



Tongue Ties: Teamwork makes the dream work!

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I have no relevant financial relationship (s)
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Course Outline

1. Multi-Disciplinary Team Approach in Treating Infants.
2. Evaluate holistic model of care from a team perspective regarding tethered oral tissues.
3. Apply a team approach to provide care across a lifespan to families with tethered oral tissues
4. Analyze outcomes related to the team approach to providing care for the families with tethered oral tissue.

About Me

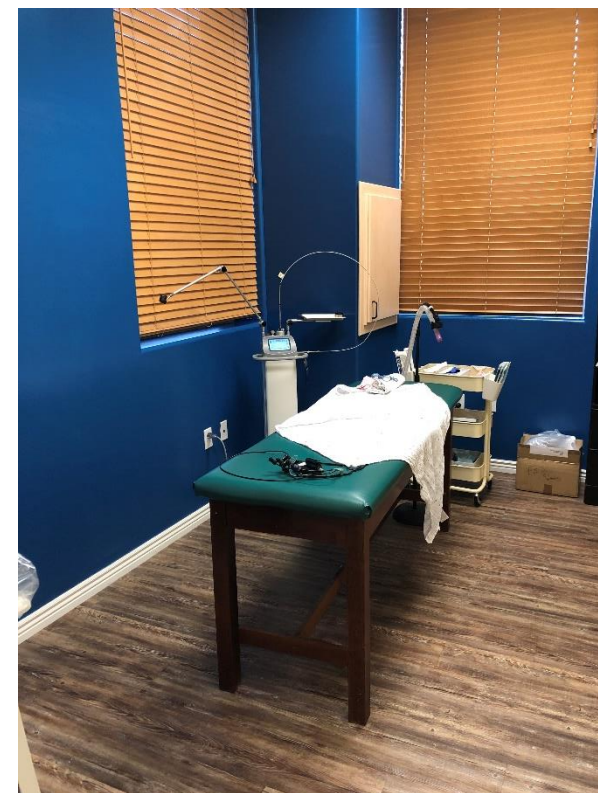
- Wife/Mom of 3
- La Leche League Leader
- CALCA Board Member
- Family Nurse Practitioner
- IBCLC
- CSOM
- DABLS



Clinic

- **Arizona Breastfeeding Medicine and Wellness**
- Dr. Cara Riek DNP, RN, FNP-BC, IBCLC, DABLS
- Breastfeeding Medicine Clinic
 - 2 Family Nurse Practitioners
 - 8 IBCLCs
 - 1 SLP/OMT
 - Collaboration throughout the community
- Started in 2015





Our Office



What is a team approach?



IBCLC or
SLP/OMT/COM

Release Provider

Bodyworker



Why a team approach?

Support Team

- IBCLCs
- OMTs/COMs
- Chiropractic
- Physical Therapy
- SLPs
- Pediatricians
- Dentists
- Midwives
- Doulas
- Occupational Therapy
- And more!





Why do we need to have a multidisciplinary approach?

- Function and form will not be instantly restored after a release. Habits and detours have been established, regardless of age.
- The longer the tie has been present, the longer these structures will take to restore proper form and function.
- Bodywork makes the exercises easier and makes the likelihood of reattachment less likely.
- Patients will get results quicker under care of a bodyworker.

History of Treating Ties

Hieronymus Mercurialis: Italian Physician: 1584



“Very prudently, not to tear off the membrane itself, but to perforate it near its root with a needle, and with this needle to pull through a thread, and to ligate it. This thread, tightened daily, will soon and gently detach the membrane.”

Much Ado About Nothing: Two Millenia of Controversy on Tongue-Tie

M. Obladen, Neonatology 2010; 97:83-89

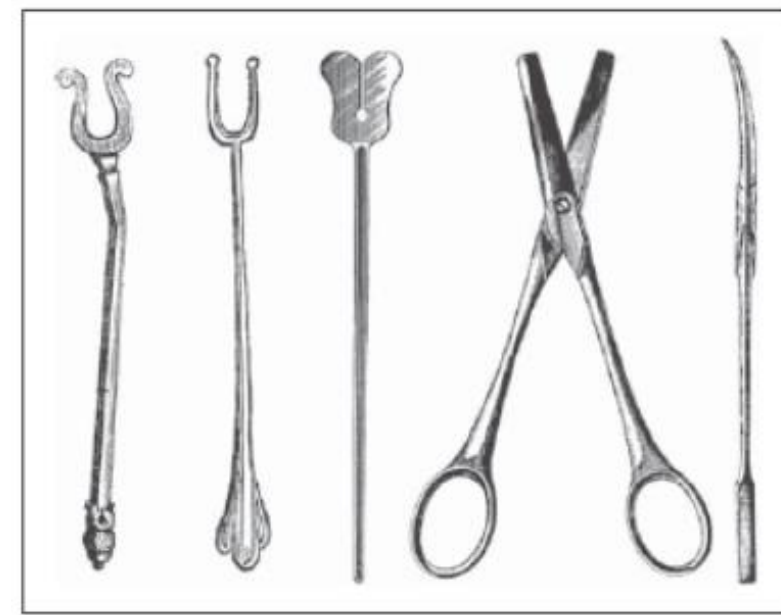
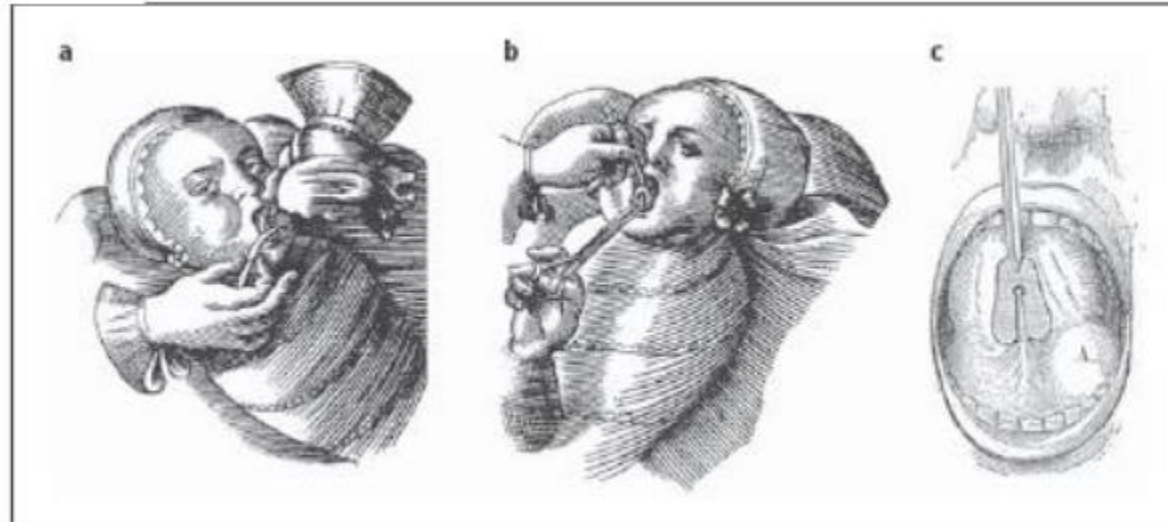


Fig. 2. Surgical instruments for frenotomy. From left to right: tongue-lifter of Scultetus [15] in 1666; tongue fork of Mauriceau [16] in 1680; sonde cannelée of Petit [20] in 1774; blunt curved scissors proposed by Schmitt [51] in 1804; lateral view of scissors.

Fig. 1. Woodcuts showing the operative techniques of Fabricius [14] in 1620 (a) ['the tongue is held with a handkerchief and the band loosened with a falciform knifelet'] and Scultetus [15] in 1666 (b) ['how the surgeon lifts the tongue with a silver instrument and dissects the attached band with a small sharp scissors']. c Ranula (grenouillette) with Petit's spatula on frenulum [30].



The shift.....

In the 1950's, Pediatric Textbooks stop recommending tongue tie treatment....



CONGENITAL TONGUE-TIE AND ITS IMPACT ON BREASTFEEDING

By Elizabeth Coryllos, MD, MSs, FAAP, FACS, FRCSc, IBCLC

Catherine Watson Genna, BS, IBCLC

Alexander C. Salloum, MD, MA

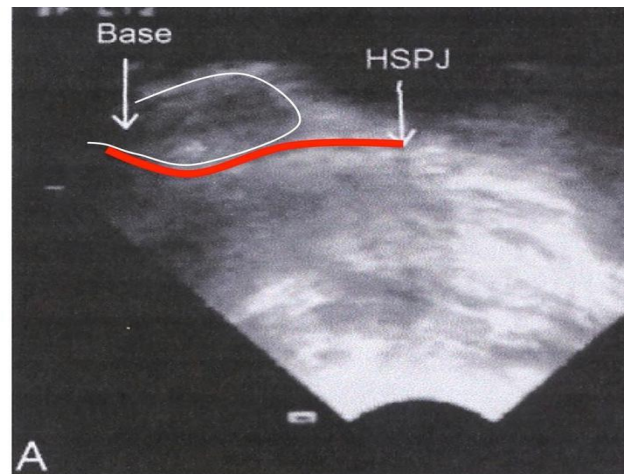
Summer 2004

- Findings
 - Tongue needs to be extended over the lower gum during suck or else a “Phasic bite reflex” (chewing) is triggered.
 - Chewing motion is sometimes sufficient for transferring milk from a bottle, but is very problematic for transferring from the breast.
 - Breastfeeding requires well-defined peristalsis from the front of the tongue to the back of the tongue, which a tongue tied infant is unable to do.
- Conclusion
 - **“Tongue-tie is a significant clinical entity, which, when symptomatic, should be treated as early as possible to minimize this breastfeeding problem. Surgical treatment is safe and effective. Complications are rare and general anesthesia is not required.”**

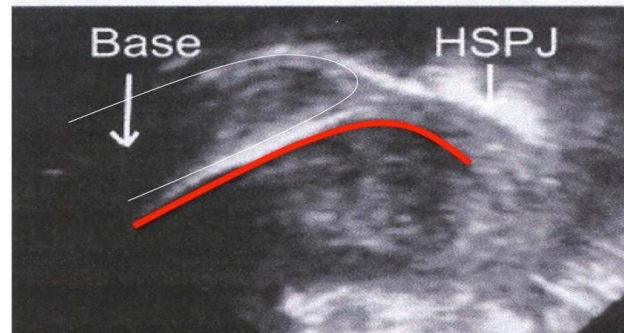
Frenulotomy for Breastfeeding Infants With Ankyloglossia: Effect on Milk Removal and Sucking Mechanism as Imaged by Ultrasound

Donna T. Geddes, Diana B. Langton, Ian Gollow, Lorili A. Jacobs, Peter E. Hartmann, Karen Simmer

Pre-frenotomy:
Base compression



Post-frenotomy:
Less base compression



- Conclusion
 - **Tongue Tie results in improper compression of the nipple, causing decrease in milk intake and resulting maternal pain.**
 - **Resolving the Tongue Tie resulted in improved milk transfer both in quantity and time, decreased maternal pain, and improved attachment at the breast.**

Tongue-tie in the newborn: early diagnosis and division prevents poor breastfeeding outcomes

Breastfeeding Review • VOLUME 23 • NUMBER 1 • MARCH 2015

David A Todd Monica J Hogan

- Study
 - Prospective Study (2008 to 2011)
- Findings
 - Study looked at the result of delaying tongue-tie revision based on newly implemented hospital policy.
 - Prior to policy releases were occurring around day six of age. Post policy revisions occurred 10 days of age. As a result there was an increase in the number of mothers not able to continue to breastfeed (3.5% to 17.4%)
 - All mothers who had release noted decreased nipple pain and improvement in feedings.
- Conclusion
 - **Possible correlation between the age or release and ability for infant to be able to successfully breastfeed.**

Ties and Breastfeeding

ORIGINAL ARTICLE

Suboptimal breastfeeding in the United States: Maternal and pediatric health outcomes and costs

Melissa C. Bartick^{1,2} | Eleanor Bimla Schwarz³ | Brittany D. Green⁴ | Briana J. Jegier⁵ | Arnold G. Reinhold⁶ | Tarah T. Colaizy⁷ | Debra L. Bogen⁸ | Andrew J. Schaefer⁹ | Alison M. Stuebe^{10,11}

○ Findings

- If 90% of US families exclusively breastfed for 6 months, the United States would save \$17.2 billion per year and prevent 3,340 deaths.

○ Conclusion

- **“Policies to increase optimal breastfeeding could result in substantial public health gains. Breastfeeding has a larger impact on women's health than previously appreciated.”**
- **“Current breastfeeding rates are suboptimal and result in significant excess costs and preventable infant deaths.”**

Epidemiological Data

Outcome Indicators	HP 2030 Target	National**	National*	Arizona**	Arizona*	Virginia**	Virginia*
Breastfeeding Initiation	**	84.1	83.2	89.9	85.4	91.7	83.3
Breastfed at 6 months	**	58.3	55.8	64.9	58.3	74.0	63.0
Breastfed at 12 months	54.1	35.3	35.9	39.3	40.4	42.3	40.1
Exclusively Breastfed at 3 months	**	46.9	45.3	48.8	43.2	56.8	39.6
Exclusively Breastfed at 6 months	42.4	25.6	24.9	24.6	24.0	30.4	25.8
Breastfed infants receiving formula before 2 days of age	**	19.2	19.2	24.9	20.2	16.2	18.6

**Breastfeeding Report Card (CDC, 2020); Data from 2017

*Breastfeeding Report Card (CDC, 2022); Data from 2019

International Journal of Pediatric Otorhinolaryngology

journal homepage: www.elsevier.com/locate/ijporl

Breastfeeding difficulties and oral cavity anomalies: The influence of posterior ankyloglossia and upper-lip ties

Seth M. Pransky^{a,b,*}, Denise Lago^a, Paul Hong^{c,*}

^aRady Children's Hospital, San Diego, CA, United States


^bDivision of Otolaryngology—Head and Neck Surgery, University of California, San Diego, CA, United States

^cDivision of Otolaryngology—Head and Neck Surgery, Dalhousie University, Halifax, NS, Canada

- Study
 - Retrospective Analysis; 618 infant patients with breastfeeding difficulty
- Findings
 - 4 out of 5 patients had some degree of tongue and lip tie.
 - Majority of patients reported some improvement of breastfeeding symptoms after frenotomy.
- Conclusion
 - **Upper lip ties may contribute to breastfeeding difficulties.**
 - **Frenotomy is a safe, simple, and effective method to potentially improve breastfeeding outcomes.**

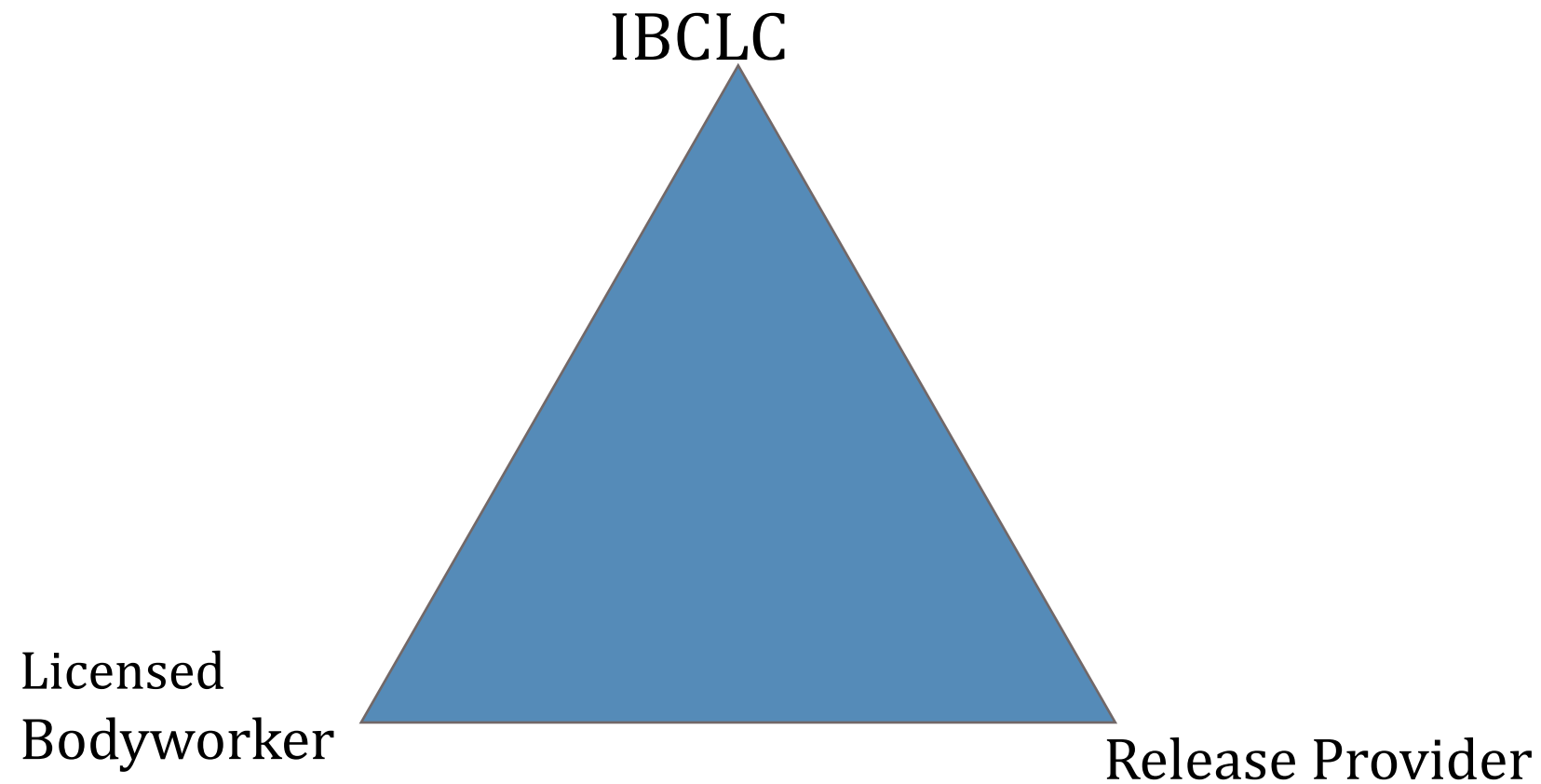
*Ties affect
individuals across a
lifespan.*





*The order of
care is
imperative to
appropriate
healing.*

Triad of Care



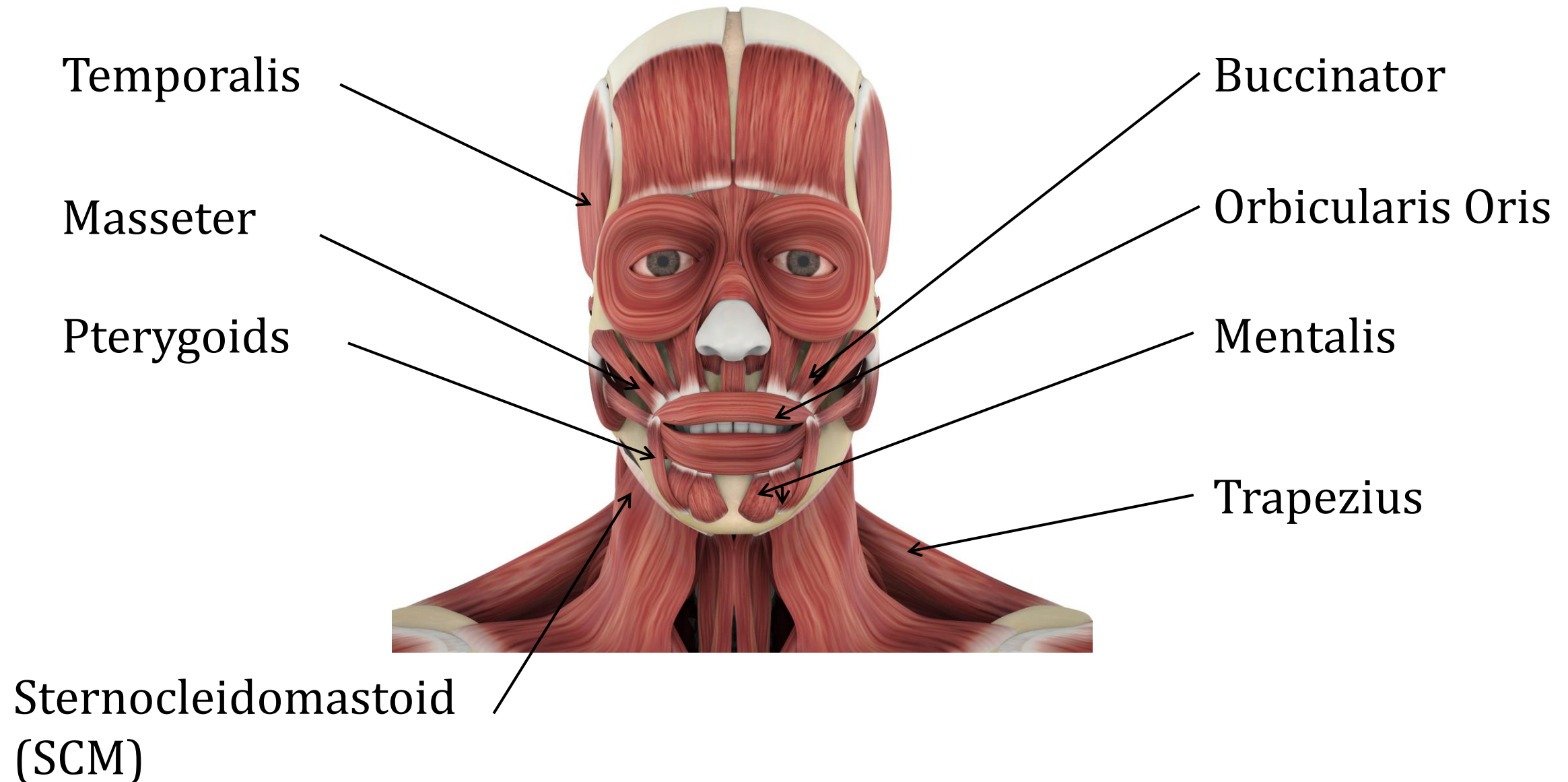
Anatomy and Physiology

“If the twig is bent, so grows the tree” -WG Sutherland

- ▶ The growing body of the child will organize and adapt itself around the strain.
- ▶ Even in the first hours of life, a baby will show signs of compensation from the strains of intra-uterine strain, birth trauma, and TOTs.



Importance of Movement

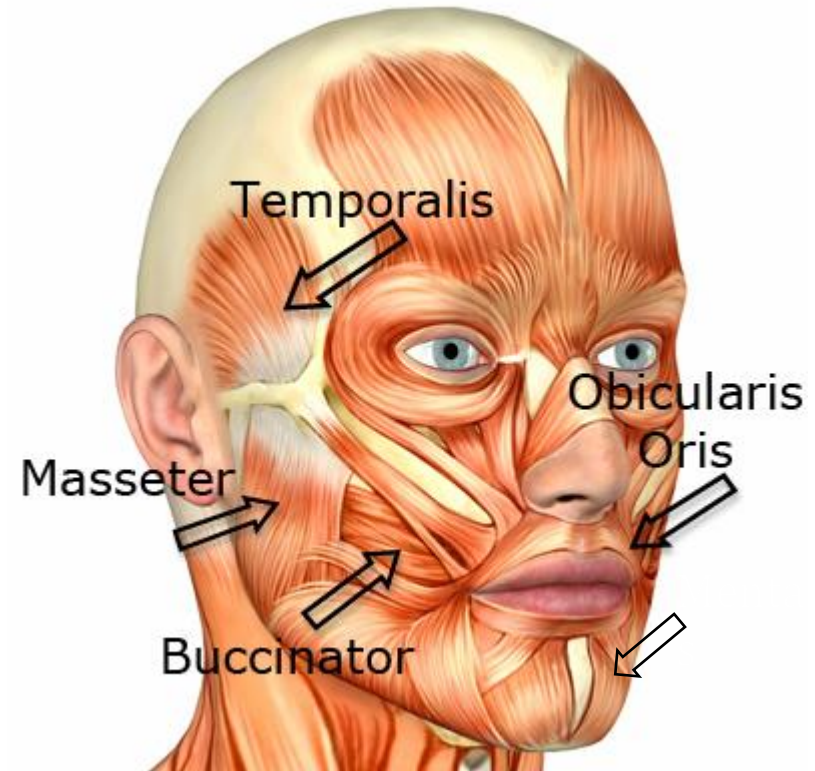


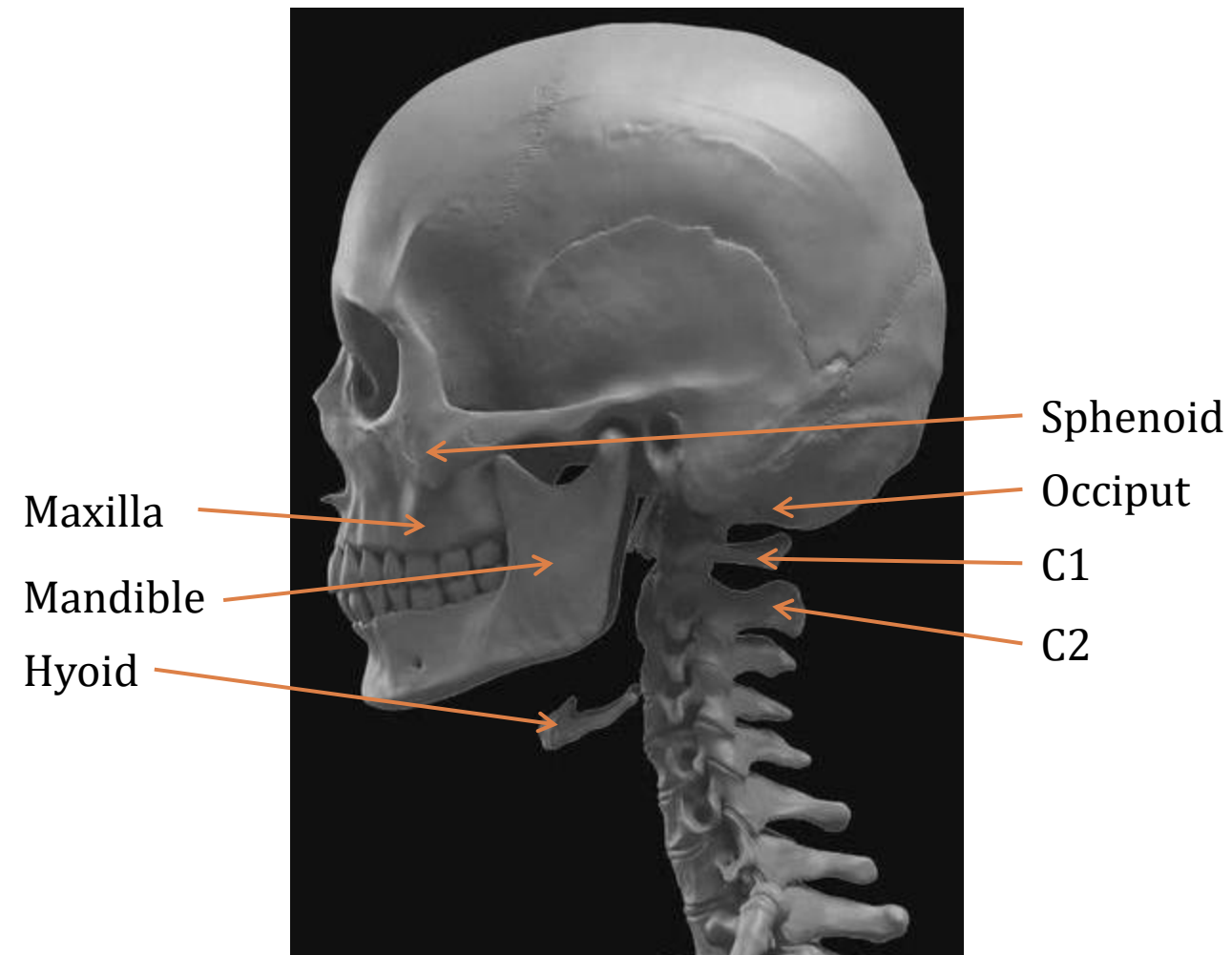
Muscles Affected By Ties

- **Masseter**
 - The back of the cheek
 - Large muscle that raises the lower jaw and is used in chewing
- **Buccinator**
 - Center/front of the cheek
 - Compresses cheek, allowing for rapid changes in volume of mouth cavity

Muscles affected by ties

- Temporalis
 - Temple
 - Closes jaw
 - Elevates mandible
- Orbicularis Oris
 - The “O” around the mouth
 - Muscle for the lip closure and lip pursing
- Mentalis
 - Chin
 - Elevates and protrudes the lower lip; used in pouting

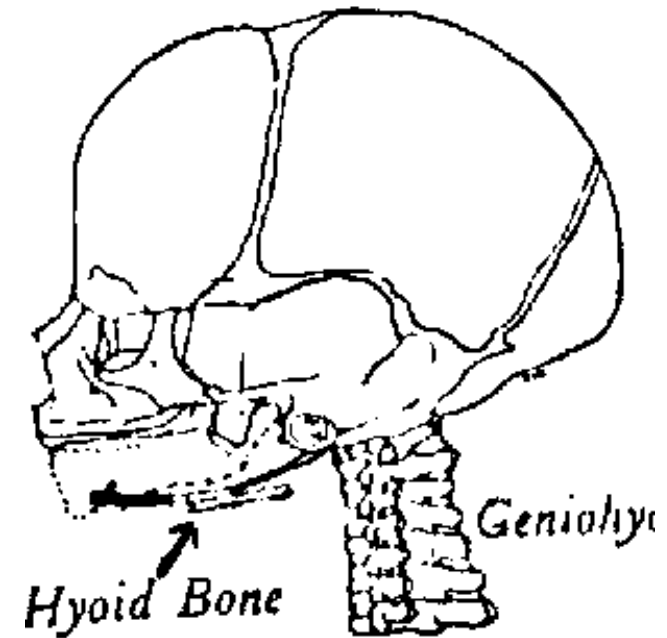




Bones/joints affected by ties

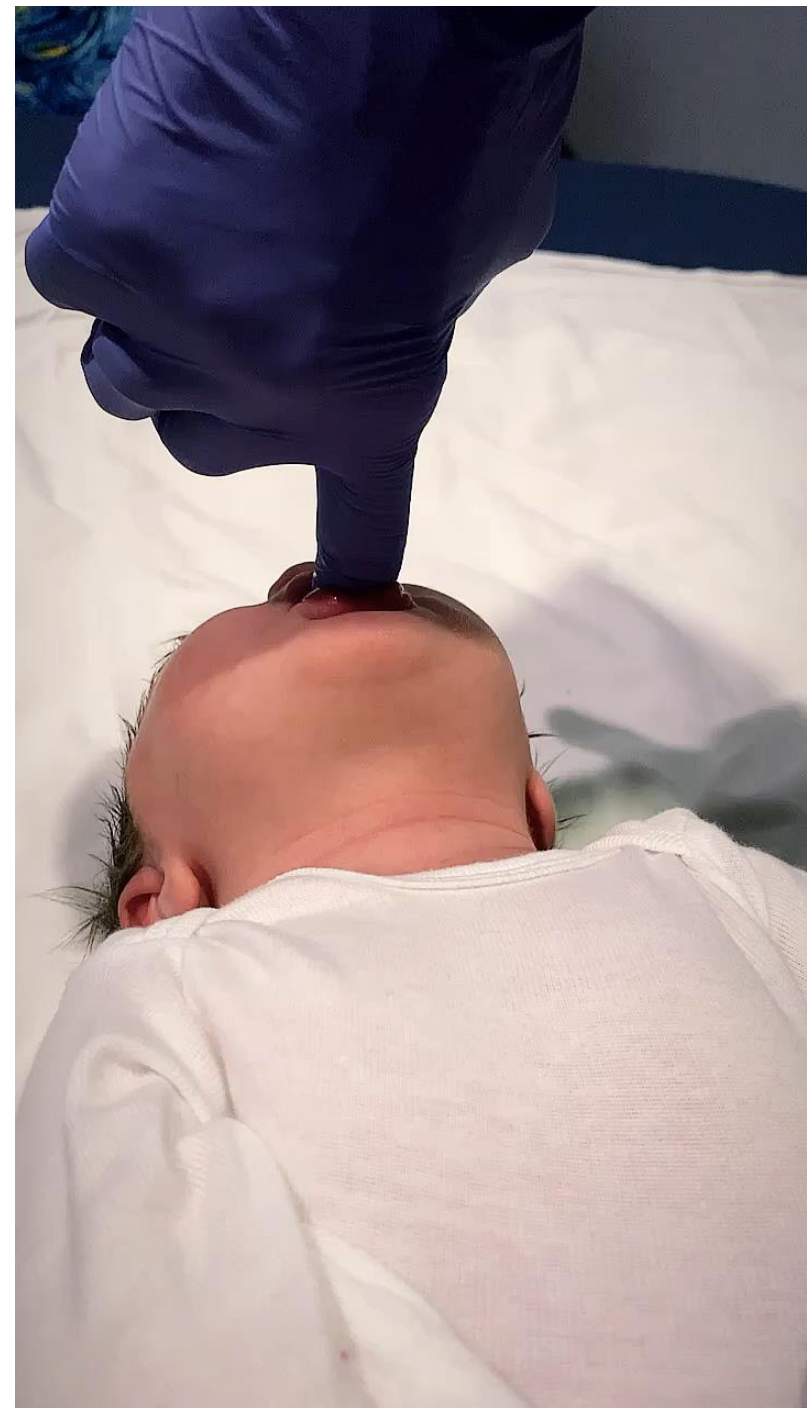
- **Hyoid Bone**

- It is a small free-floating bone that is the nexus of connections between the structures involved in the anatomy and physiology of sucking, swallowing, and breathing
- It is held in position by seven connections
- The muscles attached to the hyoid are involved in the bulk of mechanical breastfeeding behaviors. Optimal function of these muscles depend on the position of the head and neck.



Undulation

RHYTHMIC MOVEMENT OF
THE HYOID



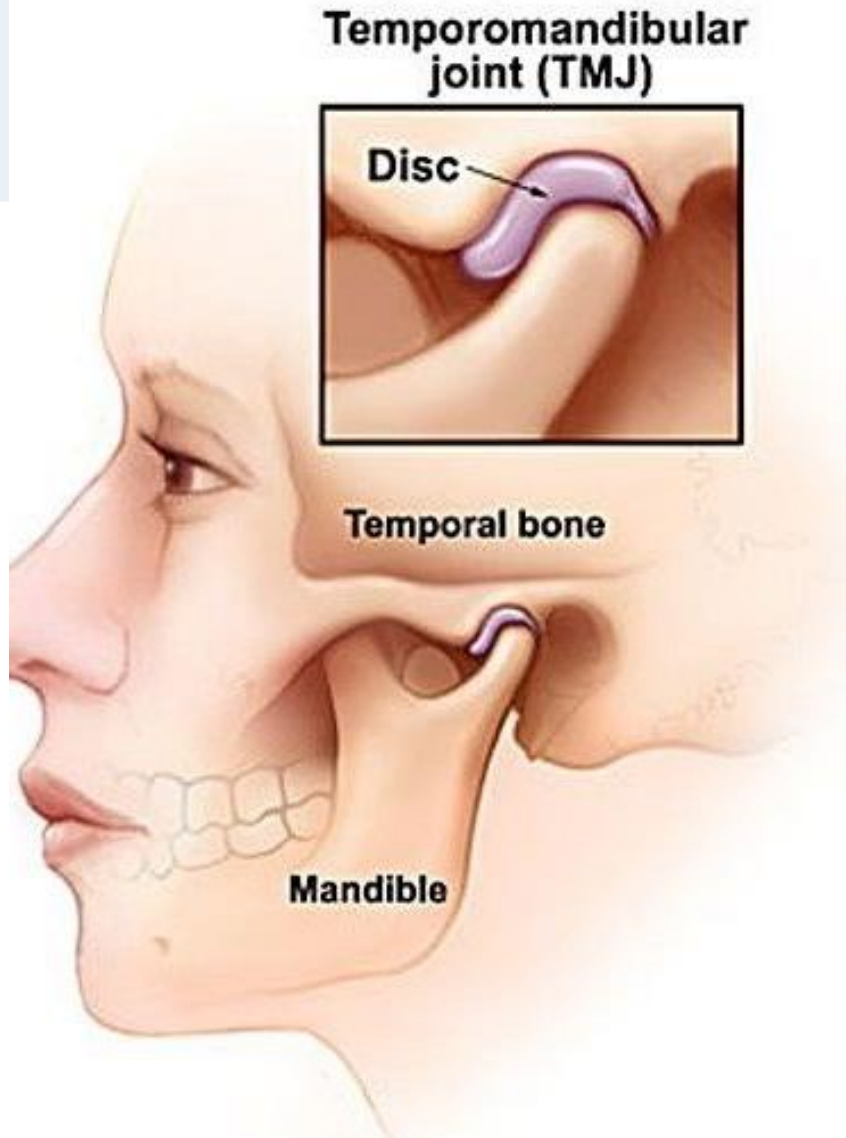
Oral Infant Exercise

9/3/20XX

Presentation Title



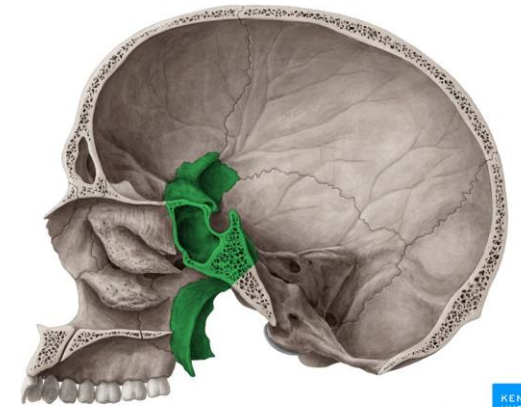
Bones/joints affected by ties



- Jaw (Mandible/Maxilla)
 - Provides a base for movements of the tongue
 - Up to raise the pressure in the mouth during swallowing
 - Drops to reduce pressure during suction
 - Lateral pterygoid muscle opens the mouth
 - Recessed jaw position can lead to obstruction of the airway. Breastfeeding provides beneficial forces on the development of the jaw during a period of rapid growth.

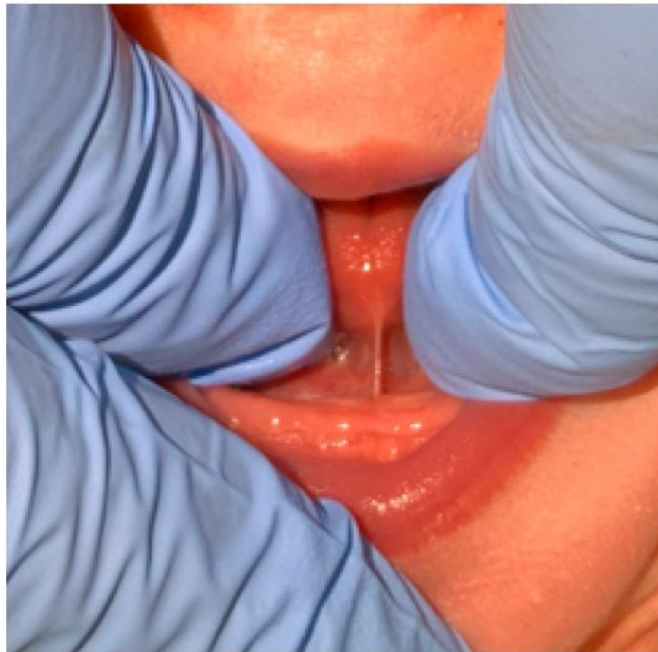
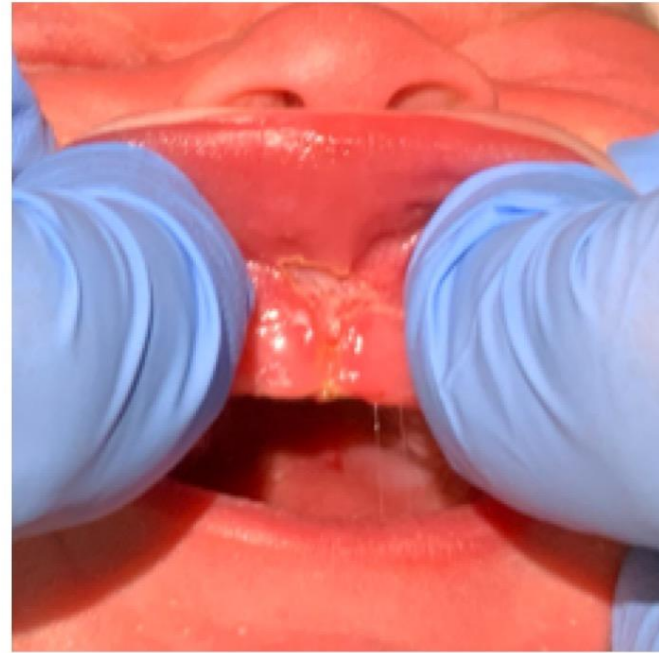
Sphenoid bone

- The sphenoid bone is wedged between several other bones in the front of the cranium. It consists of a central part and two wing-like structures that extend sideways toward each side of the skull. This bone helps form the base of the cranium, the sides of the skull, and the floors and sides of the orbits.















IBCLC Assessment

Considerations

- Often multifactorial
- Issues worse before they get better
- Birth process and womb placement
- Antibiotic usage
- GI health of mom and infant
- Protein sensitivities
- Compensations
 - Airway/Breathing



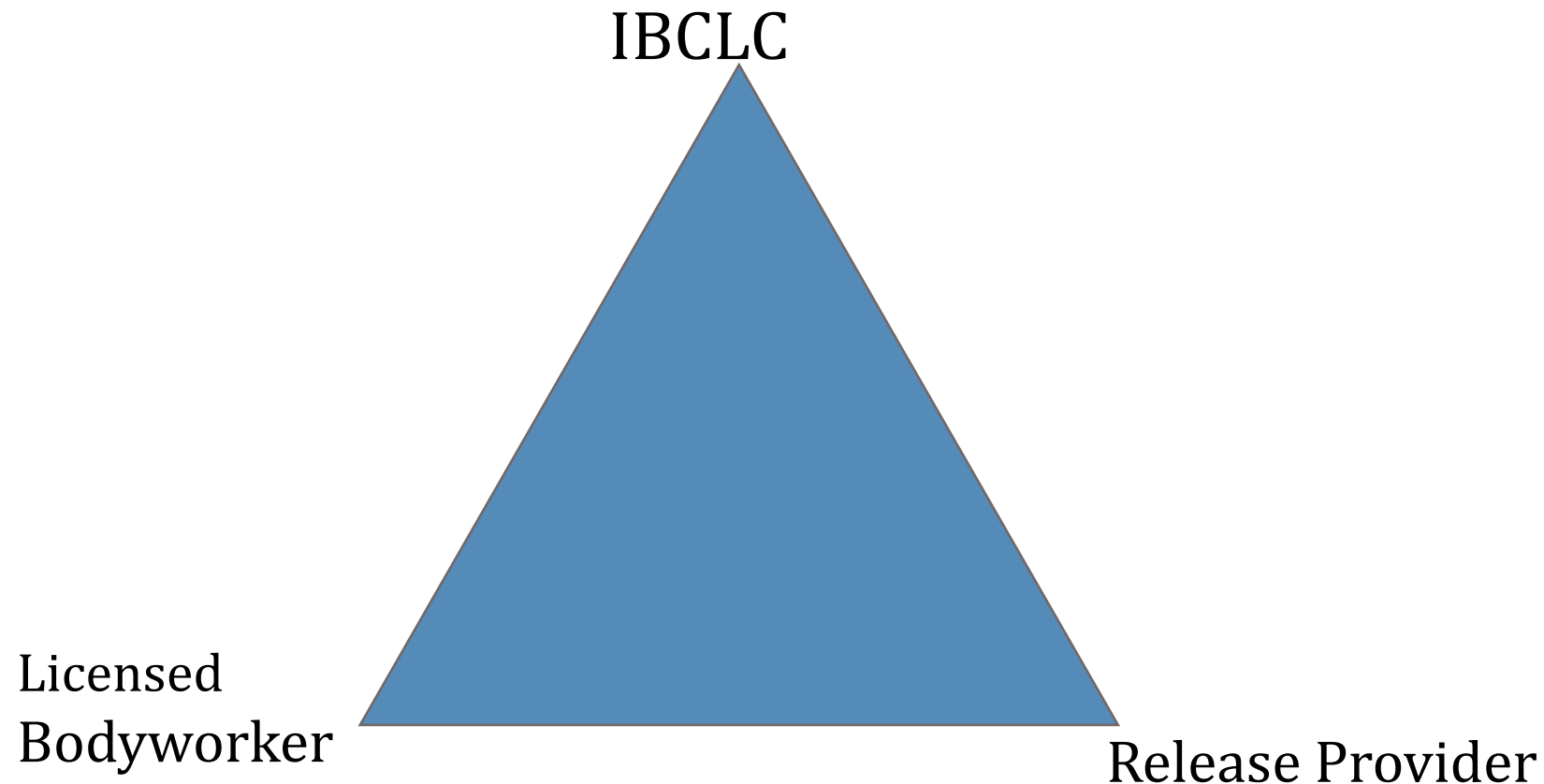






*It is okay to
be unsure.*

The order of care is **imperative**
to appropriate healing.





Alternative Options

- Body work
 - PT/OT/Chiropractic
- Breathing work
- Oral Play
 - Suck Training
 - Palate Desensitization

Timing of Release

- ▶ First 10 days of life
- ▶ Birth history
- ▶ Feeding history
- ▶ Compensations
- ▶ Team approach





When Not to Release

- Structural Assessment
- Low Milk Supply
- Low Tone
- Underlying Illness







Mindful Preparation in Older Babies

Mindful Preparation



- Feeding Therapy before release to strengthen and tone tongue
- Bodywork
- Nasal Breathing
- Decreasing trauma for young children
- Age-appropriate exercises
- Appropriate expectations

Oral Releases







Post-op Care

Pain Management for Infants

Acetaminophen and Arnica for infants

Ibuprofen for babies over 12 lbs

Homeopathic Remedies

Rescue Remedy

Pain Management for older children

Ibuprofen and Arnica

Homeopathic Remedies

Rescue Remedy

Exercises and Proper wound management

Follow-up





Post-op Exercises

Reattachment

Reasons for Reattachment



- ▶ Timing of release
- ▶ Healing process of the body
- ▶ Lack of follow-up care. Lack of bodywork
- ▶ Not releasing all ties at the same time
- ▶ Release technique

Final Considerations

- ▶ Mindful conversations with parents
- ▶ Appropriate follow-up
- ▶ Active wound maintenance
- ▶ Team collaboration
- ▶ No two patients are alike



Questions?

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