Neonatal Ankyloglossia & Breastfeeding

Breastfeeding Curriculum, updated 2021

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Learning Objectives

After reviewing this presentation, the learner should be able to:

- Define ankyloglossia
- Assess for ankyloglossia in the newborn
- Describe the procedure of frenotomy, including indications and risks

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Disclaimers

- This presentation will review ankyloglossia in the neonatal period only.
- This presentation is for informational purposes only. It is not intended to provide comprehensive instruction on any procedure.
- Frenotomy should be performed only by trained, licensed providers.

Ankyloglossia

- Ankyloglossia, also known as tongue-tie or tight frenulum, is a congenital anomaly in which the inferior surface of the tongue is tethered to the floor of the mouth by the frenulum so that the tongue's range of motion is restricted.
- 1-11% of newborns may have evidence of ankyloglossia (male > female).

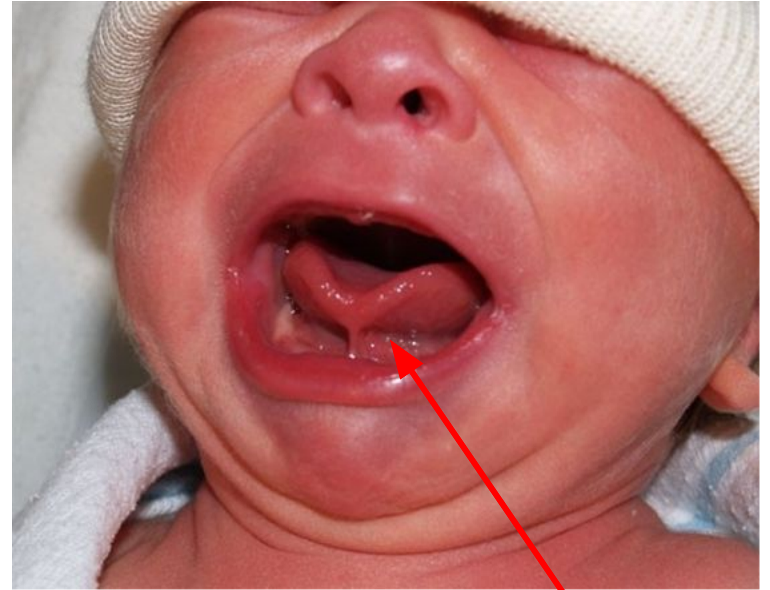

Image by Janelle Aby, MD: : https://med.stanford.edu/newborns/professional-education/photo-gallery/mouth.html

Restricted frenulum

Ankyloglossia Symptoms

- None (may be asymptomatic)
- Poor latch
- Nipple pain and/or trauma
- Prolonged feeding sessions
- Sleeping at the breast
- Poor drainage of the breast/milk stasis
- Lack of infant satiety
- Poor weight gain
- Failure to thrive

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Neonatal Physical Exam Findings with Ankyloglossia

- Tongue extension restricted to alveolar ridge
- Limited elevation of tongue during crying
- Tip of tongue is notched or heart-shaped
- Frenulum is short and inelastic
- Tongue is attached close to or on the alveolar ridge

Ankyloglossia Assessment

- Full evaluation of the breastfeeding dyad is essential.
- Ankyloglossia may be associated with no breastfeeding issues
- Better latch technique may be sufficient treatment
- May improve with time, especially with ample supply
- Multiple tools to score degree of restriction for neonatal ankyloglossia have been developed

See video for assessment.

Ankyloglossia Treatment - Frenotomy

Asymptomatic or mild cases require no treatment.

For symptomatic or more severe restriction with no improvement with quality lactation management, standard treatment is frenotomy (release of tethered tissue).

- Complete pre-procedure physical examination of the newborn by a pediatric care provider recommended to assess for other underlying neonatal diagnoses
- Can be done with scissors in office or hospital setting by trained providers
- Simple, low-risk procedure
- Some studies report immediate improvement in maternal pain
- Good follow up essential to assess for improvement in symptoms and milk transfer

Scissor Frenotomy Instruments

Image courtesy of Susan Rothenberg, MD, IBCLC, FACOG, FABM

Frenotomy Technique

Video example of a scissors frenotomy procedure

Ankyloglossia Frenotomy (Laser)

- Alternative procedure
- Procedure and goals are similar
- Procedure time is longer than scissors
- Greater expense than scissor frenotomy
- Minimal to no bleeding is typical
- Parents usually not in room due to safety protocols
- Topical or no anesthetic
- General anesthesia is NOT necessary

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Frenotomy Risks

- Risk of bleeding, hematoma formation, tissue damage or nerve injury with paresthesia or numbness of tongue (in a non-verbal neonate) with deep incisions
  - Anatomical post-mortem neonatal specimens show the genioglossus may be drawn into the fold of the frenulum and potential lingual nerve branches are superficial on the ventral surface of the tongue *
- Thermal injury to frenulum and surrounding tissues with laser

LeFort Y, Evans A, Livingstone V, et al; Academy of Breastfeeding Medicine. ABM Position Statement on Ankyloglossia in Breastfeeding Dyads. Breastfeed Med 2021;16(4):278-281. Available at: https://www.bfmed.org/statements
*Mills N, Keough N, Geddes DT, Pransky SM, Mirjalili SA. Defining the anatomy of the neonatal lingual frenulum. Clin Anat. 2019 Sep;32(6):824-835. doi: 10.1002/ca.23410. Epub 2019 Jun 3. PMID: 31116462.

Additional Areas for Research on Neonatal Ankyloglossia

- Clear definition and best tools to assess
- Extent of incision required for optimal breastfeeding outcome
- Documentation of immediate and long-term adverse outcomes
- Identification of optimal technique for frenotomy
- Long term outcomes on effectiveness and duration of breastfeeding

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Neonatal Ankyloglossia – Selected References

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Acknowledgement

This slide deck was supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling $200,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by American Academy of Pediatrics, CDC/HHS, or the U.S. Government.

Thank you to the Project Advisory Committee organizations:

- American Academy of Pediatrics (AAP), Lead Organization
- Academy of Breastfeeding Medicine (ABM)
- American Academy of Family Physicians (AAFP)
- American College of Obstetricians and Gynecologists (ACOG)
- American College of Osteopathic Pediatricians (ACOP)
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- National Hispanic Medical Association (NHMA)
- National Medical Association(NMA)
- Reaching Our Sisters Everywhere (ROSE)
- United States Breastfeeding Committee (USBC)

Thank you to the many expert reviewers of these curriculum resources!

Thank you to the Project Advisory Committee members:

- Joan Meek, MD, MS, RD, FAAP, FABM, IBCLC
- Julie Ware, MD, MPH, FAAP, IBCLC
- Lori Feldman-Winter, MD, MPH, FAAP
- Tara Williams, MD, FAAP, FABM
- Julie Wood, MD, FAAFP
- Lauren Hanley, MD, IBCLC, FACOG
- Sharon Mass, MD, FACOG
- Michal Young, MD, FAAP
- Sahira Long, MD, IBCLC, FAAP, FABM
- Jason Jackson, DO, FACOP
- Amelia Psmythe Seger
- Kelly McGlothen-Bell, PhD, RN, IBCLC
- Jennifer Nelson, MD, MPH, FAAP, DipABLM
- Susan Rothenberg, MD, IBCLC, FACOG, FABM
- Judith Flores, MD
- Sara Oberhelman, MD, CLC, FAAFP
- Caitlin Weber MD, MS, IBCLC, FAAFP
- Leslie Cortes, MD
- Kelsey Sullivan, MD
- Emily Fishman, MD, MSCI
- Melissa Hardy, MD
- Mau Assad, MD
- Ariana Rudnick, MD
- Whitney Lieb, MD

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