



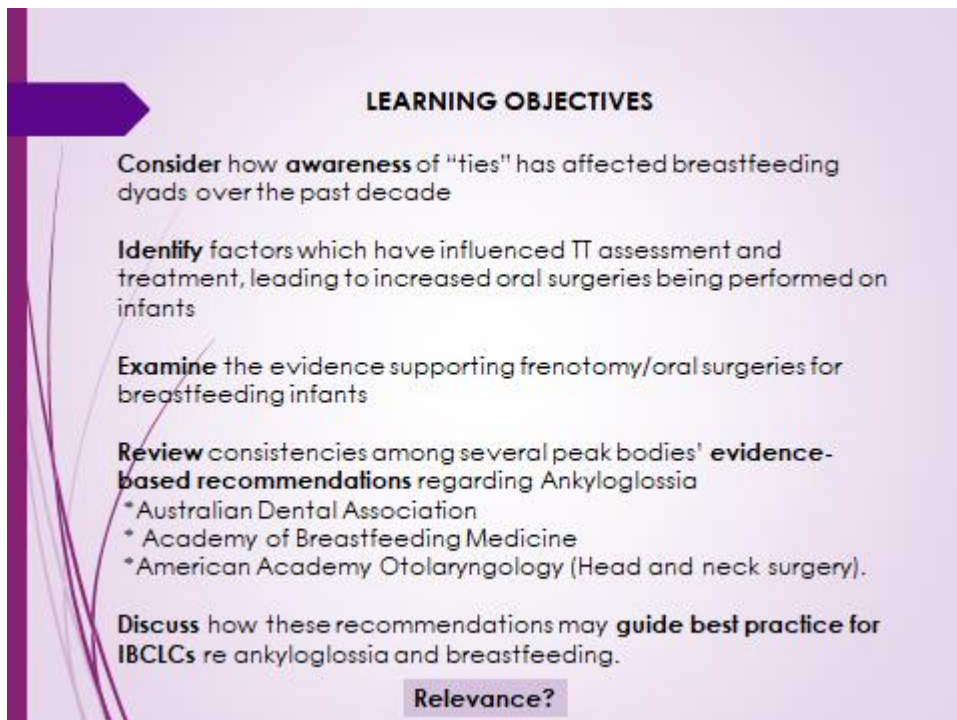
Let's examine the evidence for Tongue Tie & Lip Tie Surgical Treatment

(for Breastfeeding)

Lois Wattis
Registered Midwife & International
Board Certified Lactation Consultant

acm
Australian College of
Midwives

I represented ACM on the ADA Multidisciplinary panel, as did Michelle Simmons.



LEARNING OBJECTIVES

Consider how **awareness** of "ties" has affected breastfeeding dyads over the past decade

Identify factors which have influenced TT assessment and treatment, leading to increased oral surgeries being performed on infants

Examine the evidence supporting frenotomy/oral surgeries for breastfeeding infants

Review consistencies among several peak bodies' **evidence-based recommendations** regarding Ankyloglossia

- * Australian Dental Association
- * Academy of Breastfeeding Medicine
- * American Academy Otolaryngology (Head and neck surgery).

Discuss how these recommendations may **guide best practice for IBCLCs** re ankyloglossia and breastfeeding.

Relevance?

Guide best practice – midwives and IBCLCs are likely to notice baby's oral frenula when assisting breastfeeding mothers and potentially initiate the assessment and treatment process.

Growing Awareness of Tongue Tie



Tongue-tie has been noted throughout history

- Increased awareness worldwide over past 10-15 years, particularly relating to breastfeeding problems
- Medicare Data – 420% increase in surgical treatments over past decade in Australia.
- Does not include surgeries by dentists – statistics not documented so not available.
- **800% INCREASE** estimated in the USA (IABLE)

In recent years, there has been a large increase in the referral and surgical management of newborns, infants and children with ankyloglossia. A 420% increase in frenotomy rates, as derived from Medicare data, was reported in Australia over the last decade.¹ Surgical management has also reportedly increased in Canada² and North America.³

Pubmed – Parental and provider perspectives on social media about Ankyloglossia
<https://pubmed.ncbi.nlm.nih.gov/33964675> (paediatric TT)

Recent presentation by Dr Elise Graham (Ped.Otolaryngologist) for IABLE reported an estimated 800% increase in TT treatments!

ANECDOTALLY – as midwives we are at the coalface of perinatal and neonatal care, and few of us would not have encountered examples of parents' concerned focus on their baby's oral anatomy.

Careful attention to language used if identifying a tongue tie/frenulum in a newborn – avoid inferring baby is “faulty” or breastfeeding will be problematic.

"Ties/TOTs" – A Social Media Phenomenon

- Recent analysis of ties related discussions on Twitter – 2395% increase between 2009 and 2018. 94% had a pro-frenotomy sentiment.
- Authors quote: "*There may be a disconnect or misalignment of medical society's best evidence and practice recommendations with what the lay public may read on non-peer-reviewed social media websites*"
- "it's helpful for providers to be aware of the **significant amount of non-scientific information and opinions** which exists regarding TT which can influence decisions regarding frenotomy."
 - Grond et al 2021 Int.J. Pediatr Otorhinolaryngol.

Example of how social media has reflected and influenced the rising interest in TT.

The Evidence Hierarchy

Systematic Review

Randomized Controlled Trial (RCT)

Cohort Study
Case Control Study

Case Report

Expert opinion, Anecdote

QUALITY

Permission to use slide obtained from "Tie Savvy"

When we ask "what is the best available evidence" the hierarchy of evidence is a core principal of Evidence-based practice (EBP). EBP hierarchies rank study types based on the rigour (strength and precision) of their research methods.

The higher up the hierarchy PYRAMID the study design is positioned, the more rigorous the methodology and the more likely it is that the study design can minimise the effect of bias on the results of the study.

Well designed systematic reviews and meta-analyses are at the top of the pyramid, and expert opinion and anecdotal experience are at the bottom.

EBP balances three parts – research, experience and the patient’s wants and needs.

“A provider first looks at research to answer a question, Then uses that research to shape their practice, guided by their clinical experience and the patient’s wants and needs.” Taylor Mac

National Health and Medical Research Council. (2009). *[Hierarchy of Evidence]*. Retrieved 2 July, 2014 from: <https://www.nhmrc.gov.au/>

ADA, ABM, and AAO

- **AUSTRALIAN DENTAL ASSOCIATION Multidisciplinary Consensus Statement 2020:** Systematic Cochrane Review, and updated broader literature review (details: Appendix Part 2)
 - Reviewed complications of TT surgeries to lingual & labial frenu reported in the literature.
- **ACADEMY OF BREASTFEEDING MEDICINE Position Statement 2021 –** Summarises the available evidence following systematic literature search;
 - Acknowledges lack of available RCTs & longitudinal data
 - ABM Recommendations relating to the breastfeeding dyads is very comprehensive
- **AMERICAN ACADEMY OTOLARYNGOLOGY Clinical Consensus Statement 2020 –Ankyloglossia in Children –** Messner et al.
 - 2 Systematic Literary Reviews; Modified Delphi Method (3 iterations)
 - Age range 0-18 years; broad range of health concerns
 - The panel reached consensus that, in some communities, infants and children are being Overdiagnosed with ankyloglossia and having unnecessary surgery
- **Bruney et al, 2022:** Most Recent Systematic Review

These are the evidence based documents which we will REVIEW to determine which recommendations can guide IBCLC practice, as well as appropriate referral pathways for treatment of ankyloglossia.

As each document arises from systematic reviews of the available evidence they represent the top of the EBM Hierarchy pyramid.

ADA established a multi-disciplinary working group representing relevant key bodies –

- Clinical Midwives, Dentists, Paed Dentists, Oral Health Therapist, Chiropractor, Oral Maxiofacial Surgeon, Osteopath, Speech Pathologist, Neonatologist, IBCLCs
- **Guidelines** - that inform the diagnosis and management of ankyloglossia in neonates, infants, children and adults .
- **Objective and evidence-based advice**

The consensus statement covers :

- **Definition, diagnosis, associated health issues**
- **Management of ankyloglossia and other oral frena**
- **Complications and post-operative care following surgical treatment**

In response to rising numbers of reported adverse outcomes, ADA established a working group representing relevant key bodies associated with infant feeding.

What prompted the ADA to develop the Ankyloglossia Consensus Statement ?

- Concerns of **overtreatment** of babies , potentially having unnecessary oral surgeries
- **Misinformation** about "ties" on internet and social media
- **Conflicting advice** among health practitioners, particularly relating to breastfeeding.
- Increasing reports of **adverse outcomes** of oral surgeries
- NZ Dental Association had developed a similar document in 2018 for the same reasons.



April 2019 Kidspot

You may recognise Tori and Jimmy Rees and recall the terrible near-death event they experienced with their twin son Mack following division of a tongue tie in Sydney. This case raised awareness of the potential worst case scenario of frenotomy – gone – wrong.

ADA, ABM, and AAO

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Reports of complications of oral surgeries - ADA Page 12

Author et al. (Year)	Complications identified	Frequency
Wong et al. (2017)	<ul style="list-style-type: none"> • Pain • Swelling • Bleeding • Weight loss • Infection/sepsis • Excessive scarring • Delayed diagnosis of underlying medical condition 	100%
Wong et al. (2017)	<ul style="list-style-type: none"> • Excess bleeding • Infection/sepsis • Excessive scarring • Delayed diagnosis of underlying medical condition 	100%
Wong et al. (2017)	<ul style="list-style-type: none"> • Excessive bleeding • Recurrent ankyloglossia due to excessive scarring • Oral ulceration • Excessive scarring • Excessive bleeding • Recurrent ankyloglossia 	100%
Wong et al. (2017)	<ul style="list-style-type: none"> • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring 	100%
Wong et al. (2017)	<ul style="list-style-type: none"> • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring 	100%
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Wong et al. (2017)	<ul style="list-style-type: none"> • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring • Excessive bleeding • Excessive scarring 	100%

Poor feeding, apnoea, breathing difficulty, pain, bleeding, weight loss, pallor/anaemia, excess scarring, delayed diagnosis of underlying medical condition, severe bleeding, submandibular oedema, oral aversion, division of salivary glands, recurrent ankyloglossia r/t excessive scarring, upper airway collapse, lingual dysfunction, deglutitory anomalies, lingual parasthesia, increased salivation & jetting of saliva, sleep disordered breathing, haemorrhage, retention cyst, sublingual haematoma, hypovolemic shock -> CPR -> 2 emergency operations, blood transfusions, Ludwig's angina, obstruction of pharyngeal airway, NGT and gastrostomy feeding, infected haematoma, large volume blood loss

NOTE: interruption or cessation of breastfeeding is not mentioned as an adverse outcome.

The ADA consensus statement documents many serious adverse outcomes which have been published. “it’s difficult to read the page from the consensus statement?” so I’ve listed the complications for you. Still too many to read??

Remember, these are the cases which have been published... thousands more have been reported, but not formally documented in publications.”

Also note – interruption or cessation of breastfeeding is not mentioned as an adverse outcome.

Other Health Problems

- Ankyloglossia can cause some individuals to experience functional limitations, such as difficulty breastfeeding.
- Further research is required regarding TT causing -
- Speech problems
- Malocclusion
- Lingual gingival recession
- obstructive sleep apnoea
- As evidence of a consistent causative relationship is lacking (ADA)

Does this look like a tongue tie? We've never had any issues. She's almost 9 months and breastfed and no pain and she is gaining weight well! We have a wonderful breastfeeding relationship. But I don't want her to have issues in the future.



Meanwhile, on Facebook... 4 comments

TOTs – tethered oral tissues which is the term used by proponents of problematic multiple oral frena

Assessment

- "Considerable variability is demonstrated in the appearance of oral frena, without functional issues."
- Therefore **diagnosis of ankyloglossia should not be based solely on anatomic appearance.**
- In the absence of functional limitation – a visible frenulum is considered **NORMAL**.



For breastfeeding infants –
Observation of a breastfeed
by a qualified midwife or
IBCLC is an essential
component of assessment

Key Pre-Requisites of Assessment

Thorough case history

Assessment of tongue **FUNCTION** using a reliable diagnostic system (Hazelbaker or Martinelli) (ADA)


Complete assessment of issues related to the suspected ankyloglossia by a qualified health professional



ADA
Hazelbaker
ATLFF or
Martinelli Tool


DEFINITION: What is Ankyloglossia – Tongue Tie?

- "The **lingual frenum** refers to the mucous membrane that connects the ventral surface of the tongue to the floor of the mouth. (ADA)
- **Ankyloglossia**, commonly referred to as 'tongue tie,' describes **restricted movement of the tongue causing functional limitations**, accompanied by a **visibly restricted lingual frenum.**" (ADA)
- **ANKYLOGLOSSIA is a variation of normal anatomy** – reported in neonates, infants, children and adults.



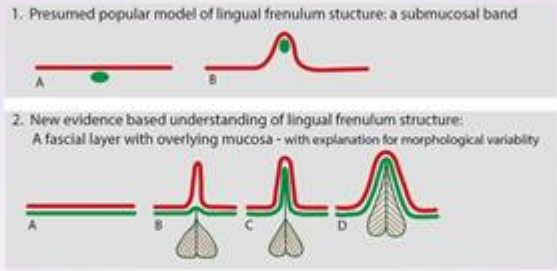
Have a good look at this image. This baby's lingual frenulum was so tight and restrictive it caused the tongue to divide and curl behind the gum ridge. It WAS divided before leaving hospital to enable breastfeeding.

Anatomical structure of the lingual frenulum



- The anatomical structure of the lingual frenulum has been confirmed in **recent research** by dissection studies – as a **DYNAMIC STRUCTURE FORMED BY A CENTRAL FOLD OF FASCIA** (Mills et al 2019)
- These findings are considered in both the **Australian Dental Association** Consensus Statement and the **Academy of Breastfeeding Medicine** Position Statement

Embryologically, **The tongue begins to develop around the fourth week of intrauterine life.** The first, second, third, and fourth pharyngeal arches contribute to the development of the various portions of the tongue.



1. Presumed popular model of lingual frenulum structure: a submucosal band

2. New evidence based understanding of lingual frenulum structure: A fascial layer with overlying mucosa - with explanation for morphological variability

- Lingual Frenum - Lingual frenum is the name given to describe the anatomical structure which is "a dynamic structure formed by a **central fold of fascia** that spans the floor of mouth and together with the **overlying oral mucosa** it forms the "roof" of the sublingual space...the fascia connects around the anterior and lateral ventral surfaces of the tongue, to **stabilize tongue position** while allowing freedom of movement.
- Mills N, Fransky SM, Geddes DT, Mirjalili SA. What is a tongue tie? Defining the anatomy of the in-situ lingual frenulum. Clin Anat. 2019;32(6):749-761. doi: 10.1002/ ca.23343

"This fold is always composed of oral mucosa. Sometimes the fold also contains floor of mouth fascia, or fascia and genioglossus muscle, which remain normal anatomic variations" ABM

Classic Tongue Tie – Frenotomy to divide Restrictive Lingual Frenulum

Australian Dental Association


- If surgical intervention is deemed necessary, the age of the patient influences the surgical approach.
- Cold steel frenotomy using scissors is recommended in neonates. Laser or cold steel may be appropriate in infants.
- Risks associated with the use of laser surgery include eye exposure, inhalation of plume and aspiration of coolant spray, plume and/or blood.

Bruney, et al 2022 – The meta-analysis performed in this study achieved statistical significance. The authors concluded that **frenotomy is effective for improving standardised scores on breastfeeding difficulty and maternal pain scales**"

ADA - Diagnosis of ankyloglossia should not be based solely on anatomic appearance. The presence of a functional limitation, such as difficulty in breastfeeding, and an anatomically restricted lingual frenum should both be present for a diagnosis of ankyloglossia. In the absence of a functional limitation, the lingual frenum should be considered functionally normal

Classic Tongue Tie
Frenotomy to divide Restrictive Lingual frenulum
Academy of Breastfeeding Medicine

- The surgical release of a restrictive sublingual frenulum, a "classic" tongue-tie, can be an effective intervention if **maternal nipple pain and/or poor milk transfer cannot be corrected in a timely way through conservative measures**
- "...in pooled analysis, frenotomy was associated with reduced nipple pain experienced by breastfeeding mothers".



Classic Tongue Tie
Frenotomy to divide Restrictive Lingual frenulum
American Academy of Otolaryngologists

There may be benefit from frenotomy for breastfeeding in the presence of ankyloglossia
Messner et al Consensus Statment

- "The panel was aware that some providers are routinely using **lasers** as their tool of choice for frenotomy, but the panel felt that there was **insufficient and conflicting evidence** to support its use as being superior to other techniques.⁸⁰⁻⁸² "



"This is critical in that different techniques may have cost implications for the patients."


And this is the elephant in the room –

The financial implications for parents, and the financial benefits for practitioners supporting the "Ties Industry".

What is NOT abnormal intra-oral frena?

- Inconsistencies among practitioners assessing anatomical features of oral anatomy has led to
- **variable interpretations**, determining some frena as "abnormal" and requiring intervention (frenotomy)
 - Lingual frenulum -> tongue tie
 - Labial frenulum -> upper lip tie
 - Buccal frenula -> buccal ties
 - Posterior Tongue Tie -> deeper incisions at the base of tongue, revealing genioglossus muscle
- **Consequently some practitioners routinely sever multiple intra oral frena in addition to the tongue frenulum.**

Are these frena abnormal?





There was also no relationship between tip to frenulum length (tongue tie) and visualized lip anatomy, suggesting that **tongue tie and lip tie may not cluster together in infants**. Upper Lip Tie: Anatomy, Effect on Breastfeeding, and Correlation With Ankyloglossia Shah et al. 2021

The oral ties industry – promoting TOTs (tethered Oral Tissues) as the cause of a myriad of problems – feeding, sleeping, reflux, mouth breathing/snoring, crying in car seats, breastmilk production problems – over and under supply, mastitis, blocked ducts – These concerns have developed into a collaborative referral loop involving various HPs in the assessment, treatment and aftercare process. The persuasive and lucrative “ties industry” continues to attract followers worldwide, mainly via social media platforms.

Posterior Tongue Tie

- The term posterior tongue tie (PTT) introduced in 2004 in an **opinion piece** in American Academy of Paediatrics **newsletter** by Coryllos, Genna & Salloum classifying the distance of the tongue tip to the leading edge of the frenum.
- Use of this term can result in a normal lingual frenum being classified as abnormal.




Does this tongue look abnormal to you?

Posted on Facebook as an example of posterior TT.

This image was used on social media to illustrate a posterior tongue tie. The elevation and shape of the tongue are perfectly normal.

Posterior Tongue Tie



AAO The panel was unable to reach consensus on a definition of posterior ankyloglossia, highlighting the controversy in the diagnostic criteria and its existence as a clinical entity.

Additionally, there is little evidence to demonstrate the efficacy of frenotomy in these patients, as the few studies available have a **high risk of bias.** 19,23,49,50

ADA and ABM unanimously agree the term “**Posterior Tongue Tie**” should not be used, nor treated with deep oral incisions.

Australian Dental Assoc:
"There is lack of evidence from dissection studies to support such an entity".

ADA The term “Posterior Tongue Tie” was introduced in 2004 through an opinion piece published in the American Academy of Pediatrics NEWSLETTER by Coryllos, Genna and Salloum, classifying the distance of the tongue tip to the leading edge of the frenum.

ABM – “Deep oral incision, in breastfeeding infants, have unique hazards and require a high level of skill and attention to avoid the potential risks of bleeding, haematoma formation, collateral tissue damage or nerve injury with resultant paresthesia, or numbness of the tongue. It is not possible to visualise all branches of the lingual nerve and infants are unable to report any loss of tongue sensation”.

Labial/Maxillary Ties and Buccal Ties

- **ADA** - There is no evidence to suggest that buccal or labial frena can lead to problems with feeding or speech.
- **ABM** – The upper labial frenulum specifically is a normal structure with poor evidence for intervention improving breastfeeding and therefore cannot be recommended. Additionally, surgery to release a “Buccal Tie” should not be performed.
- **AAO** - Many cross-sectional studies demonstrated that the MLF is almost universally present as a normal, albeit variable, structure.
- The Maxillary Lingual Frenulum serves to provide stability for the upper lip. The level of evidence for routine MLF release in infants with breastfeeding difficulties was poor.

The Maxillary Lingual Frenulum attaches the central portion of the upper lip to the maxillary alveolus between the central maxillary incisors. It consists of squamous epithelium; loose connective tissue; dense, irregular, collagenous connective tissue; and, in some cases, muscle fibers from the incisivus labii superioris portion of the orbicularis oris muscle.^{32,100,101} **The MLF serves to provide stability for the upper lip.** Many cross-sectional studies demonstrated that the MLF is almost universally present as a normal, albeit variable, structure.¹⁰²

Regarding feeding issues, while several studies purport to establish the effectiveness of the MLF release for infant feeding difficulties,^{23,50,105} the studies are hampered by unclear definitions of lip tie, the absence of control groups, small patient cohorts, the presence of confounding variables, and short surgical follow-up. A recent systematic review identified no randomized controlled trials on the subject and concluded that the level of evidence for routine MLF release in infants with breastfeeding difficulties was poor.

The panel, like the Australian Collaboration for Infant Oral Research, therefore reached consensus that MLF release is not indicated for prevention of diastema in the permanent dentition

Buccal Frenulum / Tie - AAO

The term "**buccal tie**" has been used to describe a perceived tightness in the maxillary and/or mandibular buccal frenula.

As such, the buccal frenulum augments the role of the buccinator in keeping the bolus between the teeth and in a medial position during the oral preparatory phase of swallowing.

The importance of this function is underscored by evidence that manual cheek support enhances suction during breastfeeding.

Therefore, it is illogical that division or resection of the buccal frenulum would be useful in facilitating breastfeeding in infants.

Furthermore, there are no existing criteria used to determine whether the buccal frenulum is restrictive.

The panel reached a consensus recommendation against release of buccal frenula .

The buccal frena are small connective tissue folds between the buccal mucosa and the maxillary or mandibular gingiva typically located between the canines and premolars.

They correspond to the lateral border of the lower portion of the incisivus labii superioris fibers of the orbicularis oris muscle or the anterior border of the buccinator muscle.³²

Frenotomy to treat other feeding problems

- ADA
- Insufficient evidence
"TOTs" cause reflux (GORD), colic, problems transitioning to solids or sleep disordered breathing.
- Should not take place without a well defined structural problem which is causing functional issues...
- * **Not based on speculation of future problems**
- AAO
- Several studies support the panel's consensus that in infants with little or no tongue mobility restriction, frenotomy does not prevent future feeding or speech disorders.

Management

- Multi-disciplinary care & communication
- **Non-surgical Management Strategies** – such as...
- Review and revise P&A, latch, feed frequency, alternate feeding method until nipple trauma eases, nipple shield/SNS, supporting mother to maintain milk supply.
- **Surgical Management** – “only after non-surgical management has failed to address the functional limitations associated with ankyloglossia”
- **FULLY INFORMED CONSENT**

Chiropractic or Osteopathic treatment for suboptimal breastfeeding – “THERE IS NO EVIDENCE LINKING MUSCULOSKELETAL THERAPY TO ANKYLOGLOSSIA MANAGEMENT ALONE” (ADA)



Normal round tongue tip



'V shaped' tongue tip



'Heart shaped' tongue tip

RWH info sheet

Surgical Management Post-operative Care - ADA

Minimise risk of complications

Support patients/families to overcome problems –
BREASTFEEDING SUPPORT OF THE MOTHER-INFANT DYAD IS ESSENTIAL.

Pharmacological analgesics in neonates – consultation with neonatologist/paediatrician.

Non-pharmacological analgesic strategies include:

Skin to Skin

Sucrose, with or without pacifier

Breastfeeding; or provision of expressed breastmilk/colostrum



Aftercare and Active Wound Management

- ADA - Contemporary post-operative care increasingly includes **stretching of the soft tissue wound** following division of a frenum to prevent 'reattachment' of wound margins.
- There is no scientific evidence to support these stretches, which are commonly referred to as 'active wound management' stretches.
- Stretching of surgical wounds is not recommended as it **prolongs healing time** and increases risk of **scarring and infection.**
- The lack of a scientific reason for carrying out these stretches is a **medico-legal risk for clinicians who recommend and use this approach**


Chiropractors, osteopaths and other manual therapists commonly identify TTs, sometimes treating using intra-oral manipulations, and refer dyads to IBCLCs and dentists with whom they have collaborative referral arrangements. The referral loop usually recommends extensive ongoing treatment by the manual therapist/body worker and IBCLC as necessary aftercare.

Aftercare and Active Wound Management - ABM

- Clinical follow up after a frenotomy has been performed **is imperative.**
- Assess effectiveness of surgery and document adverse event or complications –
 - Protracted bleeding
 - Persistent pain
 - Infection
 - Oral aversion
 - Worsening or cessation of breastfeeding

Further breastfeeding assistance should be made available

Evidence is lacking to support the prescribing of post procedural **manual manipulation or stretching** at or near the incised area after a frenotomy procedure.



Surgical Treatment - Frenotomy

Treating Clinicians must :

- Understand surgical techniques
- Possess the ability to identify and manage complications
- Have access to and training in resuscitation equipment appropriate to the age of patient
- Age-appropriate analgesia and anaesthetic use considered
- Q. ?? What analgesia is appropriate for newborns ?
- A. Expressed colostrum/breastmilk, breastfeed
- Sucrose (if baby formula fed).



Breastfeeding
Assoc Radical Midwives

Surgical Treatment

Definitions



FRENOTOMY/FRENULOTOMY - Division of a frenum without suture or revision of the remaining tissues.

FRENECTOMY/FRENULECTOMY - Excision of a frenum

FRENULOPLASTY – Division of a frenum and closure of the mucosa with sutures

Neonate – babies aged less than 28 days

Infants – babies aged 1-12 months

Cold steel – surgical procedures performed using a metal blade instrument
ie **scalpel, scissors**

Fascia – connective tissue that forms beneath the skin to **ATTACH, ENCLOSE** or **SEPARATE** muscles and other internal organs

Surgical Treatment of Lingual Frenulum


- HPs undertaking surgery obliged to **reassess & review** non-surgical management strategies
- Appropriate **disclosure** of potential **complications**
- Appropriate **clinical setting** to manage potential complications
- Fully Informed Consent
 - Resuscitation equipment, training and protocols
 - If complex findings – refer to ENT, Paed Surgeon, Oral Maxiofacial surgeon

Contraindications

- Orofacial malformations
 - Cleft Palate, Pierre Robin Sequence, Bleeding Disorders, Neuromuscular conditions,
 - Vit K deficiency.
- Routine post-birth Vit.K administration confirmed (IMl/oral)

*"Individuals must not advertise themselves as registered **SPECIALISTS** in ankyloglossia or tongue tie management specifically" – as no (such) training course exists to qualify. H.P. Nat.Reg Law Act 2009:115(1)*

Surgical Treatment Complications

<h3>Acute</h3> <ul style="list-style-type: none">Deep UlcerationBleedingHaematomaAirway compromiseSwellingRestricted tongue movementIatrogenic injury		<h3>Chronic</h3> <ul style="list-style-type: none">"Recurrent ankyloglossia" = scar tissue formationSubmandibular salivary gland injuryOral aversionRanulaTongue paraesthesiaInfection
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ALTHOUGH CONSIDERED A SIMPLE PROCEDURE – COMPLICATIONS CAN BE LIFE THREATENING.


Note: I personally do not examine baby's oral anatomy with my fingers in this position – ie standing behind baby and examining from above (upside down). I face baby, interacting with bub, with eye contact, and gently stroke baby's mouth to elicit a gape. My use my index finger to gently lift baby's tongue, to stroke the gums side to side to elicit lateralisation, and stroke the lips vertically to elicit tongue protrusion. This position also enables good visualisation of the palate. Babies rarely cry when I examine their mouths.

I only use this reversed position when performing a frenotomy to clearly view the frenulum and sublingual salivary ducts. I don't use a grooved retractor to lift the tongue – I find it can obscure the view with a shadow. Instead I use my right index finger to lift and stabilise the tongue, and snip carefully and quickly.

Surgical Treatment

Age of patient influences surgical approach

- COLD STEEL FRENOTOMY using **surgical scissors** is recommended in **neonates**.
- LASER or COLD STEEL FRENOTOMY *may* be used in **infants** – HOWEVER,



This is NOT my work or fingers!

RISKS OF LASER SURGERY INCLUDE - Eye exposure
Inhalation of plume
Aspiration of coolant spray, plume and/or blood.

Future Directions

Further research, preferably RCTs or high quality observational studies employing objective outcomes, is required.

Further understanding –

Effects of surgical management on improving functional limitations

“Long term effects on neonates, as *memories of pain* may be recorded biologically, and consequently alter brain development and subsequent behaviour.”



Royal Australasian College of Physicians.
Guidelines statement: Management of procedure-related pain in neonates

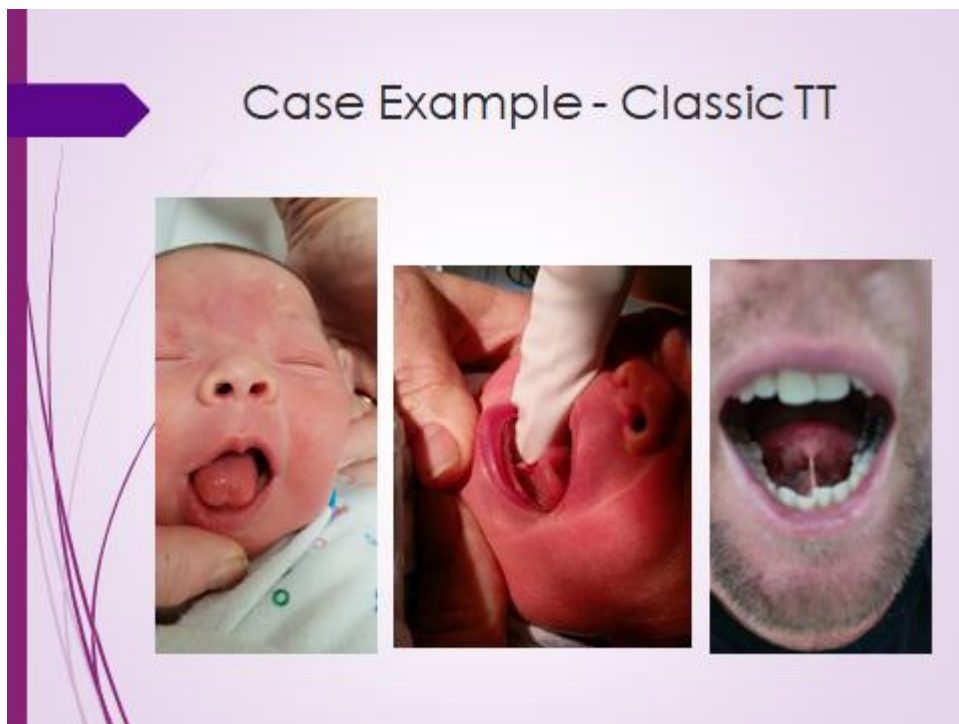
Question: When, in normal life, does a labial frenulum need to flange to this extent?

Answer: Never.



A quick visit to the Facebook/Social Media “Hall of pain”





Classic tongue Tie – Evidence confirms familial links.

The incidence of TT is almost double in males, compared to females. The father of this little boy tried hard to persuade me to divide his tongue tie too – of course I declined the invitation.

Case Study - Classic TT



This baby girl was 2 days old when assessed for tongue tie. Her mother was a primip, who also had a significant tongue tie. Observation of an attempt at breastfeeding revealed baby was latching and then demonstrating phasic bite reflex (mouth clenches involuntarily with oral stimulation) which was very painful for the mother, resulting in her taking baby off the breast quickly. Oral assessment: similar clamping of the gums on the finger when introduced in the mouth. Some reverse peristalsis and disorganised suck. ATLF Score: Function 4: Appearance 1 = 5/24 Frenotomy indicated.

Case Study - Frenotomy video



20190202_123220 (2).mp4

Case Study – Frenotomy baby a day later.



VIDEO0146 (1).mp4

Contraindications for frenotomy

Tommy and Beth

I visited this dyad at Day 12. Parents sought a 2nd opinion about baby's feeding difficulties.

Previous LC had observed a breastfeed using a nipple shield and test weighed baby, concluding he had transferred only 4mls of breastmilk.

LC noted – "stressful and noisy drinking, poor seal and milk spillage during feeds; chin recession with open mouth breathing posture."

Recommended hiring a better breast pump (hers), and referral to dentist for treatment of oral ties.

Devised a supplementary feeding plan.

On examination – I saw no evidence of tongue tie, but I did see this....



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Response?

- Obvious respiratory effort – why?
- Auscultation when calmed down – noisy breathing and clearly audible repetitive "squeak" –
- ? Laryngomalacia
- Fast track – ENT review in hospital
- Scope in ENT office – confirmed LM
- Feeding plan – Paced Bottle Feeding (Y cut teat)
- Breastfeeding – short sessions when calm and able to suckle comfortably – over time.
- Mother in control of BF progression with ongoing LC support as needed.

On Christmas Day I received this text message:

I got MY Christmas wish – Tommy is now fully breastfeeding and growing well. Merry Christmas Lois!

We've heard a lot of advice and information from other HP's. Let's also consider the experience from a Mother's perspective -

Tommy's story – in Beth's words..

"The LC I saw first worked closely with a dentist. She told me that Tommy's mouth was full of ties and he would most likely need braces in the future. She did the weighing of nude baby, fed and weighed him again and then proceeded to tell me he was starving as he was getting no milk from me. I told her I did not want to use formula and she then told me that formula is not the devil.

She left me in tears and I was very distressed. She asked me no questions about my mental health or previous breastfeeding journey. I suffered PND with my daughter and had a very difficult start to breastfeeding - I had ties cut all through her mouth, which I now very much regret."

And now...

"Tommy is going very well and is still feeding!! I keep hoping that he will self wean, but I'm unsure if he will.

I have had no issues with my supply and our journey has been beautiful- thanks for your help.

Tommy has since developed asthma so we have had a few hospital stays in his short life! But I think we are on the right track now. He is otherwise a very happy and healthy little boy."



Cleft Lip and Tongue Tie



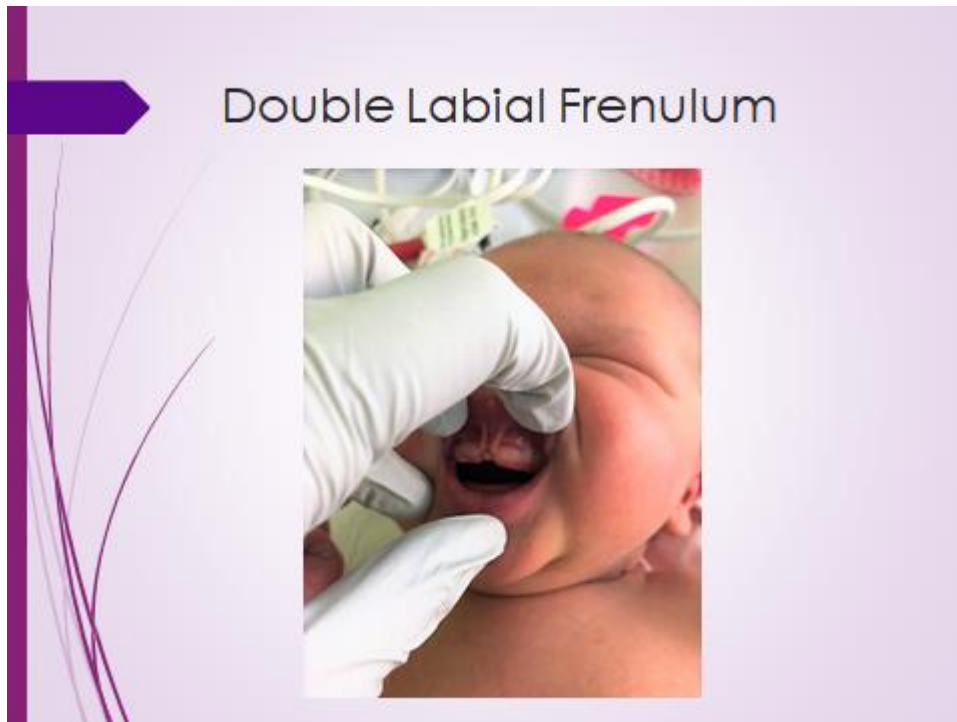
Is this a contraindication for TT release?



Just for interest sake, this is an example of a successful release of a restrictive tongue tie, in a baby girl with cleft lip.

She was this mother's 2nd baby and the cleft lip was identified antenatally. The mother was well prepared and determined to breastfeed her daughter. Baby breastfed immediately after birth, thanks to her clever mother who quickly worked out how to position her breast to close the space in baby's lips, to achieve a latch and seal. The decision to divide the lingual frenulum was in collaboration with the head neonatologist, and I conducted the frenotomy procedure.

Following release of her tongue tie baby achieved more consistent vacuum and sustained the latch more easily. The Dyad was discharged from hospital fully breastfeeding.



Again for interest only – something I had never seen before, or since! Baby breastfed beautifully!

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Closing words....



We certainly want to be releasing that classic tongue tie, but beyond that I would argue very strongly that the lovely range of normal anatomic variation in infants' mouths is being misdiagnosed as an abnormality because we are so desperate to help breastfeeding women.

Marie Biancuzzo and Dr. Pamela Douglas
"Tongue and Lip Ties: New science challenges the status quo"
Born to be Breastfed - October 16, 2017

“We certainly want to be releasing that classic tongue tie, but beyond that I would argue very strongly that the lovely range of normal anatomical variation in infants’ mouths is being misdiagnosed as an abnormality because we are so desperate to help breastfeeding women” Dr Pamela Douglas, 2017



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Thank you!



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