F:

•Functionality

- Functional activities
  - Rest posture
  - Effects on Articulation
  - Effects on Swallow function

Tongue on the SPOT

- Tongue resting against the upper alveolar ridge
  - /n/ is the best locator
- Typical resting posture for the tongue
- Nose versus mouth breathing
- Lips are closed most of the time
- Some space exists between the teeth (freeway space)
- Typical tongue tip placement for swallowing

Tongue on the SPOT

- The tongue does not have to protrude between the teeth to be in an atypical position
- If the tongue is resting on the lingual surface of the teeth, this can also be atypical, yet not as easily detectable
- The tongue should not touch the lingual surfaces of the teeth for rest, speech, or swallowing
- An anterior tongue position in any placement can cause misalignment to dental structures

Articulation

LOOK and LISTEN!!!!!!!

- Atypical tongue position may not result in acoustically incorrect speech sound
- Lingua-alveolars that are produced with the tongue as lingua-dentals are incorrect

Articulation or OMD?

When should you look more closely at an articulation disorder or is it OMD?

- When the defining term is “lisp”
- When sibilants are difficult to correct in treatment
- When the articulation diagnosis is accompanied by enlarged tonsils, open mouth posture, anterior open bite, and/or mouth breathing
- When single word productions are good but connected speech is difficult to master, particularly over a long period of time.

Connection between OMD and Articulation

- In a study of kindergarten through 6th graders- 77% of those with abnormal /s/ and /z/ productions, also had an abnormal lingual rest posture
- And 50% of those also were tongue thrusting

(Wadsworth, et al 1981)

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OMD and Speech

- In appropriate interdental and linguadental sound productions seem to dominate the speech articulation problems found in OMD. Many patients with OMD may have speech which is characterized by frontal lisping. These patients may also show prolonged need for traditional speech treatment services, unless the musculature issues are also addressed.

Orofaciaal Myology: Beyond Tongue Thrust

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Research

Pierce (1996) found that...

In a survey of 100 patients, 50 who were diagnosed with tongue thrust, had articulation errors as well.

Therapy to retrain the muscle for swallowing can result in improvements in articulation

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Dynamic function of the tongue

- If oral mechanism examination indicates some possible OMD behaviors….

….then clinical observations of the placement and function of the tongue and oral structures during chewing and swallowing are necessary

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OMD related to swallowing

- An area of OMD also relates to dysphagia, as orofacial myofunctional differences may have a negative impact on the oral-preparatory or the oral phase of swallowing. These difficulties may manifest themselves in poor bolus formation, poor or uncoordinated posterior transfer of a bolus through the oral cavity, use of extraneous facial muscles for the process of initiating a swallow, and/or in the forward tongue movement during or immediately following the swallow.

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Swallowing

- Normal vs. Abnormal Functioning
- Focus is primarily on the preparatory and oral phase of the swallow
  - Assessing both solids and liquids
  - Various severity levels of disorder

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Abnormal swallowing

- Abnormal Findings
  - Mentalis contraction
  - Lack of masseter contraction
  - Anterior loss of the bolus
  - Excessive or forced swallowing
  - Tongue Pumping
  - Poor bolus formation

Abnormal swallowing findings from OMD evaluation

- Inappropriate bite size
- Use of liquids to clear foods from the mouth
- Chewing with the mouth open
- Difficulty in isolating the tongue to manipulate the food
- Tongue forward or interdentalized during the swallow

Teaching the characteristics of the "normal" swallow

- Educate patient of appropriate chewing patterns
  -practice gathering food into a bolus.
- Increase awareness of the masseter/"chewing muscles"
  – clenching, tension, biting to "pop" the muscle
- Teach correct placement of tongue for swallowing
  – sequential positioning of the tip, mid-portion, and back of the tongue

Habituate the Normal Swallow

- Establishing habitual awareness and behavior by following a hierarchical level of skill development:
  – Individual to consecutive swallows
  – Crackers to more typical diet
  – Sips of liquids to continuous drinking
  – Charting meals and monitoring progress of carryover

G:

- Goals for Therapy

Therapy Goals

Therapy goals should include:

Habituating a typical rest posture

Habituating a typical swallow function

Habituating appropriate tongue movements for speech sounds.

Contra-indications for Treatment

- Age
- Upper airway
- Cognitive level
- Motivation/Family involvement
- Severe malocclusion
- Co-existing neurological disorders i.e. hypotonia, CP

What Approach To Treatment Is Most Appropriate?

- Generalized remediation programs are available that include specific, structured exercises and or lessons but ultimately…….

…..the clinician must determine which interventions would best meet the specific needs of each patient!

Intervention

- Treating the articulation errors without recognizing and treating the biological functions of the tongue (resting posture and swallowing) may frustrate the patient and the clinician with limited success in therapy.

(Pierce, 1980)

Treatment Goals

- Build better awareness and habituation of oral behaviors including correct resting posture
- Reinforce and establish appropriate muscle movements
- Teach typical tongue function for swallowing and chewing
- Modify tongue positioning for accurate speech sound productions

H:

- How do I manage this?

Beyond the Basics

- When to Refer
- OMD Specialists/Team
- Treatment considerations
- Efficacy research
- Resources and references

To Refer or Not to Refer???

- Clinical knowledge needs to be the guide
- I think there is a problem, now what???
- Need to decide what works best in your setting

I:

- International Association of Orofacial Myology

IAOM

- An Orofacial Myologist
- History of the IAOM
- ASHA Position
- ASHA knowledge and skills

An Orofacial Myologist is…….

A person who has undergone specialized training

- to identify dental abnormalities and the impact of these abnormalities on functions of teeth and oral facial musculature
- can provide a more complete habilitative program than any other professional
- a resource for elimination of digit habits

An Orofacial Myologist is…….

- OMD specialists may be speech-language pathologists, dental hygienists, dental assistants, dentists, orthodontists, or professionals in other related areas
- Each professionals has additional training or experience in at least one of the areas related to OMD
- A certified OMD specialist has completed a written examination and site visit, per the by-laws of the IAOM

OMD Team

- As in many other facets of speech pathology, this disorder is treated most efficiently by a team, which may contain the following professionals or individuals:

- General/Pediatric dentists
- Speech Pathologist
- Oral & Maxillofacial surgeon
- General physician
- Certified Orofacial Myologist
- Parents/family
- Allergist
- Otolaryngologist
- Periodontist
- Orthodontist
- Patient

ASHA- Scope of Practice 1991

- Assessment and treatment of oral myofunctional disorders are within the practice of speech language pathology
- Published research indicates that oral myofunctional therapy is effective in modifying tongue and lip postures and movement
- SLPs who desire to perform oral myofunctional services must have the required knowledge and skills to provide high quality treatment

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ASHA-Scope of Practice

- Appropriate goals should include retraining of labial and lingual resting and functional patterns
- Evaluation and treatment should be interdisciplinary and tailored to the individual
- Further research is needed regarding evaluation and treatment or oral myofunctional disorders.

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Orofacial Myofunctional Disorders: Knowledge and Skills

ASHA guidelines developed in 1993:

- Understanding dentofacial patterns and applied physiology pertinent to orofacial myology
- Understanding basic orthodontic concepts
- Recognition of the dynamics of etiological factors (airway, thumb sucking, anterior malocclusion)

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Orofacial Myofunctional Disorders: Knowledge and Skills

- Understanding interrelationships between speech and orofacial myofunctional disorders.
- Demonstrating competence in identifying factors affecting prognosis
- Coordination of the treatment program with other medical and dental procedures

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Orofacial Myofunctional Disorders: Knowledge and Skills

- Demonstrate a clinical environment appropriate to the provision of services
- Demonstrate appropriate documentation of all clinical services
- Demonstrate professional conduct within the scope of practice for speech language pathology

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International Association of Orofacial Myology (IAOM)

- Began in 1972, pioneered by a small group of speech-language pathologists; later joined by other dental professionals
- "set standards for qualification as an oral myo-therapist and to create a profession“
- IAOM publishes an annual journal; articles published are from dental professionals as well as SLPs

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Current IAOM Initiatives

- Increasing certification
- Continuing education and training
- Efficacy research
- Standardization measurements
- IAOM website

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J:

- Just the beginning….
  - –So much more to tell you……..
  - –So little time…..

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How to get more training?

- IAOM website (www.iaom.com)
  - – continuing education courses
  - – contact information for orofacial myologists in your area
  - – publications and research
- ASHA website

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K:

- Knowledge resources

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Efficacy Research

Through a retrospective analysis of over 100 subjects (predominately ages 5-20) dental measurements were used to show that myofunctional therapy can..

- improve dental occlusion, decrease dental open bite, and decrease dental overjet;
- age was not necessarily a factor in predicting success of a therapy program;
- improvement of open bite and overjet can result from OMT without prior or concurrent orthodontic intervention.

(Benkert 1997)

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And the research says.....

Hahn and Hahn (1992)

- Subjects: 98 children
- Ages 6-18 years
- Approx. 5 years after discharge from myofunctional therapy..70-80% were still swallowing correctly, maintaining correct lingual resting posture day and night, and had habituated consistent nasal breathing.

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And the research says, continued

In a survey of 100 patients enrolled in a program of traditional tongue thrust therapy, all of the patients were successful in correcting the resting posture of the tongue and lips and in correcting the swallowing pattern in 10-12 treatment sessions.

Pierce, R. (1996)

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