Feeding Disorders in Young Children: The AEIOU Approach

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Learner Outcomes

- Identify 5 factors that contribute to the maintenance of pediatric feeding disorders and how to address them in treatment.
- Discuss strategies for improving the mealtime environment.
- Describe components of effective parent training.

Role of Feeding Skill Development

Biologic skill
Learning about environment
Social/Cultural Participation
Interpersonal relationship
Biologic skill
Foundations to Management

- **Basic** but it is not simple
- **Rarely** caused by only the environment or only behavior
- Often exacerbated by environment
- Not just oral-motor and swallowing

Foundations to Management

- Top complaint of parents of young children
- Learning is in direct relation to experience
- Learning requires active participation
- Sometimes the only indicator of a medical condition or a sign of family relationship/attachment disorder

Foundations to Management

- “Shared Control” supports development
- Children learn by comparison and observation

Begin with the end in mind! S.R. Covey; 1997
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Feeding Development:
• Complex process
• Dependent on:
  ○ Anatomic/Structural integrity
  ○ Neurophysiologic maturation

Stevenson & Allaire; 1991

Feeding Development:
• Learned progression of behaviors influenced by:
  ○ Oral sensation
  ○ Fine and gross motor development
  ○ Experiential opportunities

Stevenson & Allaire; 1991
Feeding Development:

- Complexity of feeding compounded by:
  - Child’s temperament
  - Interpersonal relationships
  - Environmental influences
  - Culture

Stevenson & Allaire; 1991

Anything that interferes or contributes to the factors listed above will limit the acquisition of feeding skills

Primary Goal of Feeding:

- Nutrition
  - Carbs
  - Protein
  - Fruits/Veggies

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### Prevalence/Incidence

- **Manikam & Perman (2000)**
  - 52% not consistently hungry
  - 42% end meals too soon
  - 35% picky eaters
  - 33% food selectivity
  - 25% of all children
  - 80% of children with D.D.

- **Sullivan et Al. (2000)**
  - >60% never assessed

- **Chatoo (2003)**
  - #1 SPA
  - #1 IA
  - #3 PTFD

- **Rommel et al. (2003)**
  - GERD most frequently underlying medical condition
  - Dx with feeding disorder
  - Majority are preemies

### Prematurity

- Physiologic flexion
- Low muscle tone
- Reflexes
- Passive behavior
- Disorganized state/attachment
- Risk to every organ system
- Iatrogenesis

### Respiratory Complications

- Supplemental oxygen
- Endotracheal tube for ventilation
- Resuscitation
- High risk of asthma into adulthood
- Medication effects
- Increased neurodevelopmental risk
- Growth and nutrition
Digestive Complications

- Aversive Conditioning
- Surgery
- Medications
- Delayed oral feeding
- Diet restrictions
- Physical competence

Allergies/Malabsorption

- Respiratory Congestion
- Effect on weight gain
- Aversive Conditioning
- Caregiver compliance
- Resources

Stress!

Environmental

Biologic

Sensory

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Environmental Factors

Factors that predict poorer outcomes

- Poverty
- Single parent status
- Marital conflict
- History of abuse/neglect
- Parental depression/anxiety
- Changing family circumstances

Environmental Factors

- Impact on Diet and Appetite
- Shared Control
- Interaction/Management
- Child/Caregiver Support
- Resources
- Need for Referral
- Where to Begin

The A.E.I.O.U. Approach
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Observation

Understanding

Assessment Clues

History

Parental Concerns

Schedule

Interaction

Diet

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When To Treat

“negative consequences of dropping out of intervention prematurely may outweigh consequences of postponing start of intervention”

Drotar, 1995

- Caregivers receptive?
- Resources available?

When To Treat

Support Services
(in place of or prior to intervention)

- Home visits
- Counseling (individual, couples, family)
- Service Coordination
- Advocacy
- Respite Care
- Family Assistance
- Child Protective Services

When To Treat

Priorities

- Respiratory Status/Cardiac Function
- Nutrition/Hydration Stability
- Swallowing Function
- Postural Stability

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When Feeding Is Contraindicated

1. Address attachment/communication environment
2. Stimulate NNS
3. Maintain/Normalize sensory processing
4. Maintain/Normalize oral-facial sensation
5. Establish feeding/mealtime experience
6. Normalize hunger/satiety cycles; develop association with feeding

How To Treat

1. Rule Out Medical Reasons
   - Consult Pediatrician
   - Screen For Contraindications
   - Suspect GERD, Allergies
   - Refer to Specialists
   - Comprehensive History
   - Minimize medical influences

GERD

- Burp every 1-2oz.
- Decrease swallowed air
- Diet
- NNS
- Abdominal pressure
- Stress

Reflux Precautions:
- Schedule
- Surroundings
- Post-meal
- Diapering
- Positioning
- Thicken feeds
- Decrease dairy/wheat
2. Establish Environmental Support
   - Caregiver “Buy-In”
   - Attachment/Bonding/Interaction
   - Resources/Support
   - Learning Environment
   - Structure/Schedule/Exposure
   - Consider hunger/satiety cycles

The goal of a feeding program is to CHANGE the current situation

Negotiate with Family:
   - Explain; Listen
   - Problem-Solve
   - Compromise
   - Ask for a commitment

Ainsworth & Bell; (1969)
Early feeding experiences provide a model of parent responsivity and accessibility in other interactional contexts which shapes the child’s confidence in his or her ability to influence events

- “demand” feeding
  - Less crying; more positive parent perceptions
  - More “secure” attachment at 1yr. of age
Responsive Parenting

- Children dependent on caregivers for nutrition
- Effective interaction, attachment, and communication crucial for mealtime success
- Responsive parenting critical to healthy development

Maladaptive behaviors likely to increase if not effective

Effective Parent Training

**Effective Parent Training:** (Kaminski et al 2007)
- Increase positive parent-child interaction
- Increase emotional communication skills
- Teaching parents to use time-out
- Teaching importance of consistency
- Requiring parents to practice new skills during training sessions

Resources

- Bare Bone Basics of Discipline - Myra McPherson - parentexpress.org
- NCAST Training (ncast.org)
- ABC Intervention (abcintervention.com)
- Circle of Security (circleofsecurity.net)
- Theraplay.org
Mealtime Interactions

Child’s Ability to Communicate
- Hunger/fullness
- Wanting more/no more
- Wanting something different
- Changing the pace of eating
- All done
- Discomfort (positioning; sensory stimuli)

Caregiver Reciprocity
- Listens, responds, waits
- Sensitivity/responsivity to cues
- Describes foods, process
- Non-verbal communication
- Makes association for child:
  ○ Hunger/satiety with mouth, tummy

The Teaching Loop

Feedback → Alert
Eye Contact
Performance → Instruct

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How to Help

Ellyn Satter
- Behaviors that share control support homeostasis and the attachment that follows

How To Help

- Division of Responsibility (Ellyn Satter)
  - Parents do the what, when, and where of feeding
  - Children do the how much and whether of eating—from what parents offer
  - Predictable family meals and snacks

Making Choices

"Ask your child what he wants for dinner only if he's buying" -- Fran Lebowitz
Merry Mealtime Guide

- Setting/Structure
  - Social mealtimes, with models
  - Limited/No distractions (no toys, no tv)
  - In a chair, at a table
  - For meals and snacks only
  - Be consistent
  - Always allow independence-help only with permission; read "cues"

- Schedule/Routine
  - Pleasant beginning/end routine
  - Sensory transitions, if needed
  - Guided by medical/nutrition status
  - Regular Intervals (2 1/2 to 3 hours apart, 5-6x/day)
  - Duration (10-15 min snacks; 15-30 min meals)
  - Use a timer
  - Allow extra time for OM/FM, independence, socializing
  - Expect child to stay at the table
  - No grazing-only water between meals/snacks
  - Use an all-done bowl
Merry Mealtime Guide

• The Food
  o Age/skill appropriate
  o Exposure: taste/texture variety, portions
  o Someone to describe the food
  o Avoid added salt, sugar, artificial flavors/colors, low/no fat, lite
  o Healthy sweeteners: agave syrup, blackstrap molasses, honey (never for under age 1), pure maple syrup
  o Healthy fats: real butter, olive oil, coconut milk, fish oil, nuts, flaxseed (ground or oil)
  o Serve family style

Merry Mealtime Guide

• The Food (continued)
  o Include at least one preferred food
  o Offer at least 3 different foods (max 4-6)
  o No short-order cooking
  o No “walking” cups
  o Keep flavors and textures separate initially
  o Use “bridges”, “masks”, “mash-ups”, and “mixtures”
  o Use appropriate size/shape bowls, plates, utensils

How To Treat

3. Address Postural Stability/Positioning
   • Collaborate with PT/OT/Assistive Tech

4. Address Sensory Processing
   and aversive conditioning
   • Normalize response to sensory stimuli
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Sensory Processing

Sensory Responses to Food
- Won’t look at food; covers eyes/face
- Turns head away; pushes food away
- Throws food
- Attached to colors of food
- Closely “inspects” food
- Holds nose vs. intense smelling
- Hand/finger splaying
- Wiping hands
- Makes faces; body quivers; squints eyes; startles
- Gagging; vomiting; coughing
- Pockets food; stuffs food
- Anterior loss of food

How To Treat

5. Address Oral-Motor and Feeding Skills
   - Normalize the feeding experience
   - Consider child’s autonomy/independence
   - Consider child’s skill level
   - Consider modifications (food, equipment)
   - Target skill deficits

Teach Expulsion!

Modifications

- Physical environment
- Sensory environment
- Positioning/Postural stability
- Other sensory stimuli
Behavior Strategies

Strategies that support learning, respect independence and autonomy, and foster trust:
- Consistency is key
- "Shaping": break down tasks into component parts; teach smaller steps
- Desensitization: addresses the child’s anxiety
- Operant Conditioning: help children make new associations (interactions, environment, physical, sensory)

From survival...to stability...to success...to significance... (S.R. Covey; 1997)

Selected References:

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**Signs of Distress**

- sighing
- yawning
- sneezing
- sweating
- hiccup
- trembling
- startling
- gasping
- facial grimacing
- falling asleep
- squirming
- gape aversion
- straining
- bowel movement
- multiple swallows
- increasing high/low tone
- halt hand
- saying “no”
- tray pound
- cry face
- lateral head shake
- crying/fussing
- pulling away
- spitting
- covering eyes/face
Signs of Major Distress

- coughing
- choking
- spitting up
- gagging
- retching
- color change

- respiratory pauses or breath holding
- irregular respiration
- arching back
- bradycardia
- “posturing”