

The comprehensive oral peripheral mechanism evaluation and the school SLP:

What to do when TOTs and/or tongue thrust is suspected?

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Disclosures

Financial Disclosures

- Ms. Brakebill is a salaried Speech-Language Pathologist at Sensible Rehab
- Ms. Vogl is President of Sensible Rehab

Non-Financial Disclosures

- Ms. Vogl and Ms. Brakebill are both trained orofacial myologists through the International Association of Orofacial Myology (IAOM)
- Ms. Vogl is a member of the IAOM

Learning Objectives



1. Review the comprehensive oral peripheral mechanism exam



2. Identify TOTs and/or tongue thrust



3. Describe appropriate referral process

Background

LEISHA VOGL, M.S., CCC-SLP

EI/ECSE 2006 to 2010

K-12 (mostly K-5) 2010-2013

Private Practice

- minimal progress with some of my articulation clients/patients
- orofacial myofunctional therapy

LEAH BRAKEBILL, M.S., CCC-SLP

Salem Keizer Public Schools

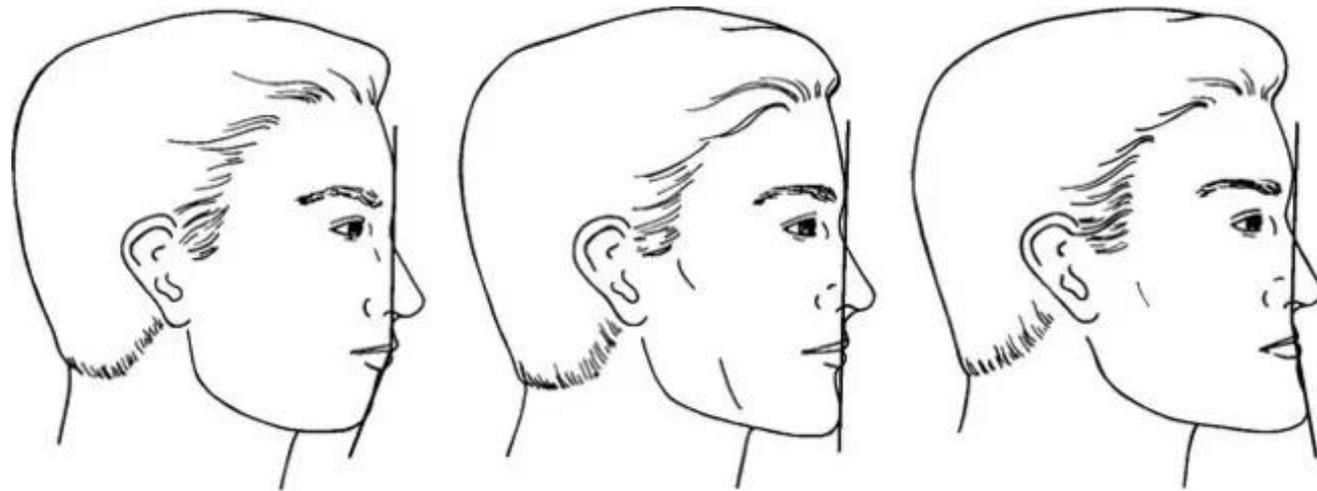
6th-12th grades 2017-2018

Private Practice 2018- present

- minimal progress with many articulation students/patients, desire to learn more about root causes for disordered oral function
- orofacial myofunctional therapy



Comprehensive Oral Mech Exam



A

Convex

B

Straight

C

Concave

Facial Symmetry

Symmetry

Abnormal Movements

Mouth Breathing

Jaw/Teeth

ROM

Symmetry

Movement

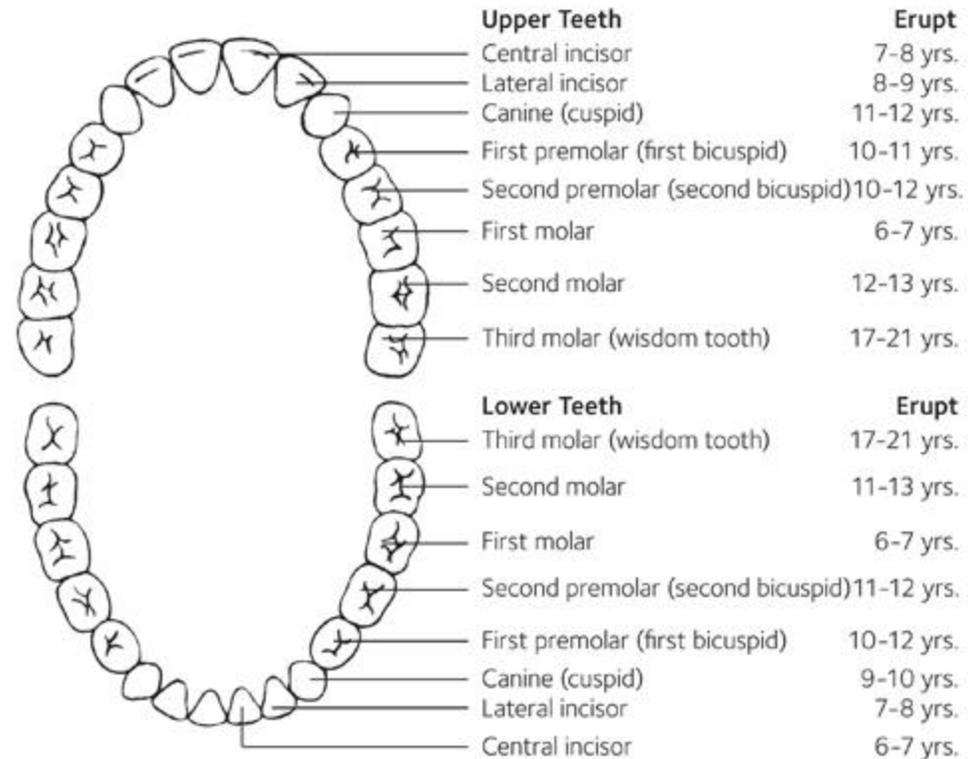
TMJ

Occlusions

Teeth

Arrangement of dentition

Hygiene





Lips

Pucker

ROM

Symmetry

Strength

Smile

ROM

Symmetry

Puff cheeks and hold air

Lip strength

Nasal Emission (absent/present)

Tongue

Surface Color

Abnormal Movements

Size

Frenum

Protrusion/Retraction

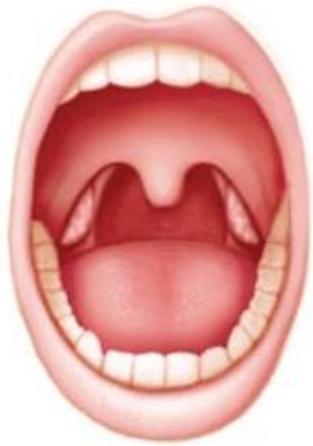
ROM





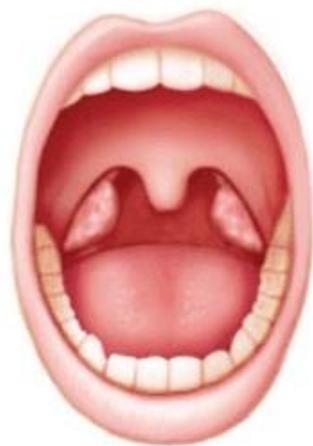
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Surgically removed tonsils



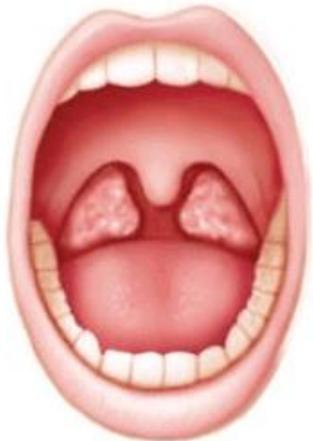
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Tonsils hidden within
tonsil pillars



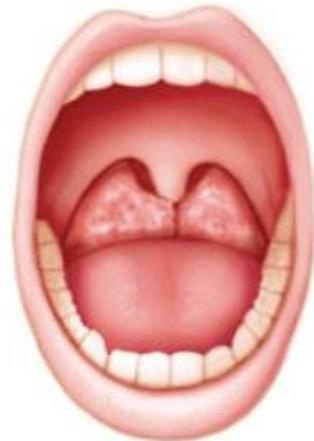
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Tonsils extending to the
pillars



3

Tonsils are beyond the
pillars



4

Tonsils extend to midline

Pharynx

Color

Tonsils/Adenoids

Hard and Soft Palate

Color

Rugae

Arch Height/Width

Growths

Fistula

Clefting

Symmetry

Gag Reflex

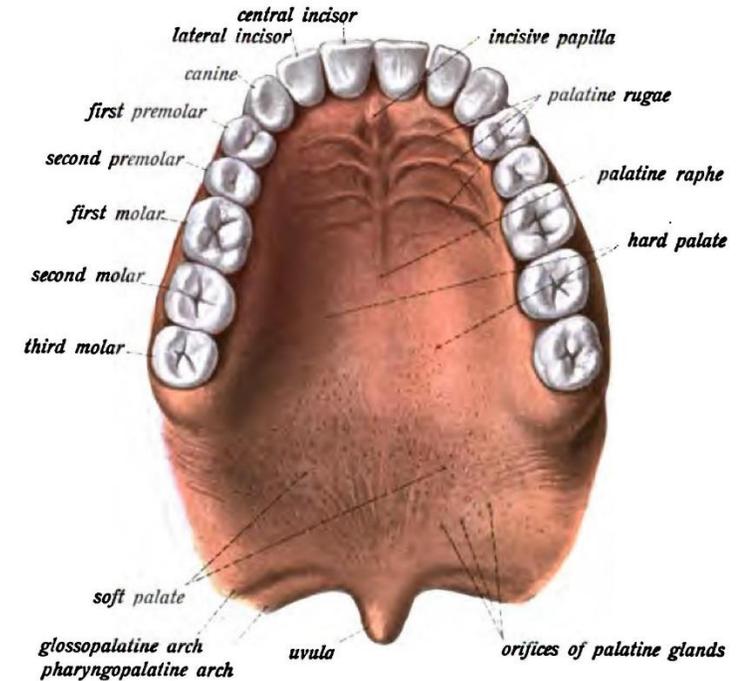
Phonate on /a/

Symmetry of Movement

Posterior Movement

Uvula

Nasality





Identifying TOTs and/or Tongue Thrust

Identifying Tethered Oral Tissues (TOTs): Red Flags

Difficulty breast feeding / bottle feeding

Prolonged sucking habits

Narrow/vaulted hard palate

Dental rotations toward the tongue of lower central incisors

Diastemas

Difficulty with articulation

- Lips "*m, p, b, w, f, v, sh, ch, j*"

- Tongue "*t, d, n, l, s, z, k, g, r, sh, ch, j, th (voiced), th (voiceless)*"

Objective Assessments of Tongue Tie

Tongue Tie Assessment Protocol (TAPS) by Carmen Fernando 1998

Cosmetic Appearance

Oral Hygiene & Dental Health

Feeding Skills

Lingual Movements

Oral Kinaesthesia

Speech

Emotional Status

Functional Assessment and Remediation of TOTs by Robyn Merkel-Walsh & Lori Overland 2018

Appearance and structures of tongue/lips/cheeks

Facial Features

Dentition

Function

Pre-Feeding/Feeding Skills

Articulation

Additional Concerns

How to measure the Tongue Tie?

Kotlow Rating Scale

- Class I TT is located from the base of the tongue halfway to the salivary duct
- Class II TT located between the salivary duct halfway to the base of the tongue
- Class III TT located from the salivary duct halfway to the tip of the tongue
- Class IV TT located at the tip of the tongue extending halfway between salivary duct and tip of tongue

Coryllos & Genna Classification

- Sub-mucosal attachment, ***hidden tongue-tie***
- Type 4, 0%, fibrous attachment, ***asymmetry of tongue movement***
- Type 3, 50% tongue tie, ***may appear WNL***, may perform very poorly
- Type 2, 75% tongue tie, restricted elevation and extension
- Classical Type 1, 100% tongue tie, heart shaped tongue

Identifying Tongue Thrust: Red Flags

Articulation

- Anterior tongue thrust
 - Interdental and/or anterior placement for any of the following (usually multiple phonemes) "t, d, n, l, s, z, ch, sh, j"
 - Anterior jaw sliding
- Lateral tongue thrust
 - Lateral "lisp" or distortion on the same possible phonemes
 - Lateral jaw sliding

Dentition

- Open bites (anterior and/or lateral) and/or cross bite

Tongue Resting Posture

- Low and forward, open mouth

Tongue Thrust Evaluation

Comprehensive Oral Mech

Case History of feeding skills, oral habits, dentition, etc.

Feeding/Swallowing Evaluation

- Prolonged mastication? Rotary mastication?
Lateralization of the bolus?
- Poor bilabial seal?
- Pursing of lips during oral management/swallow?
- Placement of the bolus?
- Tongue movements during oral management and initiation of the swallow?

Articulation Assessment if needed

Orofacial Myology and ASHA

Orofacial Myology page on the ASHA Practice Portal

<https://www.asha.org/public/speech/disorders/Orofacial-Myofunctional-Disorders/>

Speech Sound Disorders Screening and Assessment
Includes:

<https://www.asha.org/PRPSpecificTopic.aspx?folderid=8589935321§ion=Assessment#Screening>

“...orofacial examination to assess facial symmetry and identify possible structural bases for speech sound disorders (e.g., submucous cleft palate, malocclusion, ankyloglossia)...”

Case Study #1

Unable to breast feed due to difficulty with latch, tried for approximately 6 months and then gave up

Began speech therapy with the WESD at age 3 for multiple speech sound distortions including severe interdental lisp.

Received speech therapy in public school setting through first grade with minimal progress noted by parents who then sought out private speech therapy

Anterior sublingual frenulum presentation, tissue appears to be tight and restrictive, patient complained moving tongue within mouth was painful stating "it hurts"

Bowing of lingual tip observed, unable to reach incisive papilla with tongue tip, significant jaw grading observed during attempts, limited lingual ROM

Unable to protrude tongue upward past upper lip with mouth open

Unable to protrude tongue horizontally/midline, past vermilion border without resting on the lower lip

During swallow assessment unilateral chew observed (primarily on right side), pocketed bolus in right cheek prior to initiating swallow. Minimal lateralization of tongue during process of mastication, cracker debris on lips

Significant speech sound distortions on /s/, /z/, /r/ (all allophones)

Post sublingual frenectomy/post-myofunctional therapy

Greatly increased lingual ROM

Able to reach incisive papilla "the spot" without significant jaw grading

Rotary mastication and lingual lateralization achieved without effort

Speech sound distortions <90% remediated

Case Study #2

Trouble breastfeeding

Very slow eater

Orthodontist – 3 years with braces

Tongue feels tired after eating and/or talking

Throat feels like she needs to “clear” it frequently

Errors included:

- Anterior placement and/or distortions on /t, d, n, l, s, z, sh, ch, j/
- Mumbling
- Difficulty with rapid speech and precise articulation
- Fatigues after talking for longer periods of time

Case Study #3

Patient referred to Sensible Speech & Rehab via Bright Now Dental

Patient evaluated for orthodontia, but orthodontist Dr. Susan Park does not want to place braces until patient has corrected his "suspected tongue thrust"

Low tongue resting posture and tongue thrust confirmed following complete swallow assessment by myofunctional therapist

Approx. 3mm open bite with overjet observed upon assessment

During PO trials of cracker textures unilateral, left-sided chew observed, minimal lingual lateralization for movement of bolus

PO trials of thin liquids revealed lingual pumping with audible swallow

Case Study #4

Breastfed till just over one year

Sucked her thumb till she was ~7

Upper palatal expander twice "jaw just isn't growing right"

Three tongue cribs (1st 7-8 years, 2nd 10 years, 3rd just before picture)

Upper 1st bicuspids pulled "to prevent crowding"

Ortho removed the crib and allowed us to do OMT

Speech therapy in preschool – didn't transition to Kinder

Errors included:

- Distortions on stridents /s,z,sh,ch,j/ secondary to tongue crib
- Slides jaw forward even without the crib

Case Study #5

Pre-sublingual frenectomy:

Unable to breast feed due to difficulty with latch

Sore and bleeding nipples, often pulling off in frustration

Profound speech sound distortions, overall intelligibility significantly reduced

Anterior insertion, thin, tight and restrictive, patient complained pain when "stretching tongue"

Bowing of lingual tip

Unable to reach tongue to incisive papilla/ "the spot"

Unilateral, munch chew, intermittently open mouthed, observed to chew mostly on right side of mouth

Post sublingual frenectomy/post-myofunctional therapy:

Can reach tongue tip to incisive papilla without jaw grading/not effortful

Greatly improved lingual ROM, no complaints of pain

Improved lingual lateralization and mastication

Referral Process



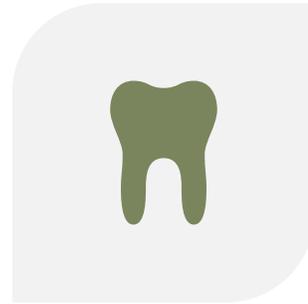
Who and *HOW* do you "refer"?



ENT



DENTIST



ORTHODONTIST



SLP WITH EXTENSIVE TRAINING IN
OROFACIAL
MYOLOGY/MYOFUNCTIONAL THERAPY

Questions



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