

Session 1726
Handout-Web Version

Topic Area: Feeding and Swallowing Across the Lifespan

Title: The Speech-Language Pathologists' Role in Tethered Oral Tissue (TOTs)

Authors Biographical Sketch:

Robyn Merkel-Walsh MA, CCC-SLP/COM® is a licensed speech pathologist, Certified Orofacial Myologist®, author and lecturer who resides and practices in the state of NJ. She has training in oral placement therapy (OPT), oral motor, feeding, orofacial myology, apraxia, autism and Applied Behavioral Analysis. Robyn is also a consultant for TalkTools® and works for the Ridgefield Board of Education. Robyn holds her degrees from Montclair State University. Robyn is a member of ASHA, NJSHA, IAOM, ICAP, NJEA, Ankyloglossia Bodyworkers and the Board Chair of the Oral Motor Institute.

Lori L. Overland, M.S., CCC-SLP, C/NDT, CLC is a licensed speech pathologist with her neurodevelopmental certification and certificate as a lactation counselor. Lori is currently working on her IBCLC. Lori specializes in oral sensory-motor/feeding therapy, OPT and orofacial myofunctional disorders in children. Lori holds degrees from Hofstra University and Adelphia University. Lori is a member of ASHA, CSHA, LISHA, NYSSLHA, the IAOM, ICAP and a board member of the Oral Motor Institute.

Instructional Level: Introductory

Learner Outcomes:

1. Participants will be able to list three ways that TOTs impedes feeding skills.
2. Participants will be able to state the age in which orofacial myofunctional therapy is appropriate.
3. Participants will be able to state two phonemes that can be impacted by TOTs.

Abstract of Proposal:

Presentation will explore 1) The SLP's role in the assessment of Tethered Oral Tissue (TOTs); 2) The SLP's role in the functional treatment of TOTs and 3) The modalities of treatment for TOTs and the training needed to provide them.

Summary of Proposal:

Tethered Oral Tissue (TOTs) defines the seven oral frena located in the buccal cavities (upper and lower), under the lips (maxillary and mandibular) and under the tongue. Frena can support or restrict movement and in cases of TOTs restriction is the concerning factor. When tethering of the frena is discussed in the dental and medical fields, it is widely accepted that frena cannot be "stretched" due to the collagen makeup of the frena fibers (de Castro Rodrigues, Marchesan, Gusmao, de Castro Rodriguez & Berretin-Felix, 2014). In addition, recent research by Mills, Pransky, Geddes & Mirjalili (2019) discovered through dissection of the lingual frena of adult cadavers that the lingual frenulum consists of sublingual glands and submandibular ducts that are enveloped by the fascial layer and anterior genioglossus fibers that are suspended beneath it, warranting release.

With research emerging, TOTs is being discussed across disciplines, and many speech-language pathologists are questioning what their role may be in TOTs care. With ongoing debates on evidenced based practice (EBP), diagnosis, therapy and surgery, social media groups are active with therapists questioning how they can get training in TOTs assessment and treatment.

The American Speech-Language and Hearing Association (ASHA) has defined the SLP's Scope of Practice (ASHA, 2016) and has also defined Orofacial Myofunctional Disorders in a new Practice Portal (ASHA, 2019). Ankyloglossia (or tongue-tie) is listed as a condition that an SLP may assess or treat in the aforementioned documents; however ASHA reminds us that as SLPs we need a physician to give the medical diagnosis and/or prescribe surgical intervention. Clinicians who are working with TOTs patients such as Merkel-Walsh & Overland (2018) indicate

that physicians rely on SLPs to state functional impact and generate letters of medical necessity for TOTS patients; therefore we must be verse in TOTS to maintain our scope.

So what is the SLP's role with this condition? Since signs and symptoms range from poor oral resting posture, to reflux to possible articulation challenges SLPs must conduct a proper assessment to develop a treatment protocol in one or more of the following areas:

1) Oral Motor Development: there is a set of expected oral sensory motor milestones that infants should achieve from 0-3 years. These norms are carefully described by Bahr (2010), Boshart (2015), Morris & Klein (2010) & Overland & Merkel-Walsh (2013) in texts and coursework. These norms are very important to assess before a frenectomy is performed to be able to establish goals. For example, the SLP needs to check that pre-requisite oral motor skills are in place to handle solid feedings. In older children /adults we can assess oral motor functions and determine where the areas of deficits lie to help improve feeding, oral resting posture and speech. Oral aversion can become a problem in TOTS aftercare and pre-op oral motor training is helpful to both the patient and the parent.

2) Feeding: There are recent discussions on who treats a feeding disorder. The simple answer is it depends on the age and symptoms of the patient. SLPs recognize that International Board Certified Lactation Consultants (IBCLCs) are the best professionals for treating the breastfeeding dyad; however SLPs do have feeding across the lifespan in their scope of practice (ASHA, 2016). Occupational therapists also treat feeding disorders. Feeding encompasses many stages including: breastfeeding, bottle feeding, pureed foods, solids, oral phase of feeding (chewing, bolus collection), pharyngeal phase and esophageal phase. SLPs who are feeding specialists have a role in helping transition patients from one phase of feeding from the next, for example helping wean a bottle to introduce solids. The SLP also treats self-limited diets and picky eating habits. All of these issues may arise from TOTS (Merkel-Walsh & Overland, 2013; Potock, 2017; Baxter, 2018). The SLP's clinical expertise may vary based on where they work (school vs. hospital

vs. clinic) and how they are trained. ASHA has strict guidelines on their website that SLPs must have specific training in pediatric feeding to work with babies, toddler and school aged children (ASHA, 2019a).

3) Orofacial Myology: OMT stands for orofacial myofunctional therapy which was derived between orthodontists/dentists and SLPs who understood that there was a close relationship of oral structures and the functions of the tongue. It is a modality of treatment for those who present with an Orofacial Myofunctional Disorder (OMD). The International Association of Orofacial Myology (IAOM) defines an OMD as one or more of the following: *abnormal labial-lingual rest posture, bruxism (teeth grinding), poor nasal breathing, tongue protrusion while swallowing, poor mastication and bolus management, atypical oral placement for speech, lip incompetency and/or digit habits and sucking habits (such as nail biting)*. These conditions can also co-occur with speech misarticulations (Billings, Gatto, D'Onofrio, Merkel-Walsh & Archambault, 2018).

Certainly people across the lifespan with TOTs can face any of the challenges listed in this definition but the age of the patient is key in determining who should treat them and how to treat them. Infants and toddlers need to be treated for oral motor, speech and feeding issues (IBCLC/OT/SLP) because they cannot engage in the volitional movements and self-monitoring that OMT requires. Children four and above can be treated with OMT (Merkel-Walsh, 2018). A recent study by Dr. Saroush Zaghi shows some positive outcomes with myofunctional therapy and frenectomy combined (Zaghi, S. , Valcu-Pinkerton, S. , Jabara, M., Norouz-Knutsen, L., Govardhan, C., Moeller, J., Sinkus, V., Thorden, R., Downey, V., Camacho, M., Yoon, A., Hang, W.M., Hockel, B., Guilleminault, C. & Lui, Y.C.L., 2019).

5) Speech: Research is emergent on TOTs and speech (Marchesan, 2004; Baxter & Hughes, 2018; Meaux, Savage & Gonsoulin, 2016), though some state there is no evidence which is an overgeneralization. Children with tongue-tie can have issues atypical speech sound elicitation with abnormal lingual dental articulatory placement for /t/, /d/, /l/, /n/, /r/, /k/, /g/ and distorted productions of /s/, /z/ often with an interdental or

lateral lisp to include /tʃ/ , /dʒ/ , /ʃ/ , /ʒ/ (Merkel-Walsh & Overland). There is no specific research to date on which treatment method should be used to assist with these sound errors, but many clinicians recommend tactile approaches (Merkel-Walsh & Overland, 2018; Billings & Davidson, 2018; Boshart, 2015).

In summary the SLP has many roles with patients who present with TOTs ranging from oral resting posture to speech sound production. The quest for clinical competency is soaring, and the research is emerging regarding the physical composition of the frenum and what this means for both functional and surgical interventions.

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