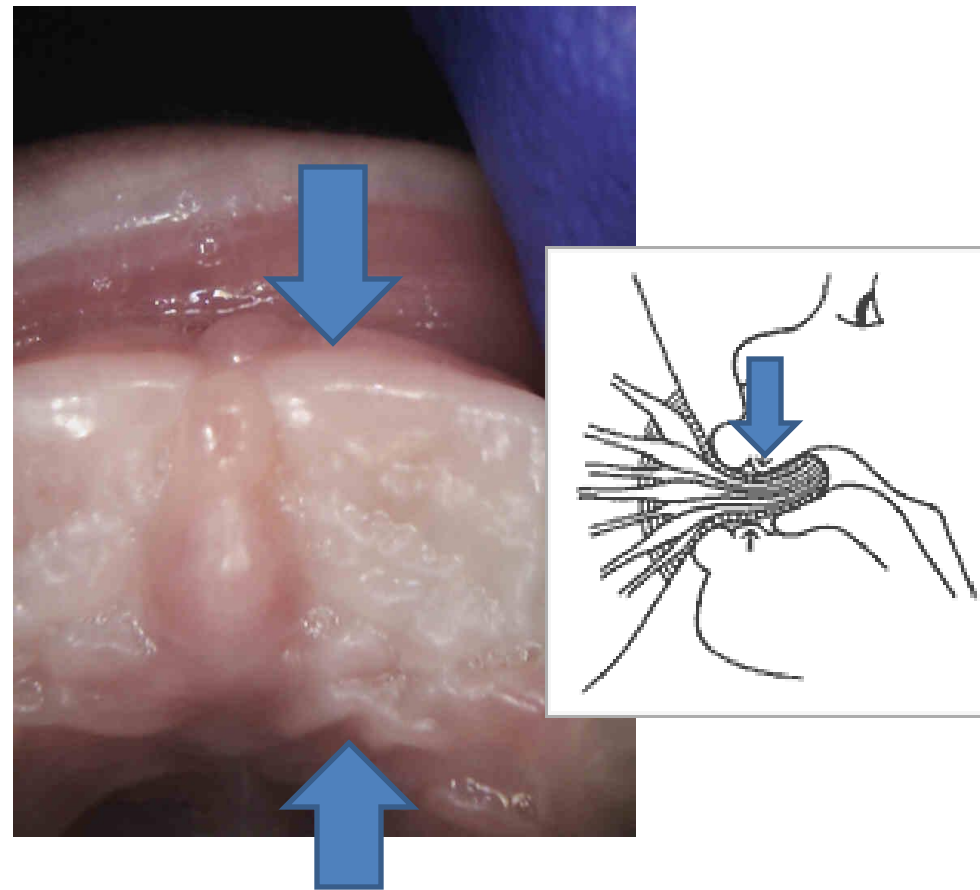


# Pre-maxilla of **Palate** (nipple **compressed & slides** out easily from the **flattened anterior**)

Normal view/ pursed & tight



Palatal view/ **wide & flat**



# Generalization of Laser Ranges for Clinical Dentistry

- All Lasers are Ablative- can be used safely with limitations
- Ask what **type** and the **training** and why the specific laser was chosen for their practice
- There are **3 major wavelength ranges**
- **1000 nm: Diodes** uses **hot glass tip** 600°-1000°C with **touch** to tissue **0.5-2.0 mm thermal depth**
- **3000 nm: Erbium** at 100°C with **no touch** and **shallow 0.020mm-** allows for some bleeding
- **10,000 nm CO2** **no touch** **with 0.04 mm minimal to no bleeding -**
- Human hair is approx. 0.120 mm **so 1/4 - 1/3 the diameter of a human hair for CO2 & Erbium**

# 3 Major Laser s in dentistry

CO2 & Erbium are “optic”

**Diode** is “hot tip contact”



# Healing Sequence example

- Pre-op



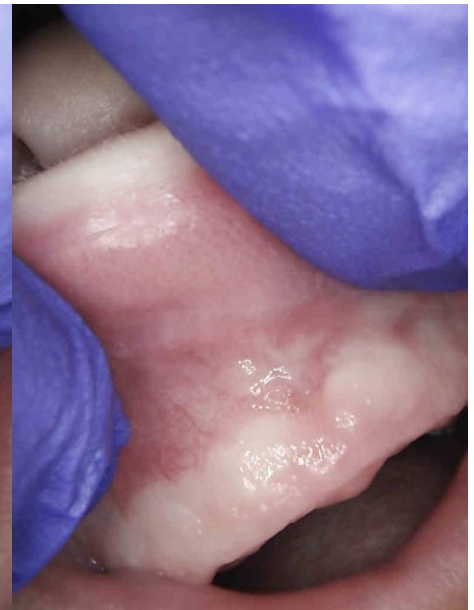
- Post-op



- 6 days



- 3 weeks



# Treatment Safety

Movement-Swaddle

Eyes-Protection



# Swaddle Positioning for Safe Treatment



# Every Patient **REQUIRES** Laser Specific Protection

- Glasses or goggles
- Disposable pads





# Other Considerations

Spaces of teeth, speech, eating, swallowing, posture, decay etc. Are considerations

Treatment of an infant requires current symptoms as the primary focus

# Dental Decay and the Frenum

**Chronic shallow latch history  
Gave up on breastfeeding after a few weeks**



**Cannot tolerate tooth brushing and  
complains of “gums hurt” when  
bristles rub against frenum**



# Frenum & Dental Decay

**No Breastfeeding BUT has Caries**

**Class 4 No Caries**



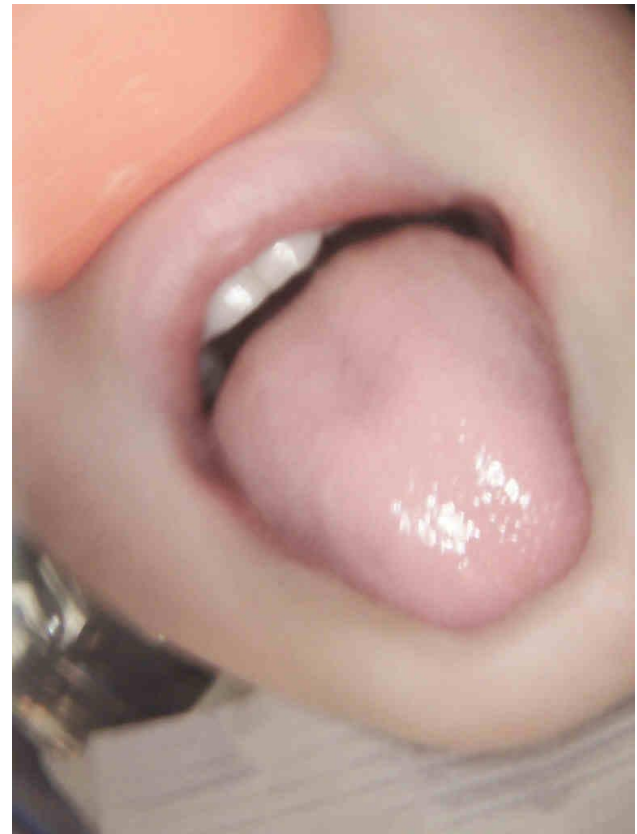
# 4 Year Old Poor Breastfeeding History

currently gagging and food texture and speech problems

**No ability to point tongue**



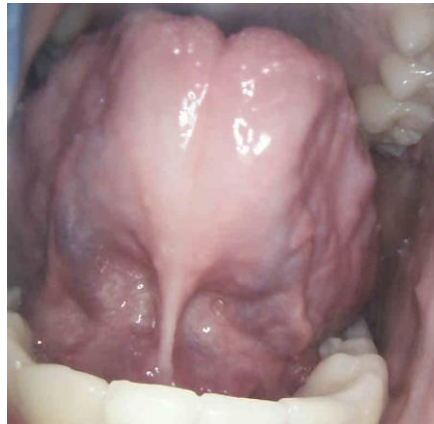
**Immediate ability to point tongue**



# Adult Tongue Tie (17 years old, the myth is that the frenum will stretch. It did **not** stretch.)

**Snoring and speech problems from inability to extend tongue and have an open airway**

**After treatment could extend and breath and speak better**



# 7 Year Old

**Diastema space**



**Post Treatment closure**





# 8 Year old with dental spacing compare after treatment result

**Before** Treatment

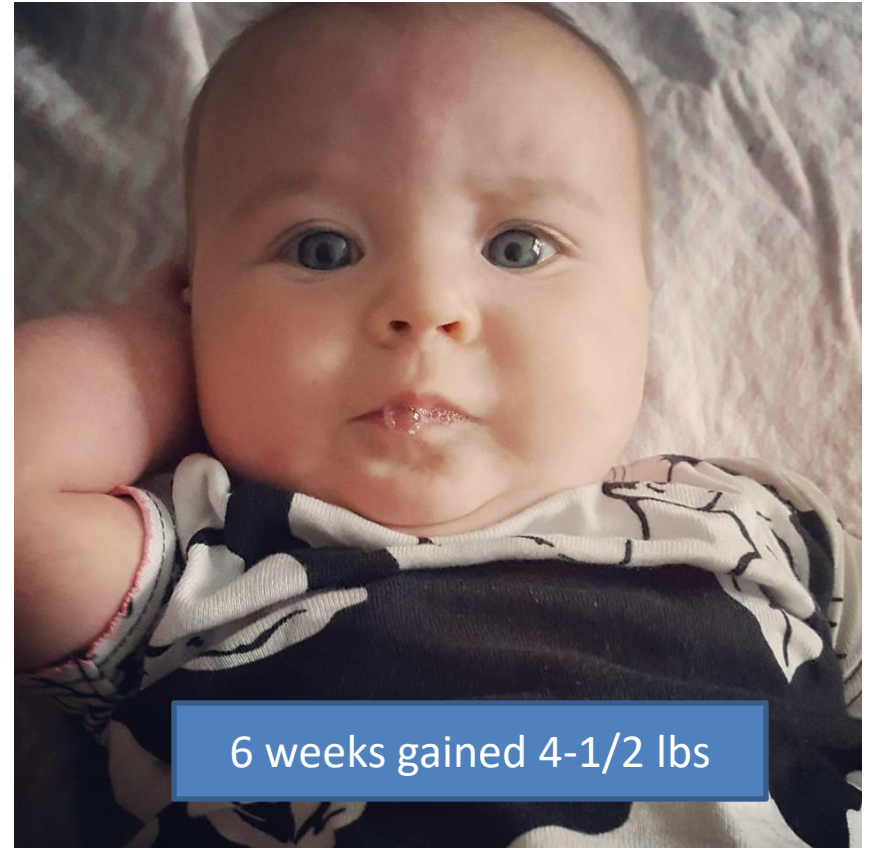


**Spaced closed on its own** after  
several year  
(no other orthodontic care was  
required)



# Remember Me?

## Hope this Presentation helped you understand “Ties” better



Surgical Provider requires objective intake to help with decision to treat

The following are suggested intake forms

**The provider is responsible for the decision to treat and must be confident in the decision based on entire intake history**

# Important Forms

## Infant Frenectomy Consultation Considerations

Patient name: \_\_\_\_\_ D.O.B.: \_\_\_\_\_ Date: \_\_\_\_\_  
Position: Supine/ Upright Vitals: HR \_\_\_\_\_ O2/Co2: \_\_\_\_\_ RR: \_\_\_\_\_ Temp. \_\_\_\_\_

Classification of the lip tie:    1       2       3       4

Presentation: Thin / Thick/ Mixed    Fibrous /Fleshy/Mixed    Corded / Triangular

Lip evaluation:

- Callus and or blisters present on the upper lip?    Y / N
- Defined Philtrum?    Y / N
- Full upper lip?    Y / N
- Upper lip curls up and out (flanges)?    Y / N
- Lip purses? Y / N
- Upper lip stretches and rolls to the tip of the nose?    Y / N
- Gums blanch when raising lip? Y / N
- Muscle tone tight or flexible
- Thin lipped compared to lower Y/N    \_\_\_\_ mm. upper / mm. lower \_\_\_\_ % \_\_\_\_

Tongue evaluation:

- Anterior Tongue-Tie Frenum Width: none - slight- <1mm - moderate 2-5mm - severe > 5mm
  1. Barrier to finger sweep: fence / speed bump
  2. Blanching gum when tongue retracts
  3. Sore or blister on tip of tongue
- Shape of Tongue: Notched / forked / cupped / heart-shaped / folds down / square / blades / rounded/ blunted
- Posterior tie:(posterior finger speed bump, tenting ( Eiffel tower), fence, cord
  1. Short < 5mm. / Medium 5-10 mm. /long > 10 mm.
  2. Lingual fiber: Thin/ Wide-Corded/Fleshy/Mixed- Shallow/Deep-Fascia-thin/thick
  3. Fiber Inserts: anterior 1/3, middle 1/3 , posterior 1/3
  4. Deep /Hidden ( seen with retraction—*Submucosal* )
- Finger suction: None - weak - strong -- even pressure - pinching clamp or bite
- Tongue cycle: continuous *progressive wave* - short burst with *prolonged rest* - humping push - pistons in and out
- Lower Jaw – tremors / tight / tension lines
- Tongue : posterior elevation- anterior lift - anterior point – extends beyond gums Y/N - sides curl – blades – cups
- Palate: Flat - Normal - High Arched - Bubble Palate – Cleft : soft tissue/ boney
- Asymmetry: Head Tilt: Y (right-left) /N    Face: Midline Symmetry: Y/N  
Jaw Symmetry: Y/N    Shoulder Preference: R/L    Cranial Vault Symmetry: Y/N  
Eyes Level: Y / N    Mouth and Eyes Level: Y/N    Anterior Posterior Strain: Y/N  
other \_\_\_\_\_

09/22/2017

# Intake Forms

**Thank you for scheduling an appointment with me. The goal of this consultation is to determine if there is a physical oral problem affecting your ability to breastfeed your baby.**

Please answer the following questions so that I may better understand your current breastfeeding issues.

Patient name: \_\_\_\_\_

D.O.B. \_\_\_\_\_ Birth Weight: \_\_\_\_\_ Current Weight: \_\_\_\_\_ Today's date: \_\_\_\_\_

Birth History: Hospital / Home Birth Term in weeks \_\_\_\_\_ Vaginal/C-Section Forceps/Vacuum assisted Y/N

Drugs used: Pitocin: Y/N others: \_\_\_\_\_

---

**Mother-** Do you have any of the following (please check all that apply).

- Painful nursing
- Are your nipples, bruised, cracked, everted, flat, inverted, blistered, blanched, flattened, lipstick shaped, bleeding or misshaped nipples after nursing?
- Breast swelling or Clogged ducts
- Mastitis
- Thrush of the nipples
- Milk supply: strong letdown, adequate, losing supply, not certain
- Have you altered your diet? Y/N If yes, why? \_\_\_\_\_

Do you use a shield to breastfeed? \_\_\_\_\_ Right – Left – Both sides

Have you had any breast surgery or trauma? Yes / No Reduction-Augmentation - Other (circle)

How many times a day do you breastfeed? \_\_\_\_\_ How long for each side? \_\_\_\_\_

**Infant-** Does any of the following apply (please check all that apply)

Has your baby been previously diagnosed with a lip or tongue tie? Y/N

If yes, was it treated somewhere else? Y/N

If yes, when \_\_\_\_\_ where \_\_\_\_\_ how \_\_\_\_\_ by who \_\_\_\_\_ ?

Has your baby taken or is currently taking any prescribed medications? Y/N

If yes, which ones? \_\_\_\_\_

Has your baby had his/her Vitamin K drops or shot? Y/N Is there a family history of tongue or lip ties? Y/N

Have you seen a Chiropractor, Osteopath or CST for your baby? Y/N

Is there any posture or shoulder tension or head position favoritism? i.e. sleeps with head arched back ? Y/N

**When nursed is the feeding:**

- Diapers: Yellow / Green / Brown Seeded / Mucous / Bloody (circle all that apply)
- Prolonged, incomplete or baby slides off of the nipple Y/N
- Baby bobs mouth on and off to latch Y/N
- Baby falls off the breast and sleeps Y/N
- Lip or tongue feels weak---can or cannot retain a pacifier in mouth by self (circle)
- Lip or tongue cycles through sucking and movement for a short time then stops and recycles Y/N
- Can you hear your baby breathe? Y/N Typical baby breathing: lips apart or lip together (Circle)
- Chronic burping, flatulence and or hiccups? (circle that which applies)
- Distended or bloated belly (circle)
- Signs of reflux such as chronic spitting up, gagging or vomiting Y/N (circle that which applies)
- Signs of discomfort such as arching of the back or clenching of the hands Y/N
- Clicking noise or loss of suction while nursing: none, occasional, frequent, inconsistent (circle)
- Breast milk leakage from mouth, nose or both (circle that which applies)
- Does your baby's tongue feel like sandpaper rubbing against you? Y/N
- Is there a crease mark on your baby's upper lip after nursing? Y/N
- Is your baby losing weight? If yes, how much? \_\_\_\_\_ Y/N
- Does nursing sound like there is drinking, gulping or other noises? (circle that which applies)
- Do you supplement with a bottle to assist with proper feeding? Y/N breast milk, formula or both
- Is there a sustained strong or clamping latch? Y/N

Any other nursing concerns: \_\_\_\_\_ 01/22/2018

Thanks Mom & Dad, whatever you decide.

**I LOVE You Guys!**





# Contact Information

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