Understanding Feeding Aversion in a City Full of Foodies

Amy Houtrow, MD, MPH
Pediatric Physical Medicine & Rehabilitation
UCSF Department of Pediatrics
June 2, 2007

Learning Objectives

Learners will be able to explain how different medical conditions contribute to feeding aversion
Learners will be able to identify signs and symptoms of feeding aversion
Learners will be able to describe the work-up for feeding aversion
Learners will be able to identify treatment options for feeding aversion

Presentation Outline

Definitions
Normal
Medical conditions associated with oral aversion and commonalities
Other contributing factors
Making the diagnosis
Treatment

Oral aversion
Feeding aversion
Food phobia
Conditioned dysphagia
Oral-tactile hypersensitivity

Reluctance or refusal to feed or eat
Other Definitions

- **Dysphagia**: any objective or subjective difficulty swallowing food or secretion, +/- coughing and choking with meals
- **Aspiration**: solid or liquid food, or secretions, descending below the level of the vocal cords into the trachea

Clinical Significance of Feeding Aversion

Feeding disorders are common

- ~25%

A majority of children with developmental disabilities and chronic medical conditions have problems with feeding

Most feeding disorders develop as a result of an organic condition but are maintained over time by additional behavioral factors

What is normal?

<table>
<thead>
<tr>
<th>Physiologic Skill</th>
<th>Gestation in weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early components of suck</td>
<td>8</td>
</tr>
<tr>
<td>Oral and gag reflexes</td>
<td>12-16</td>
</tr>
<tr>
<td>Sucking reflex</td>
<td>24</td>
</tr>
<tr>
<td>Suck and swallow</td>
<td>28</td>
</tr>
<tr>
<td>Coordinated suck and swallow</td>
<td>32-34</td>
</tr>
</tbody>
</table>

What is Normal?

- Diet should be exclusive breast or formula until 4-6 months
- Slow introduction of rice cereal, pureed fruits and vegetables
- Single food introduction
- Babies will indicate readiness for oral feeds by opening mouth and leaning forward

Phases of Swallowing

- **Oral preparation stage**: Food is chewed and moistened by saliva. The tongue pushes food and liquids to the back of the mouth towards the throat.

- **Pharyngeal stage**: Food enters the pharynx. The epiglottis closes off the passage to the trachea to prevent aspiration. Food and liquid are quickly passed down the pharynx into the esophagus. The epiglottis opens again so we can breathe.

- **Esophageal stage**: Liquids fall through the esophagus into the stomach by gravity. Peristalsis pushes food toward the stomach.
Intrinsic and Environmental Factors Associated with Feeding Aversion

- Child’s health status and co-morbid conditions
- Oral motor control and dysphagia
- Parent-child bonding
- Feeding behavior

At-Risk Populations

- Children with developmental problems
- Infants and children with congenital and acquired CNS lesions
- Infants and children with GERD
- Preemies
- Infants and children with history of critical illness
- Infants with chronic lung disease
- Infants and children with severe cardiac disease

Developmental and CNS Disorders

- Tactile sensitivity
- Co-morbid reflux
- Delayed PO intake
- Difficulties with oral-motor control
- Dysphagia

GERD

- Concept of conditioned dysphagia
- No problems of oral sensitivity or difficulty with oral motor control
- Physiologic punishment for eating
  - Pain
  - Irritation
  - Vomiting

Preemies and Critical Illness

- Tubes, tubes and more tubes!
- Prolonged periods without oral feeds
- Developmental stage
- Non-nutritive suck
- Safe trophic oral feeds

Chronic Lung and Cardiac Disease

- Prolonged intubation
- Prolonged NG feeds
- High metabolic cost of feeding
- Loss of hunger drive
Oral Motor Control and Dysphagia

- The child who physiologically can’t eat is often the child who won’t eat
  - Choking/gagging

Intrinsic and Environmental Factors Associated with Feeding Aversion

- Child’s health status and co-morbid conditions
- Oral motor control and dysphagia
- Parent-child bonding
- Feeding behavior

Parent-Child Bonding

- Family conflict and strict control are correlated with feeding problems
- Punishments and perceived extrinsic rewards have been associated with feeding problems
- Praise is associated with increased food acceptance
- Family factors such as cohesion and independence foster positive dietary intake

Signs and Symptoms

- Clinical History
  - “My baby won’t eat”
  - Reflux symptoms
- Physical exam
  - Failure to thrive
  - Limited oral movements
  - Refusal to accept exam of mouth

The Work-up

- Medical work up for neurologic, GI, respiratory and cardiac conditions
- Formal evaluations of swallow
  - Bedside evaluation
  - Barium Swallow
  - FEES
Treatment and Management

Goals

Treatment team

Treatment tips

Dual Goals of Treatment

Meeting the nutritional needs of the child through oral feeding

Decreasing defensiveness/aversion

Goal Hierarchy

Acquisition: child learns the new behavior

Fluency: child practices the behavior so that the behavior can be completed accurately and efficiently

Generalization: child can complete the learned behavior in various settings with different items

Setting Short-term Goals

Achievability

Child, caregiver and feeding therapist driven

Attention to frustration and feeling discouraged

Treatment Team

Child

Parent/caregiver

Occupational Therapist/ Speech & Language Pathologist

Physician

PMD

Subspecialists

Psychologist/Behavioral Interventionalist

Treatment Tips

Make sure medical management is maximized

Map out a plan and define small and measurable steps

Structure therapy sessions with routine

Start with shorter session and work up

“Slow and steady” with “one step at a time”

Focus on where the child will accept focus
Treatment Tips

- Reinforce the positive
  - Do not end sessions early as a positive reward
- Include the caregiver
  - Explain the philosophy and treatment plan
  - Validate caregivers' concerns
  - Share successes
- Move forward gradually
  - After the initial aversion is overcome work on tastes, textures and appropriate eating behavior