# Differential Diagnosis of Motor vs. Sensory-Based Oral Feeding Disorders

Presented by Marjorie Meyer Palmer, M.A.
Speech Pathologist
Neonatal and Pediatric Feeding Specialist

## Oral-Motor Patterns in the Child with **Hypertonia**

*jaw thrust

*tongue thrust

*lip retraction

*tonic bite

*tongue retraction

*deviant swallow pattern

## Oral-Motor Patterns in the Child with **Hypotonia**

*absent bilabial closure

*persistent open mouth posture

*flaccid and protruded tongue

*ineffective secretion management

*poor jaw stability; excessive range of motion

*inefficient swallow with pharyngeal pooling

*apraxia of speech

# Differential Diagnosis of Motor vs. Sensory-Based Oral Feeding Disorders

Presented by Marjorie Meyer Palmer, M.A.
Speech Pathologist
Neonatal and Pediatric Feeding Specialist

**Clinical description of infants and children with sensory feeding issues:**

1) the **hypertonic** infant/child – diagnosed with spastic quadraplegia, hyperactive oral responses, abnormal oral-motor patterns, hyper-reactive, startles easily

2) the infant/child with **generalized hypotonia of unknown etiology** – presents with an open mouth, a tongue forward in the mouth, drooling, apraxia of speech, decreased intra-oral sensory perception and awareness

3) the infant/child with **sensory integration issues** – has difficulty with the sensation on the palms of the hands, the soles of the feet, and the dorsum of the tongue; frequently gags when material contacts the tongue blade, has problems with transitions onto textures and tolerating certain food consistencies

4) the infant/child who initially presented with an **underlying medical condition** that has since been resolved, is otherwise normal, but has secondary problem of an oral feeding aversion. Early experiences may include hospitalization, surgery, use of life saving medical procedures, gastroesophageal reflux, etc.

# Differential Diagnosis of Motor vs. Sensory-Based Oral Feeding Disorders

**Presented by Marjorie Meyer Palmer, M.A.**
**Speech Pathologist**
**Neonatal and Pediatric Feeding Specialist**

Clinical signs of a sensory-based oral feeding aversion:

-prefers to drink water-minimal sensory information; clears esophagus

-smells or licks food without eating-interested but afraid to eat

-bites/chews without swallowing-sensitive gag; esophageal dysmotility

-oral-motor skills are age appropriate-only a sensory issue

-hypersensitive gag with or without emesis-unable to clear material

-difficulty with food texture transitions-sensitive to texture

Other clinical signs frequently observed:

*may respond well to crunchy, crispy solids that provide sensory input; stimulation
*bites, chews, swallows; child remains interested; can self-feed
*unable to manage solids that do NOT dissolve in the mouth (meats, vegetables, fresh fruits)…often interpreted as "behavioral" problem but sensory information is insufficient and these solids may not clear the esophagus in a timely manner
*prefers strong flavors to bland- result of oral-sensory deprivation
*poor oral stereognosis- decreased intra-oral sensory perception
*may select foods based upon shape, color, or texture
*rigid and limited mealtime choices

# Differential Diagnosis of Motor vs. Sensory-Based Oral Feeding Disorders

Presented by Marjorie Meyer Palmer, M.A.
Speech Pathologist
Neonatal and Pediatric Feeding Specialist

**Reminders:**

Important to make a **differential diagnosis** of motor vs. sensory-based feeding disorder

**Nutrition is important** – children who refuse to eat entire food groups are at risk for poor nutrition and health problems

Rule out food allergies

Investigate underlying medical conditions:

* delayed gastric emptying
*gastroesophageal reflux
*eosiniphilic esophagitis
*chronic diarrhea or constipation
*Celiac disease
*Pyloric stenosis
*Chiari malformation

The underlying medical condition may help to determine the course of treatment as well as to explain the sensory-based oral feeding aversison!

# Differential Diagnosis of Motor vs. Sensory-Based Oral Feeding Disorders

Presented by Marjorie Meyer Palmer, M.A.
Speech Pathologist
Neonatal and Pediatric Feeding Specialist

## Reference List – motor vs. sensory oral feeding disorders

Gisel, EG, Tessier, M-J, et.al., "Feeding assessment of children with severe cerebral palsy and eating impairment: an exploratory study," **Physical and Occupational Therapy in Pediatrics,** 23, 2003, p. 19-44.

Manno, CJ, Fox, C, et.al., "Early oral-motor interventions for pediatric feeding problems: what, when, and how" **Journal of Early and Intensive Behavioral Intervention**, fall 2005.

Orenstein, SR, "Oral, pharyngeal, and esophageal motor disorders in infants and children," **GI Motility Online**, May 16, 2006.

Palmer, MM and Heyman, MB. "The effects of sensory-based treatment of drooling in children: a preliminary study**," Physical and Occupational Therapy in Pediatrics,** vol. 183(3/4), 1998, p. 85-95.

Palmer, MM and Heyman, MB. "Assessment and treatment of sensory-versus motor-based feeding problems in very young children," **Infants and Young Children**, 6(2), 1993, p. 67-73.

Reilly, S., Skuse, D., et.al., "Prevalence of feeding problems and oral motor dysfunction in children with cerebral palsy: a community survey," **Journal of Pediatrics**, 129(6), Dec. 1996, p. 877-882.

Schwartz, SA, Clarke, D., et.al., "Association of occlusion with eating efficiency in children with cerebral palsy and moderate eating impairment," **Journal of Dentistry for Children**, 70, 2003, p. 33-39.

Schwarz, SM, Corredor, J., et.al., "Diagnosis and treatment of feeding disorders in children with developmental disabilities," **Pediatrics**, vol. 108., no. 3, September 2001, p. 671-676.

Sullivan, P. and Rosenbloom, L. **Feeding the Disabled Child** (Clinics in Developmental Medicine), MacKeith Press, January 17, 1996.