Improving Speech Clarity for Teens and Adults
It Is Not Too Late!

Presented by Sara Rosenfeld-Johnson, M.S., CCC-SLP
Author of: Oral Placement Therapy for Speech Clarity and Feeding: Assessment and Treatment of the Jaw and OPT for /s/ and /z/

My name is Sara Rosenfeld-Johnson and I’m speaking on treating clients with speech oral placement disorders. I am an employee and patent holder of TalkTools. TalkTools is a company that manufactures tools and programs for Oral Placement Therapy. My job is to develop, research and write directions for the use of these tools. I have no relevant non-financial relationships to disclose.

What is Oral Placement Therapy for Speech Clarity and Feeding Safety?

A THREE-PART TREATMENT PLAN FOR ORAL PLACEMENT THERAPY

1. To increase the awareness of the oral mechanism
2. To normalize oral tactile sensitivity
3. To improve the precision of volitional movements of oral structures for speech production
4. To increase differentiation of oral movements
   a. dissociation: The separation of movement, based on stability and adequate strength, in one or more muscle groups.
   b. grading: The controlled segmentation of movement through space based upon dissociation.

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Oral Placement Therapy for Speech Clarity and Feeding

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   b. grading: The controlled segmentation of movement through space based upon dissociation.
   c. fixing: An abnormal posture used to compensate for reduced stability which inhibits mobility.
5. To improve feeding skills and nutritional intake
6. To improve speech sound production to maximize intelligibility

The Tactile System

1. Tactile Hyposensitivity: An under-response to tactile input.
2. Tactile Hypersensitivity: An over-response to tactile input.
4. Fluctuating Tactile Sensitivity: Responses that change over time.
   • Tactile Defensiveness: A learned tendency to respond negatively or emotionally to tactile input.

Assessing the Oral Sensory System

ALWAYS:
1. Start from the outside and work your way in
2. Be systematic
3. Begin with the least input if unsure

ASSESSMENT:
• Knees, Hands, Shoulders, Cheeks, Lips
• Oral Cavity - Lips, Buccal Cavity, Upper and Lower Gum Ridges, Blade of Tongue, Lateral Margins of Tongue, Gag Reflex? Palate

Normal Speech Clarity

1. Functional Movement Intact: YES
   Mobility, Agility, Precision, Stability, Endurance, Dissociation, Grading
2. Motor Planning Intact: YES
3. Foundation: Adequate
   Speech Clarity WNL
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Dysarthria

1. Functional Movement Intact: NO
2. Motor Planning Intact: YES

Oral-Placement & Articulation Therapies

Disorder: Dysarthria
Foundation: Insufficient

Apraxia with Dysarthria Component

1. Functional Movement Intact: NO
2. Motor Planning Intact: NO

Oral-Placement & Motor Speech Therapies

Foundation: Insufficient

Dissociation: LIPS FROM JAW

Muscle Movement
Following normal speech development

PHONEME EX.

1. Open
   - ah, uh
   - m, p, b

Closed to Open
Open to Closed

2. Protrude
   - so, oh, w, ee, ih
   - f, v

Retract

3. Lower Lip Retraction/Tension
   - sh, ch, j, r, er
   - (l, d, n, l, s, z, ch, k, g)

Dissociation: TONGUE FROM JAW

Muscle Movement

PHONEME EX.

1. Retraction- Protrusion: Balance (Equal range of motion)
2. Retraction- Protrusion: Imbalance
   - Gradual increase in retraction
   - Gradual decrease in protrusion
3. Retraction (stability) - Lateralization of tip
   - a. Midline to both sides
   - b. Across midline
4. Retraction- Tip Elevation/Depression
   - (l, d, n, l, s, z, sh, ch, j, k, g)
5. Retraction - Back of Tongue Side Spread
   - (stability for co-articulation, er)
Once the foundational movements for speech are observed, we MUST transition that movement into function for feeding or speech. (Bahr, 2001, pp.3-4; Green, et al., 1997; Moore & Ruark, 1996; Ruark & Moore, 1997)

When the movement is transitioned into function, you will no longer need Oral Placement Therapy for that movement.

**Task Specificity Speech for Speech**

**Acquired Functional Deficits in Down Syndrome**

- Inter-dental tongue posture
- Conductive hearing loss
- Upper respiratory problems
- Open mouth
- Mouth breathing
- Large tongue
- High, narrow palatal vault

**Tongue Thrust**

1. Retraction- Protrusion: **Balance** (Equal range of motion)
   - Gradual increase in protrusion
   - Gradual decrease in retraction
   - Retraction – Protrusion: **Imbalance**
   - Significantly more protrusion than retraction for function: feeding and speech

**Why is feeding so important to an Oral Placement Therapy program?**

The muscles used in feeding are the same muscles used in speech.

We need:
1. Lip closure or rounding on a spoon before it is removed.
2. Chewing solids on the back molars - masseter muscles.
3. Straw drinking with lip rounding and tongue retraction - no biting. The straw should not touch the tongue during drinking.

**Why is feeding so important to an Oral Placement Therapy program?**

**SPOON FEEDING:**
- Lateral Placement
- Front Placement
- Spoon Slurp
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11/7/13

Why is feeding so important to an Oral Placement Therapy program?

STRAW DRINKING: Begin with a regular diameter straw to assess the skills. As the oral functioning improves, increase the resistance by increasing the complexity of the straw.

Specific goals may be:

- Tongue Retraction and Grading
- Lip Rounding
- Defining Facial Musculature
- Jaw Stability
- Independent Self-Feeding

Straw Hierarchy - Thin Liquids (8 Straws in Hierarchy)

GOALS: Lip Protrusion, Tongue Blade Retraction/Grading

Begin with either Straw #1 or #4

Straw #1

Straw #8
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DISSOCIATION: Tongue from Jaw

MUSCLE MOVEMENT

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PHONEME EX.

(all sounds except th)
(l, t, d, n, l, s, z, sh, ch, j, k, g)
(stability for co-articulation, er)

Activities to Improve Feeding Safety and Speech Clarity

Abdominal Grading Activity:

Horn Blowing Hierarchy: Criteria for success – 25X in rapid succession without a break for each horn in the hierarchy

Duration Requirements: Horn 11: any duration; 12: 1 second duration; 13 & 4: 1.5 second duration; 5, 6, 7 & 8: 2 second duration; 9 & 10: 2.5 second duration; 11 & 12: 3 second duration.

Resonation Activities

Why do adults with the diagnosis of Down syndrome sound hyper-nasal? What is the velum and why it is important?

Oral-Nasal Contrasts (hoo-m)

Refer to Oral Placement Therapy (OPT) for Speech Clarity and Feeding

(Rosenfeld-Johnson, S., 2001 Revised 2009)
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JAW EXERCISES

1. Bite-Tube Hierarchy:
   - Red Tube
   - Yellow Tube
   - Purple Tube
   - Green Tube

2. Jaw Grading Bite Blocks

Scenarios That Require Jaw Exercise Therapy

- Symmetrical Jaw Instability: both sides are equally weak
- Asymmetrical Jaw Instability: both sides are weak, but one side is weaker
- Asymmetrical Jaw Instability: only one side is weak

DISSOCIATION: Tongue from Jaw

- MUSCLE MOVEMENT
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- PHONEME EX.
  - (all sounds except th)

Oral Placement Therapy

- BLADE RETRACTION
  - Lip Protrusion-Tongue Retraction
  - Straw Drinking Hierarchy

- Tongue Lateralization: TalkTools® Tongue-Tip Lateralization Tool
  - Prerequisites: Complete all 3 exercises using Bite Block #2 through #5
  - Midline to Left
  - Midline to Right
  - Across Midline

Criteria for success: Repeat the appropriate unit 5 times
A THREE-PART TREATMENT PLAN FOR ORAL PLACEMENT THERAPY

**TONGUE TIP ELEVATION AND/OR DEPRESSION:**
TalkTools® Tongue-Tip Elevation/Depression Tool
**Prerequisite:** Complete all 3 exercises using Bite Block #2 through #7

- Tongue-Tip Elevation Up
- Tongue-Tip Depression Down
- Up and Down

**Criteria for success:** Repeat the appropriate unit 5 times

**Reason for referral:** Adult male with a large gap between what he says and what the listener can understand

**History of Speech-Language Therapy:** Ages 2 through 21 through EI and the local public school system where the primary focus was language development and language usage

**What to look for in this video concerning speech clarity:**
- Articulation: omits many final sounds
- Poor jaw grading for tip alveolar sounds
- Poor tongue grading
- Hyper-nasality
- Poor velar grading

**Clint:** Case Study 27 years old

**Changes:**
- Articulation: Using many final speech sounds
- Pre-Test Jaw Grading: Bite Block #2 - 13 seconds, Bite-Block #7 - 15 seconds
  - Purple: 4(L)-10(R) - 4(L)
  - Green: None
  - Slow Feed: 4 consecutive Back Molars: 13 seconds
- Pre-Test Tongue Retraction:
  - Straw: #3 - 3/8"
  - Spoon Slurp: 17

**Changes:**
- Breath Control: more fluent
- Pre-Test Abdominal Grading: Horn Hierarchy: #6, 7 reps.
  - Pre-Test Velar Grading:
    - Pre-requisite: Horn #9

**Changes:**
- Hypernasality: no change
- Pre-Test Velar Grading:
  - Pre-requisite: Horn #9

**Clint:** Case Study - 3 sessions per week for 1 month

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