Beyond Picky Eating:

Integrating Cognitive and Family Based Therapeutic Strategies to Successful Treatment of Food Refusal

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Learning Objectives

- Review underlying risk factors in children with avoidant or restrictive feeding disorders
- Review of DSM-V criteria for ARFID
- Discuss treatment interventions for food refusal
- Case examples
Feeding a Child - A Challenge

- A child is fed 10,000 times between birth and the fifth birthday.
- Mothers of children with gastrostomy tubes experience more stress than mothers of children with cerebral palsy, brain injury, spinal bifida, etc.
- Feeding disorders cross all pediatric specialties

*Adams, Gordon & Spangler, JADA, vol.99, no. 8
*Piazza & Carroll-Hernandez, March 2004
25% of all children experience minor feeding problems

40-70% of premature infants < 36 weeks require feeding support

33% of children with developmental disabilities have difficulty eating

Survivors of complex medical conditions and treatments often continue with feeding challenges after their condition has resolved
Medical Risk Factors

- Prematurity
  - Complex medical course
  - Neurologic impairment
- Structural Anomalies
  - Orofacial
  - Gastrointestinal
  - Cardiorespiratory
- Physiological Limitations
  - Gastrointestinal
  - Cardiorespiratory
  - Food Allergies
    - Eosinophilic Esophagitis
- Invasive medical interventions
  - Surgery
  - Intubation
  - Prolonged medical illness
  - NG-tube
- Constipation
Compounding Factors

- Developmental Disorders
- Oral-Motor Dysfunction
- Sensory Disorganization
- Negative Mealtime Behaviors
- Disordered Family Feeding Systems
Impact on Quality of Life

- Poor weight gain
- Pain and discomfort
- Problematic behaviors
- Social impairment and isolation
- Disordered parent-child interactions
- Increased family stress
- Increased costs
PSSST... I DON'T LIKE EGGS...

I HATE IT WHEN MY FOOD TOUCHES.

IT'S OK! REALLY!
Picky Eating

- Have normal weight but consume an inadequate variety of foods
- Reject foods of a particular appearance, texture, color, taste, or smell
- Unwilling to try new foods (food neophobia)
- Typically present between 2nd to 6th year of life
- Most children tend to grow out of it
Prevalence of Picky Eating:

By age 14 months:
- ate less, less variability in foods consumed, and had lower caloric intake

By age 4 years:
- more fussy, higher satiety response, greater desire to drink fluids, less pleasure associated with eating, and overall lower food responsiveness

Remitting picky eaters: 32.3%
Late-onset picky eaters: 4%
Persistent picky eaters: 4.2%

(Cardona Cano et al., 2015)
Beyond Picky Eating: ARFID
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

A. Eating or feeding disturbance defined by:

- Apparent lack of interest in eating or food
- Avoidance based on the sensory characteristics of food
- Concerns about aversive consequences of eating
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

The disturbance is manifested by persistent failure to meet nutritional or energy needs with at least one of the following:

- Significant weight loss
- Significant nutritional deficiency
- Dependence on enteral feeding or oral supplements
- Marked interference with psychosocial functioning
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

B. Not due solely due to lack of food or associated culturally sanctioned practice (e.g., fasting)

C. The eating disturbance does not occur exclusively during the course of anorexia or bulimia (with no evidence of body weight or image distortion)

D. Disturbance is not due to a concurrent medical condition or not better explained by another mental disorder and the severity of the disturbance exceeds that routinely associated with the medical condition
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

• Weight loss is a clinical judgment; instead of losing weight, children who have not completed growth may not maintain weight or height increase along their developmental trajectory.

• Significant nutritional deficiency is based on clinical assessment which may include:
  • Assessment of dietary intake
  • Physical examination
  • Laboratory testing
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

- Dependence on enteral feeding or oral nutritional supplements means supplementary feeding is required to sustain adequate intake
  - infants with FTT who require NG-tube feedings,
  - children who are DD and dependent on nutritional supplements,
  - or children who require G-tube or complete oral nutrition in absence of an underlying medical condition.

- Food avoidance or restriction may be based on the sensory characteristics of qualities of food (such as appearance, color, smell, texture, temperature, or taste).
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

• Food avoidance or restriction may also represent a conditioned negative response associated with food intake following, or in anticipation of, an aversive experience, such as choking, a traumatic investigation (e.g., esophagoscopy), or repeated vomiting.

• There is currently insufficient literature directly linking avoidance/restrictive food intake disorder and subsequent onset of an eating disorder.
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

- Risk Factors: Temperamental, Environmental, and Genetic/Physiological
  - Anxiety, ASD, OCD, and ADHD may have increased risk
  - Family history of anxiety or eating disorder
  - History of GERD and other GI conditions
- Culture-Related Issues: None
- Gender-Related Issues: Equally common in both genders
- Diagnostic Markers: Malnutrition, low weight, growth delay, and need for artificial nutrition
DSM-V Diagnosis: Avoidant/Restrictive Food Intake Disorder

• Functional Consequences: Negative impact on social and family functioning

• Differential Diagnosis:
  • Other general medical conditions
  • Autism or other neurodevelopmental disorder
  • Reactive attachment disorder
  • Phobia, anxiety, OCD
  • Anorexia nervosa
  • Major depression
Prevalence Rates of ARFID

• 5% to 14% in pediatric inpatient ED programs
• 22.5% in pediatric ED day treatment programs
• Compared to AN and BN, ARFID patients tend to be younger, higher proportion of males, and have comorbid psychiatric and/or medical symptoms
  (Norris et al., 2014; Fisher et al., 2014; Ornstein et al., 2013; Nicely et al., 2014; Forman et al., 2014)

• 1.5% of patients referred to pediatric gastroenterology clinics
Avoidant/Restrictive Food Intake Disorder: Subtypes

- Individuals who do not eat enough/show little interest in feeding
- Individuals who only accept a limited diet in relation to sensory features
- Individuals whose food refusal is related to aversive experience, e.g. choking, pain, vomiting, etc.
Important Areas to Assess:

**Current food intake**
- Overall energy intake, major food groups, essential micronutrients

**Oral supplement or tube dependency**

**Persistence of problem**
- Thorough history regarding onset, duration, frequency of feeding problems

**Social/emotional functioning**
- Presence of significant distress or disruptions to social and/or family functioning

**Weight and height (BMI percentile)**
- Weight loss or static weight when weight should be increasing
Important Areas to Assess:

- Signs of nutritional deficiency
  - Clinical and laboratory based signs; lethargy; delayed bone age

- Lack of interest in food
  - Failure to recognize hunger/ lack of hunger drive

- Sensory-based aversion
  - Avoidance based on the texture, taste, temperature, appearance including color, and smell of foods

- Fear/aversion
  - History of choking, pain, vomiting or diarrhea, medical procedures, etc.
Treatment Interventions
Treatment of Food Refusal

- Family-Based Treatment (FBT)
- Cognitive-Behavior Therapy (CBT)
- Behavior Modification
- Parent Training
- Exposure therapy
Family-Based Treatment (FBT)

Parents and families integrated into treatment and meal management process.

Attend therapeutic meals daily.

Provide psycho-education on management of disordered feeding behaviors.

Obtain behavior training on the use of behavioral contingencies and meal structuring.
Cognitive-Behavior Therapy (CBT)

- Cognitive-behavior therapy is based on the idea that our thoughts influence how we feel and behave.
- The goal is to identify and replace maladaptive or unrealistic thoughts about foods and eating with more adaptive/positive thoughts.
Cognitive-Behavior Therapy (CBT)

Kendall’s 16-session CBT model for treatment of childhood anxiety

- F: Feelings
- E: Expectations
- A: Actions
- R: Rewards

Incorporate imaginal and in vivo practice of skills learned

Use of hierarchy of anxiety-provoking situations

Modeling, role-playing, and reinforcement
Behavior Modification

- Based on the principles of Operant Conditioning

Goal is to increase desired/target mealtime behaviors using:

<table>
<thead>
<tr>
<th>Positive reinforcement</th>
<th>Shaping and fading prompt</th>
<th>Offering choices</th>
<th>Token economy</th>
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</table>

Decrease avoidance/refusal behaviors using:

- Extinction
- Redirection
- Differential attention
Parent Training

- Psycho-education regarding disordered feeding regimens
- Behavior management training
- Process non-finite grief, medical trauma, vulnerable child, parental stress
- Improve goodness of fit (sensitivity to reading child’s cues)
- Incorporate role play, social modeling, and direct observation/feedback
Exposure and Systematic Desensitization

Theoretical mechanisms of exposure:

• Habituation: Natural reduction in responding with repeated exposure
• Extinction: Overwriting previously learned fear associations
• Emotional Processing: Developing new interpretations and meaning for feared stimuli and fearful responses
• Self-efficacy: Increased perception that one is capable of tolerating feared stimuli and responses
Exposure Therapy

- Goal is to address underlying discomfort/stress/anxiety using systematic desensitization (fear hierarchy)
- Shape successive approximations to desired/target feeding behaviors
- Incorporate stress reduction and relaxation training as an integral component in reducing stress and anxiety with repeated exposure
Case Examples
• 6-year old biracial African-American female with significant food refusal
• Medical: Reflux as infant
• Birth: Born at 37 weeks gestation.
• Nutritional: limited variety consisting of milk and yogurt
• Developmental: Met all early developmental milestones WNL
• Social: Resides with mother (single parent); limited contact with father
• Academic: 1st grade, regular education, no history of special education
<table>
<thead>
<tr>
<th>Reason for Referral</th>
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<tr>
<td>Extremely rigid diet of only blueberry yogurt, milk, and water.</td>
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<td>Only licks animal crackers.</td>
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<td>Never able to transition to textured purees or solids.</td>
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<td>Early choking incident at 18 months of age on a piece of cracker</td>
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<tr>
<td>Brand specific</td>
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Treatment Goals

*Patient-focused:*
• Demonstrate acceptance of a variety of flavors.
• Swallow a variety of foods and liquid (reduced fear of eating and choking)
• Drink one nutritional supplement that she can take consistently at home.

*Parent-focused:*
• Learn strategies and skills to introduce new foods and manage foods at home.
A multidisciplinary feeding team integrates a number of disciplines to address a complex feeding problem holistically.

The specialty knowledge that each team member brings is utilized to reshape the mealtime experience, addressing not only the child’s relationship with food, but with the primary feeder as well.

With a multimodal approach, the child and parent learn how to overcome physical, psychological, behavioral, nutritional, and familial obstacles to eating.
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<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
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<tbody>
<tr>
<td>Physician/Nurse Practitioner</td>
<td>Oversees medical and pharmaceutical interventions. Manages common conditions such as reflux, constipation, and hydration as well as instances of acute illness (e.g., fever, vomiting)</td>
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<tr>
<td>Psychologist</td>
<td>Provide psychotherapeutic interventions to assist the child and family with anxiety and behavior management. Provide consultation and support to improve parent-child relationship</td>
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<tr>
<td>Clinical Social Worker</td>
<td>Assist families with adjustment to the inpatient program and provide psychosocial support to facilitate positive coping and response to feeding interventions</td>
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<tr>
<td>Role</td>
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<tr>
<td>Occupational and Speech Therapist</td>
<td>Lead feeding therapy sessions; provide direct feeding and swallowing treatment that is individualized utilizing a variety of strategies to address the mechanical, sensory and behavioral deficits that may be impacting oral feeding skills</td>
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<tr>
<td>Registered Dietitian</td>
<td>Determine calorie and fluid needs, monitor growth and nutritional status, and provide guidance during the GT weaning process to optimize nutritional intake</td>
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<tr>
<td>Child Life Specialist</td>
<td>Provide developmental play opportunities (e.g., food play, art therapy) to assist the child with his/her adjustment to the hospital stay. Assist with medication acceptance</td>
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Inpatient Process

Week 1: Improve the Child’s Feeding Experience
Week 2: Maximizing The Child’s Potential
Week 3: Preparing for Transition Home
Week 4: Home Implementation after discharge
Program Interventions

• Integrative treatment strategies
• Nutritional education
• Medical management
• Psychological interventions
• Parent management and consultation
Shaping and Exposure with Response Prevention

- Develop hierarchy or graded steps toward exposure to new foods
  - Tolerate new food on plate
  - Kiss or lick new food
  - Hold food in mouth for 10 seconds
  - Chew and swallow a small bite
- Reward successful approximations “steps” toward goal (Shaping)
- Escape or refusal is extinguished by using positive attention to reward gradual increases in acceptance
Mindfulness and Relaxation Training

- Address anticipatory anxiety with relaxation training
- Belly breathing
- Food journaling
- Imagery of throat as a slippery slide
Parent Management Training

• Challenging fears = Improving parent self efficacy
• Setting appropriate expectations
• Utilizing behavioral feeding strategies to increase compliance
• Providing nutrition guidance and education regarding meal planning
Treatment Outcomes

• Able to accept iron and MVI supplement every day
• Eating a variety of foods independently (crackers, toast with avocado, peanut butter sandwich, turkey sandwich, pizza, pancakes, waffles, cheese, etc.)
• Eating a variety of foods with minimal to moderate use of feeding strategies (apple, banana, cooked carrots, green beans, mashed potatoes, scrambled eggs, bell peppers, etc.)
• Willingness to try new foods every day
• Able to eat new foods in a variety of settings
• Caregiver feels confident using feeding strategies when introducing new foods
• 12 year old Asian-American male with significant food refusal
• Medical: no previous medical conditions, significant hospitalizations, or illnesses
• Nutritional: adequate weight and height; limited diet variety
• Birth: Full term; no complications with early feeding or sleeping
• Developmental: met all early developmental milestones WNL
• Social: Resides with his mother, father, and 2 younger sisters
• Academic: 6th grade, regular education, no history of special education
• Hobbies/Interests: piano and competitive swim
Reason for Referral:

Onset of refusal behaviors following a family trip where patient got sick

Duration of symptoms has gradually evolved over the past 2 years

Rules about appearance, temperature, and types of foods accepted

Family has made significant accommodations related to dining options, food preparation, and meal planning

Recently began oral supplementation with Pediasure to ensure nutritional needs are adequately met given restricted range of accepted foods
Treatment Goals:

- Challenge negative/unrealistic thoughts about foods and eating
- Exposure therapy with response prevention
- Relaxation and mindfulness training
- Provide parent education and behavior management training to alter parent-child mealtime interaction
Challenge and Replace Thoughts

Negative thought:
Food → It will make me sick → Avoid food

Positive thought:
Food → It will give me energy → Accept food
Gradual Exposure/Shaping

- Develop hierarchy or graded steps toward exposure to new foods
  - Tolerate new food on plate
  - Kiss or lick new food
  - Hold food in mouth for 10 seconds
  - Chew and swallow a small bite
- Reward successful approximations “steps” toward goal (Shaping)
- Be flexible in ability to go up or down
Enhancing cognitive processing

- Creating lists or journals of new foods
- Assigning ratings or symbols
- Discussing food properties, similarities, recipes
- Fostering sense of accomplishment
Relaxation and Mindfulness Training

- Teaching self regulation
- Deep “belly” breathing
- Journaling
- Listening to music
- Progressive muscle relaxation
Parent Training/ Behavior Management

- Establish a meal schedule/structure
- Eliminate grazing
- Offer choices
- Social modeling and family meals
- Offer praise and positive reinforcement for target mealtime behaviors
Conclusions

- Collaboration between treatment providers allows integration of strategies
- Teasing apart anxiety, sensory responses, and behavior allows for child to be in the best learning state
- Incorporating parent management training and participation supports generalization to home
- Be patient with the process of treatment & manage expectations


