BRIEF INTERVENTIONS: TREATING PROBLEMS OF FEEDING AND EATING IN CHILDREN
BI-PED PROJECT (BRIEF INTERVENTIONS: PEDIATRICS)

Emotional Health Committee Maryland Chapter American Academy of Pediatrics

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Most infants, toddlers, and children with feeding and eating problems are normal children who have developed challenging feeding and eating habits. Although these habits and learned behaviors are often not serious, a surprisingly large number of parents present feeding and eating concerns to their primary care physicians (45% in general population and 80% in children with developmental disabilities). The majority of these children have feeding and eating challenges that can be addressed easily and quickly by a knowledgeable and supportive medical professional in the pediatric office.

Common Feeding and Eating Problems

- **Picky eaters and severe food selectivity**
- **Limited overall intake**
- **Difficulty progressing with textures**
- **Nighttime feeding**
- **Acute fear of choking**

Assessing Feeding and Eating Problems

- **Determine if feeding and eating challenges are age typical, a product of maladaptive feeding patterns that can be treated with the interventions below or if the feeding/eating pattern is indicative of a more complex problem necessitating a feeding specialist or feeding team (see When to Refer).**
- **Parent interview, including a history of the child's feeding and eating from birth, progression from bottles, to purees, and table foods.**
- **History of the present feeding or eating difficulty, including parent's attempts to address the problem and the child's response**
- **Interview of the child (if old enough)**
- **Current eating schedule and style including meal and snack schedule (or lack thereof; e.g. snacking between meals, drinks/bottles between meals). Current seating arrangements for**

meals, mealtime duration and family mealtime rules ("Tell me about a typical day of meals and snacks for your child")

- **List of preferred and refused foods including typical volumes consumed to determine deficiencies in diet (caloric or nutritional deficiencies).**
- **Consider requesting a food record for 3 days to clarify foods and volumes consumed.**
- **Assess and treat for constipation, reflux, allergies and food intolerances as indicated by patient history, as these factors frequently contribute to food refusal.**
- **Examine the child's growth curve to assess patterns of height, weight and BMI**

Brief Interventions in Your Office

PICKY EATERS AND SEVERE FOOD SELECTIVITY

Background:

- **The level of selectivity may range from "picky" which is fairly normal for toddlers and young children to severely selective placing children at risk for nutritional deficiencies.**
- **Picky eating occurs frequently in typically developing children, particularly toddlers. However, severely selective eating is significantly more common in children diagnosed with an autism spectrum disorder or generalized anxiety disorder.**

Interventions:

A) Picky eater:

Picky eating is an often developmentally appropriate behavior particularly in toddlers. Many toddlers and preschool children engage in *food jags* in which they choose to favor certain foods at the exclusion of a more balanced diet. If the child is growing well, parents can be advised to offer alternative foods or choices but to *avoid* engaging in coercion and conflict over food.

B) Severe Food Selectivity:

- **Food selectivity should be conceptualized as a food phobia and treated by use of successive approximation (gradually getting closer to the end goal of eating the food), exposure (supported presentations of the food in a systematic way), and anxiety reduction techniques (including pairing engagement with novel food with enjoyable activities). These techniques are detailed below:**

    - **SUCCESSIVE APPROXIMATION- To improve exploration and consumption of novel foods, "meet the child where they are" and move forward at a pace such that their anxiety subsides before taking the next step. A list of suggested successive approximation steps are provided below (Touch, Kiss, Lick, Bite – TKLB sequence). Start where the child is comfortable and only move to the next step when he/ she appear fully comfortable with the previous step. A general suggestion is 5x without anxiety. If the child is old enough to engage in a discussion about this process, the steps should be explained as well as any prizes or rewards for compliance.**
        - **Allow the food on the table without protest/fear/anxiety (no pressure to eat it)**
        - **Child allows the food on their plate**
        - **Touch- Child touches the food with a finger**
        - **Kiss- Child picks up the food and touches it to their lips**
        - **Lick- Child touches the food to their tongue**
        - **Bite- Child takes a bite of the food (starting with a crumb sized bite; may start as tiny as a spec; increase bite size slowly as tolerated)**
- **Additional "in-between" steps can be added if needed such as touching to teeth, making bite marks, taking a bite and spitting it back out etc. if the parent finds the child gets "stuck" at one particular step.**

- **Some children progress through steps with a new food quickly, eating full portions after one presentation. Others need daily practice for weeks to progress through all of the steps.**
- **When introducing novel foods keep the following in mind as foods are selected to work on:**
    - **Offer foods the family consumes regularly and that are familiar to child.**
    - **Consider the foods the child currently eats and try to "chain" based on texture or taste. For example if the child appears to prefer salty, crunchy foods, but refuses all meats, crispy bacon may be a good first meat to try. If the child eats French fries, the parent can introduce sweet potato fries, then zucchini fries etc. Expanding on taste may look like going from vanilla ice cream to vanilla pudding to vanilla yogurt.**

- **<u>ANXIETY REDUCTION</u>-**
    - **Use the steps above in conjunction with positive reinforcement strategies listed in the "positive reinforcement strategies" section below to facilitate reduction in anxiety and to improve the child's personal motivation to comply with the process.**

    - **Praise any efforts the child makes to comply with steps, but be careful to not correct the quality of their completion of the task or minimize their effort (e.g. if they are eating crumbs, be excited and try not to push increasing the size too quickly).**

- **<u>REPEATED EXPOSURE</u>-**
    - **Do not work on any more than 5 new foods at a time. Present the child with novel food practice once daily with no more than 2 novel foods in each practice session. Rotate through the 5 novel foods for several weeks until the child is comfortably consuming the novel food, or until it has become clear that no progress is being made with a particular food (e.g. not moving up the steps at all**

for at least a week, despite consistent trials and repeated presentations). We are all entitled to dislike some food.

- **Consider use of a sticker chart to track completion of steps and offer a small prize for completion of steps with a specific food (e.g. earning a set number of stickers).**

- **Children need to consume a food 10 to 15 times (different presentations) before the new food is comfortably incorporated into their diet (Koziel, 2013)**

- **<u>POSITIVE REINFORCEMENT</u> (see Positive Reinforcement Strategies below)**

LIMITED OVERALL INTAKE

Begin with structuring mealtimes:

- **Schedule 3 meals and 2 snacks daily with at least 2 hours between each.**
- **Do not allow snacking between meals including calorie containing drinks. If it is a young child who is still bottle dependent, consider bottle offerings as part of a meal or snack.**
- **Allow/ encourage free access to water between meals.**
- **Children should be seated in a developmentally appropriate seat for meals; highchair, booster seat or table and chair.**
  - **If the child gets up from the table frequently when seated independently, consider returning to the booster seat if the child fits.**
  - **For older children, set a visual timer like an egg timer for the time they are expected to remain seated at the table. Start with an achievable amount of time (e.g. 5 minutes) then work up to a standard 20 to 30 minute meal.**

- **If structuring the meal is not sufficient to improve overall intake, parents may need to use positive reinforcement strategies including social reinforcement, toys or video**

temporarily to shape their child's eating behavior (see Positive Reinforcement Strategies below- also see Behavior Modification module). Once good eating behavior has been established, the use of toys and video can be faded and slowly removed from the mealtime.

- **If weight gain is a concern, choose calorie rich and nutritionally dense foods. Consider prescription of a high calorie beverage to supplement nutrition and caloric intake such as Carnation Breakfast Essentials, Pediasure, etc.**
- **Also consider adding oil, butter, sugar, and cream to foods to increase caloric density. Consider a referral to a dietitian for patient specific recommendations.**
- **Offer calorie dense foods first, then other foods when possible. Offer foods in order from *least* preferred to *most* preferred to maximize intake.**

POSITIVE REINFORCEMENT STRATEGIES

(can be used for children with food selectivity or limited overall intake- also see Behavior Modification module)

YOUNGER CHILDREN (age 1-3 years) need immediate rewards for motivation.

- **Social praise and attention is sufficient for many young children, with clapping, counting, singing and verbal praise following each bite.**
- **Toys and Books can be used to reward bites of food and frequently lead to extended mealtimes (allowing for more bites) as the children frequently want to continue to play/ engage with the parent. Prompt the child to take a bite and then read a page or allow them to play with a toy.**
- **If using a toy, allow them to continue to play as long as they are accepting bites. If they refuse, take the toy away and only return it after they have either taken a bite (if the child can understand "if this then that" commands) or after holding the toy for a "toy time out" for about 30 seconds. Return the toy and then proceed with offering bites again. Repeat as needed. If using a book, have the child take a bite before turning the page.**

- **<u>Video</u>- consider allowing the child to watch a favorite video on a phone, tablet, or computer at the table. Allow them to watch as long as they are taking bites. Turn it off for at least 30 seconds for refusals. If they understand "if this then that" commands, require they take a bite before the video is turned back on. Alternatively, wait 30 seconds then turn the video back on and try again.**
- **Keep any toys, books or videos used for meals *only* for meal times. *Do not allow access between meals*, in order to preserve the effectiveness of the rewards. Rewards may need to be rotated regularly to maintain the child's interest.**

<u>OLDER CHILDREN (age 4 and up)</u> may need immediate rewards as above, but many can benefit from delayed or more sophisticated reinforcement strategies discussed below

- **<u>Sticker chart/ token economy</u>- Develop a sticker chart or token economy. Give the child a token such as a marble, poker chip, sticker etc., which may be exchanged like money for a larger prize. Develop a list of prizes to work toward with token values (e.g. trip to the park for 5 tokens; or extra video game time for 3 tokens). Make the values achievable.**
    - **Offer a token for the child finishing all of their food at a meal. Begin with offering a small portion of food that the child is capable of finishing (and typically would finish in a meal) then slowly, over many weeks, gradually increase the portion size initially given, by one bite or one spoonful until an age appropriate portion is being provided.**
    - **If they appear to have difficulty finishing a portion size, do not increase the portion size again until they are consistently successful with that portion size.**
- **With limited oral intake, children may not be getting enough calories to grow and develop. Weight checks should be done frequently. If children are not gaining sufficient weight or growing, referrals to GI and feeding specialists should be strongly considered as well as use of feeding tubes in extreme cases.**

DIFFICULTY PROGRESSING WITH TEXTURES

- **Normal texture progression moves from Stage I and II baby foods to stage III and presentation of meltable solids such as Gerber Puffs, yogurt melts and cheerios. Soft solids such as fruits, pastas and soft or processed meats are next followed by increasingly difficult foods to chew with unprocessed, tough meats such as steak as the last and most difficult foods to chew.**
- **Children may develop resistance to progression at any of these steps by refusing foods by texture and gagging with presentations.**
- **Parents should monitor gagging carefully, but calmly as to not communicate fear to the child. The child should be reassured that they are "ok" and talked through chewing the bite more thoroughly or taking a sip to assist in swallowing. Parents should offer a smaller bite of the offending food at the next presentation to re-build confidence.**
- **Parents should model chewing when applicable to help their child learn to process the food.**
- **If the child is having difficulty progressing from stage II to stage III foods, parents can try mixing a stage II with a stage III for an in-between step to mastering the stage III. Crumbs of meltable solids can also be added to stage II foods. However, this should be done with the child's knowledge so as to not risk the child beginning to refuse preferred foods.**
- **Tiny bites (crumb sized) of the non-preferred texture should be offered to start, with increasing size as tolerated.**
- **The child can be offered alternate bites of the non-preferred texture with the preferred texture.**
- **If minimal or no progress refer for oral motor therapy**

NIGHTTIME FEEDING DIFFICULTIES

(for children old enough to sleep through the night whose nighttime feedings are causing disruption for their family at night)

- **If the child is not getting much nutrition from nursing or bottle feeding at night (feeding is primarily for comfort), begin the**

Progressive Waiting Approach for sleep intervention (see Bi-Ped Project Brief Interventions: Treating Sleep and Bedtime Problems module)

- **If the child is getting substantial nutrition from nighttime feedings, the first step is to wean the child from nutrition during nighttime feedings**
- **Let the child nurse for shorter and shorter periods of time over several days**
- **If the child is drinking a bottle at night, milk or formula can be gradually diluted with water over several days to a few weeks (90% milk – 10% water, 80% milk – 20% water, 70% milk – 30% water, etc.) until the child is drinking only water. The bottle can then be stopped either abruptly or over a few more days, with less and less water offered. Most children become bored and no longer want to drink when the bottle only has a small amount of water.**
- **When the parent is confident that the child is no longer waking up because of hunger, parents can begin the Progressive Waiting Approach to help the child learn to fall asleep on their own at the beginning of the night and when waking up during the night**
- **Parents should be advised in early infancy not to use breast feeding or bottles as "props." Parent should feed and put the child into crib tired but awake so that the infant learns to "self soothe" and fall asleep on his/her own**
- **Some parents will opt to continue feeding their child frequently during the night. If the child is growing well and parents do not identify this as a problem then no intervention is necessary.**

SCHOOL AGED CHILDREN WHO DEVELOP AN ACUTE FEAR OF CHOKING

- **May occur in children who experience a choking incident or observe a choking incident**
- **The child may or may not have premorbid anxiety**
- **The child may develop an acute stress/anxiety response and fear of choking when swallowing food**
- **The child and parent should be reassured that they will recover quickly and completely (and will not choke or die)**

- **If the child is old enough, he/she can be educated about the swallowing process**
- **The child should be encouraged to eat small amounts of food at a time, beginning with a tiny bolus (e.g., small bites of a cheerio) and increasing the bite size over time**
- **The child should be encouraged to consume sufficient volume and density of supplemental drinks (e.g., Ensure) to maintain adequate calorie intake**
- **IF THE CHILD GOES TOO LONG WITHOUT ADEQUATE CALORIC INTAKE, APPETITE WILL DIMINISH RAPIDLY, OFTEN EXACERBATED BY ANXIETY AND/OR DEPRESSION.**
- **The child and parent should be supported through this process**
- **If the child can eat one cheerio, then he/she can progress to several cheerios and then to larger boluses. The child should be encouraged to eat small amounts many times throughout the day.**
- **If the child has not progressed and returned to a normal diet within two weeks, weight will need to be monitored, in addition to consideration of supplemental tube feedings. Referral to a feeding team or specialist should be made if the child is still struggling after two weeks.**
- **Intensive feeding intervention is generally fast and successful.**

WHEN TO REFER TO A FEEDING THERAPIST OR FEEDING TEAM

- **When the above recommendations are not successful in resolving the feeding/eating problem**
- **When there are associated medical, developmental or nutritional complications including but not limited to**
    - **History of or suspected structural or functional anomalies of the mouth, esophagus, stomach, or GI tract. (refer to a GI specialist and/or a feeding team).**
    - **Oral motor delays or history of frequent pneumonias, coughing, choking or gagging on a regular basis with foods or liquids, oral motor delays (refer to an oral motor specialist or feeding team)**

- **Severe anxiety, behavioral rigidity or disruptive behavior that extends beyond feeding and eating (refer to a psychologist).**
- **ARFID (Avoidant/Restrictive Food Intake Disorder) in which the diet is severely deficient in caloric intake or nutritional content placing the child at risk for associated medical complications such as iron and vitamin deficiencies or Failure to Thrive marked by weight loss or poor weight gain (refer to a feeding team including a dietitian).**

Reference:

Kerzner B, Milano K, MacLean WC Jr, Berall G, Stuart S, Chatoor I. A practical approach to classifying and managing feeding difficulties. Pediatrics. 2015 Feb;135(2):344-53. doi: 10.1542/peds.2014-1630. Epub 2015 Jan 5. PMID: 25560449.