



Pediatric Feeding and Dysphagia Newsletter

Welcome fellow feeders, to the last issue in this subscription year!

In this issue we focus on oral aversion and what the term means to different feeding therapists. In fact we had to add 2 extra pages to this issue to fit all the responses! We continue learning about the development of chewing skills and the chewy tube with Mary Schiavoni, SLP, learn exactly what is a "swallowologist" on page 6, as well as tap into a GERD resource online, an interesting case and interesting research.

PLEASE resubscribe, our next subscription year begins in July! Our plan is to email the newsletter in a pdf format so be sure to include an email address to receive the newsletter. See page 5 for renewal information or the insert. WE are also asking that you help us spread the word by telling colleagues about the newsletter so we can expand our readers. Currently, it's being received in 4 countries! Thanks! Krisi Brackett MS SLP/CCC

Direct questions to: feedingnews@earthlink.net

Pediatric Feeding and Dysphagia Newsletter
Hiro Publishing
www.feedingnews.com

Volume 6, number 4

Special Points of Interest:

- ☺ Current information
- ☺ New products
- ☺ Research and publications
- ☺ Education
- ☺

Editorial assistance provided by Elizabeth Crais Ph.D. CCC SLP, Division of Speech and Hearing Sciences, UNC-Chapel Hill and Cathy Fox MS OTR/L, Private Practice, Frederick, MD

We asked therapists from around the country, What does "oral aversion" mean to you as a feeding therapist? Read on.....

I think we need to be careful using the term 'oral aversion' when children refuse food or oral stimulation. Children that are considered 'orally aversive' or as having a 'behavioral feeding problem' typically have a physiologic reason for behaving the way they do. Many of these children have a reason to protect their mouth/esophagus because they are in discomfort. As feeding specialists, it is our job to consider all avenues or reasons why a child is refusing food, implements, or oral hygiene before beginning treatment. Refusal behaviors are typically a symptom of the problem. The term 'oral aversion' seems to be a term that means refusal of oral input. The real question is what's causing the oral aversion whether it be gastrointestinal, respiratory, cardiac, anatomic, musculoskeletal or most likely a combination of reasons.

Cecilia Manno, MS, CCC/SLP, Private Practice, Newtown PA 18940

Having "oral aversion" as the reason for referral usually only means oral aversion is a catch all term. I think this is very over used and ill defined. When I hear someone say oral aversion, I immediately think that there is something that is giving this child negative oral sensation, that is not allowing the child to eat without negative signals. The first question to be answered is what is going on and can it be or has it

(Continued on page 2)

Inside this issue:

| | |
|---------------------------|-------|
| Oral Aversion | 1-5 |
| Peds GERD online tutorial | 6 |
| Swallowologist | 6 |
| Chewy tubes.... | 7-9 |
| Case by Case | 10-11 |
| On the Research Front | 12 |

Re-subscribe!

Oral Aversion.....

(Continued from page 1)

been treated completely enough for this child. Often I have seen children who are said to have a behavioral feeding problem or sensory aversion. Yet they do a lot of oral exploration and have no significant adverse response to a variety of sensory input. Many of the children continue to have persistent medical issues that make it difficult to engage in or advance the oral motor experiences and skills. We treat the medical, behavior and some sensory issues around feeding but do we do enough to inhibit exaggerated sensory responses by using medicines to turn off these signals? Interested people should read information by Dr. Paul Hyman., Ped Gastro-motility Specialist.

Cathy Fox, MS OT/L, Children's National Hospital, Washington, DC

When I first started in pediatric swallowing and feeding back in the 70's, this term was strictly reserved for "pure" oral - sensory problems, which can indeed exist. Currently, the term "oral aversion" has become so watered down that it has unfortunately lost clear meaning, and is at times being applied somewhat indiscriminately without careful differential diagnosis involving a multi-system approach.

Too often children with any eating refusal/avoidance get lumped into a "generic" group, and are diagnosed as having an "oral aversion". In reality there is usually, for each child, a unique etiology and set of complex co-existing associated factors, that if peeled apart layer by layer, may lead us to a different clinical conclusion and different treatment approaches.

The key I think is to remember that "our kids do things for a reason" (as Bob Beecher says) and our job is to find out what that is and then individualize the treatment. It takes patience, thorough assessment, teamwork and careful reflective thinking.

Catherine S. Shaker, MS/CCC-SLP, BRS-S, Board Recognized Specialist in Swallowing and Swallowing Disorders, St. Joseph Regional Medical Center, Milwaukee, WI

Oral aversion is described as a consistently observed negative response (grimace, avoidance behaviors) with sensory input to the peri-oral and/or intra-oral region. Oral aversion may be related to a variety of medical conditions, such as gastroesophageal reflux, aspiration, prematurity, intraventricular hemorrhage (IVH), periventricular leukomalacia (PVL), etc., as well as from negative oral experiences such as nasogastric (NG) or orogastric (OG) feedings or from long term intubation.

Aversion may be evident at birth and may impact breast/bottle feeding, spoon-feeding and the transition to table foods. However, oral aversion is distinct from feeding aversion and behaviors can go beyond the feeding experience. A child with an oral aversion may be aversive to oral care, avoid contact to the mouth with hands and toys and therefore may not experience normal developmental mouthing activities. The child may also present with motor deficits and may be physically unable to bring hands/objects to mouth. Care giving practices and parenting style may also contribute to oral aversion. The parent may discourage mouthing of toys/objects and insist on feeding the child beyond the appropriate developmental stages to control the feedings due to concerns regarding safety of oral nutrition or to avoid messy mealtime experiences.

An oral aversion may also be part of a more global presentation of a sensory processing disorder. Oral aversion can manifest itself in a variety of presentations including hypo-reactive and hyper-reactive responses to sensory input. Treatment should focus on a whole body approach providing pleasurable age-appropriate child directed

(Continued on page 3)

Oral Aversion.....

(Continued from page 2)

oral motor experiences. The therapist should work progressively toward the mouth as tolerated. Analysis of the food items accepted by the child may reveal that only particular types or textures of food are tolerated. Treatment focuses on expanding flavor prior to texture and providing variety in the diet as tolerated. The child may present with a very restricted food repertoire and nutrition can also be significantly impacted.

Cheri Fraker, CCC/SLP, CLC, Laura Walbert, CCC/SLP, CLC

Preemietalk, Inc. , Springfield, Illinois

I don't have time to go into as much detail as I would like, but I do want to say that I believe this term is over-used and is not well defined in most instances. It has become a "waste basket" term. I will also add that I believe some behaviors become imposed by therapeutic interventions - not every infant and young child who seems reluctant and wary about certain food and liquid (or perhaps all food and liquid) needs intraoral stimulation. Many children are smart enough to know what makes them feel good and what does not - children with pain and discomfort for whatever reasons that may even remotely be connected to the act of oral feeding tend to protect themselves. We need to remind ourselves constantly that all behavior stems from some underlying physiologic experiences even if we can never delineate those clearly..... enough said for now.

Joan C. Arvedson, PhD, BC-NCD, ASHA Fellow, Board Recognized Specialist in Swallowing and

Swallowing Disorders, Program Coordinator, Feeding and Swallowing Services

Children's Hospital of Wisconsin-Milwaukee

Oral aversion- hypersensitivity orally that results in rigidity in texture, taste, temperature and impacts transitions to age-appropriate diet textures and amounts. Secondly, medical, physical, emotional, and temperamental issues can result from now resolved medical issues and become more behavioral in nature. Oral aversion may also stem from extreme inexperience and or lack of internal motivation to explore things orally.

Polly Tarbell MS SLP, The Encouragement Feeding Program, Charlottesville, VA

Oral aversion to me means any one who has a negative emotional response to the activity of oral intake. Debra Beckman, MS, CCC-SLP, Beckman & Associates, Inc.

I feel "oral aversion" is an overused term (often used by MD's) to describe any feeding problem in infants / kids. I like to separate the term "oral aversion" from "food aversion." The term oral aversion is often used for kids who refuse solids, eat poor volumes, or are having difficulty transitioning to textures. Many children with these issues have underlying medical problems that are causing more of a food aversion or decreased interest in eating. I think oral aversion better describes a child or kid who prefers nothing in or around his mouth. No mouthing of hands or toys, no spoons, or food, etc. For example, a kid who has been g-tube dependent since birth, has never eaten and is orally / facially defensive to all stimuli. I have seen plenty of children diagnosed with "oral aversion" who love their mouths when it comes to pacifiers, toys, hands, but feel very differently when it comes to food in their mouths which, again may be a result of a medical problem or complicated feeding history.

Jenn Rayburn MS SLP, UNC Hospitals, Chapel Hill, NC

(Continued on page 4)

Oral Aversion.....

(Continued from page 3)

Having "oral aversion" as the reason for referral usually only means to me that the family is having feeding difficulties. It then becomes my job to describe the nature of the feeding difficulties and investigate potential etiologies. I have found any number of reasons for the "oral aversion". The treatment is then tailored to the real description of the problem. It doesn't seem that the term as used here means anything specifically. Mary Christiaanse, MD, Amos Cottage, Winston-Salem, NC



Practitioners treating children with pediatric feeding disorders often face the dual challenge of not only increasing the volume of food their client eats by mouth but also, simultaneously, decreasing their client's severe oral aversion and defensiveness. There are many underlying reasons why infants and children become orally defensive, but even when these initial conditions are stabilized and/or resolved many children continue to show lingering signs. Due to this, oral aversion remains a significant barrier for therapists trying to teach children to eat by mouth and/or to advance oral motor skills.

Therapists who treat children with oral aversion often become frustrated, particularly when treatment sessions produce an agitated child who has not consumed any food. With severe oral aversion and defensiveness, it is important for therapists and caregivers to not become discouraged by the negative responses but rather set short-term achievable goals that stem from the child's abilities.

In the Pediatric Feeding Program at Children's Hospital in Richmond, VA, we treat many children from around the country who have received ongoing therapy but have not managed to decrease their oral defensiveness. With intensive treatment in our day patient program, these children have been successful in overcoming oral aversion and have begun to eat by mouth.

Carol Elliott, OTR/L, Betsy Clawson, Ph.D., LCP, & Amber Bishop, M.S., OTR/L
Children's Feeding Program, Richmond, VA

Oral aversion means so many different things to different therapists. As feeding therapists have become more conversant with the philosophy of sensory integration, there has been an increasing tendency to label children as having "oral aversion" or "oral defensiveness" anytime they refuse to let adults in their mouths or are reluctant to experience foods that require greater sensorimotor skills. To me "oral aversion" is a sensory processing disorder that is a part of an overall sensory processing difficulty. When a child says "no" to sensory input in the mouth, I explore 2 major questions: 1) Does the child show other indications of a sensory processing or sensory integration problem? and 2) What has been the child's personal history with oral sensory experience and with adults who provide it? In my experience, children who have sensory difficulties in other non-mouth areas are more likely to be experiencing a true "oral aversion" in which there is a neurological or neuro-psychological difficulty with processing the sensory input itself. Children who have experienced a great deal of oral invasion from examinations, oral surgery, intubation, and overenthusiastic therapists who force sensory input, are usually children who are taking care of themselves by saying "no" when sensory input is introduced by others. These kids are experiencing

(Continued on page 5)

Oral Aversion.....

(Continued from page 4)

"sensory

defendedness", not "sensory defensiveness. The concept that therapists need to "desensitize" a child's mouth is one of the most harmful ones that we have added to the therapy repertoire. Sensory processing at all levels should be highly interactive. Children need to be comfortable and need to give permission before therapists enter the mouth with toys, tools or food. When sensory input is forced (even with the best of intentions) children typically become more guarded and experience greater physiological levels of discomfort because of the stress involved. Thus, my approach with all children is to respect their mouths and to understand, in the best way I know how, that they may be saying "no" in a way that others call "oral aversion". My communication and action with these children is one of building trust and a sense of adventure, comfort and competence with the mouth. The aversion with these kids is a form of communication in which the child is sharing past uncomfortable experiences non-verbally.

When children are experiencing a more generalized sensory processing difficulty, I treat the underlying issue which is one of sensory processing and integration, not "oral aversion". Oral aversion or defensiveness is part of the whole. It can be addressed within the total construct of altering the way in which the child is able to handle the sensory world in an adaptive manner. I work with the

overall principles of sensory integration in identifying the sensory avenues that help a particular child process information more effectively. The concept of a sensory diet that incorporates

integrating sensory information throughout the day is very important for these kids. Greater interest in and acceptance of sensory experiences in the mouth is enhanced by activities involving

vestibular, proprioceptive, deep touch and music/sound prior to the meal. The idea of working with the whole sensory system rather than just focusing on the mouth is vital for these kids.

With both groups of kids it is very important to take very small steps in changing the sensory input offered to the child through the mouth and to engage the child in an interactive response rather than simply accept sensory stimulation passively. The most important aspect of all of this is finding ways in which kids are comfortable yet slightly challenged by the sensory input. I want children to

enjoy their sensory world and feel safe in their relationship with me as they expand their horizons.

Suzanne Evans Morris, Ph.D. , Speech-Language Pathologist, New Visions

Children who have a negative response to touch, textures or tastes have oral aversions. These aversions may be innate or learned. There are clients we see who have innate sensory processing disorders and have aversions to input because they cannot make sense of the information. I think this is the client you will get most responses about. So I would like to address "learned" oral aversions. For example: Think about a child who is on a pureed diet and the family/therapists are trying to introduce textures. You give the child a food they do not have the motor skills to handle and they gag, choke, and throw up. In the interest of nutrition, you continue to try and offer foods the child cannot handle. The child has negative sensory experiences associated with solid foods. They have learned that it is uncomfortable...even scary to have those foods in their mouth. The response may be turning away, crying, lip closure (for the child typically in an open mouth posture!), vomiting, etc.... They may be labeled as having "behavioral feeding disorders". These oral aversions are learned. As we address the oral motor skills for feeding and develop positive sensory experiences these children learn to handle a variety of tastes and textures. Lori Overland M.S. CCC, Alphabet Soup, Pediatric Oral Motor/Feeding/Speech Therapy, Norwalk, Connecticut

PART II: Interview with Mary E. Schiavoni

By: Mary E. Schiavoni, MS, CCC-SLP, Feeding Consultant

Chewy Tubes

"A little something to chew on."

3. How did you develop the protocol for the Jaw Rehabilitation Program? Is it based on research?

The protocol for the **Jaw Rehabilitation Program** (affectionately referred to as the JRP) was developed principally through clinical experience. My training in Pediatric Neurodevelopmental Therapy in addition to my Speech Pathology background led me to carefully scrutinize the components of jaw movement as one aspect of oral motor function. This analysis of jaw movement led me to the identification of specific treatment components i.e. the initiation of jaw excursion, stimulation of jaw closure, and reinforcement of repetitive cyclical excursion-closure movement. I related these treatment issues to specific feeding skills and began asking questions specific to the jaw regarding fundamental oral

feeding behaviors i.e. what mandibular function does a patient need in order to safely and effectively masticate a bolus? What are the essential components of this movement? When is the cycle of jaw excursion initiated? How can this cyclical biting movement be stimulated and initiated? When is one cycle of jaw motion complete? How can duration of a patient's repetitive jaw movement be sustained and increased in order to effectively masticate firmer textures? How many cycles are required for effective mastication? What outcomes result if the jaw fatigues in the process of mastication? To summarize, I wanted to identify what mandibular movement looked like and what the parameters of jaw movement were as related to oral feeding behaviors.



I was originally encouraged in my work by Dr. Suzanne Evans Morris who authored much of the original oral motor work back in the 1980's. I studied under her directly and read her work and was particularly interested in her *Pre-Speech Assessment Scale*. This publication delineated specific oral motor movements and provided descriptions of these movements along a developmental and chronological timeline. Normal and abnormal movements of the jaw were delineated, as observed in typically developing children and children with cerebral palsy. Earlier in my career I had been very interested in lingual treatment and had completed a study for my thesis on lingual diadochokinetic rates. Later in my professional career, I became increasingly interested in the maturation of jaw movement, particularly in the developmental progression of biting and chewing skills. I have specialized now for over thirty years in treatment to develop oral feeding behaviors in the pediatric population. In developing the intervention program outlined in the *JRP*, I initially utilized a Chewy Tube™ prototype with my patients to target increased jaw movement and followed the sequenced plan of treatment which is also congruent with motor learning theory.

I collected data on an informal basis with several of my patients and I began to see a pattern of successful maturation of jaw movement and application of these skills in oral feeding, especially with my patients who had Down syndrome. My data is not in publishable form at this time. I am intending to prepare a retrospective study at some point in the future when time permits. Dr. Suzanne Morris also used Chewy Tubes™ in treatment in the early stages of their development and reported successful outcomes with her patients.

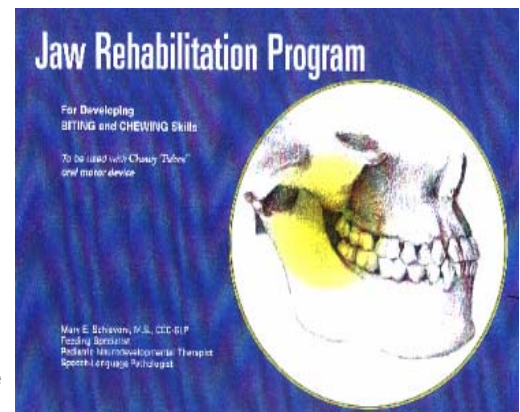
The **Jaw Rehabilitation Program** is organized into seven levels of treatment. Each level is comprised of two long term goals and specific short term objectives which accompany each long term goal. It is a sequenced intervention program. Each treatment level builds on skills achieved at the previous level. It is recommended that all levels of the **Jaw Rehabilitation Program** be implemented in sequence with each patient.

(Continued on page 8)

PART II: Interview with Mary E.

(Continued from page 7)

I am constantly encouraging therapists to observe jaw movement and carefully describe the function. The *Jaw Assessment* tool was designed to document major components of function and structure relevant in developing jaw movement needed for oral feeding behaviors. These areas include: *Structure, Range of Motion, Dentition/Alignment, Function, Quality of Motion and Food Texture*. Knowledge of basic structural integrity is, of course, mandatory. Any aberrations in structure need to be recognized and noted. Some anomalies may impact function. So we document the structural integrity of the jaw before we begin treatment. We do not expect structural components to change as a result of treatment. We do expect to see patient progress in the functional movement areas, however, so baseline is documented prior to intervention.



4. What are the different types of Chewy Tubes and how are they used?

There are now 5 individual tools in the Chewy Tube™ family of oral motor tools: red and yellow Chewy Tubes™, the green Knobby Tube (has bumps all over the bitable stem), and the solid tangerine *Ps & Qs*. The red and the yellow Chewy Tubes™ are our hallmark products and were developed to be used with implementation of the **Jaw Rehabilitation Program**. When assessing individual progress on long term goals and short term objectives sequenced in the *JRP*, the therapist uses a red and/or yellow Chewy Tube™ with the patient. Chewy Tubes™ have the patented tubular design which offers some resiliency when a patient bites down on the bitable stem. This resiliency effect encourages the individual to bite down again and again on the bitable stem. The corrugated handle was designed to provide additional tactile input for visually impaired individuals regarding where to hold onto a Chewy Tube™ for oral positioning and to facilitate a secure grip when held by the therapist.

The yellow Chewy Tube™ has the narrowest bitable stem (3/8" outside diameter) and is the smallest of the Chewy Tubes™. I typically treat my youngest patients, who have the smallest jaws (definitely under one year old) with the yellow Chewy Tube™. I suggest initiating treatment using a yellow Chewy Tube™ with patients who are defensive to intra-oral tactile stimulation or with any patient who has reduced jaw excursion. With adults, many therapists use the yellow Chewy Tube™ with individuals who have trismus or reduced jaw excursion. The yellow Chewy Tube™ is also used with patients status post mandibular surgery and radiation therapy. In skilled nursing facilities patients use both red and yellow Chewy Tubes™ in practicing the exercises outlined in the *JRP* to maximize their biting abilities. The red Chewy Tube™ is next largest with a 1/2" outside diameter. I typically move my toddlers onto the red Chewy Tube™ so that I have both the yellow and red Chewy Tube™ available for treatment activities. The child can select the one (s)he wants to start with and then we move to the second Chewy Tube™. Generally, I'm going for double the treatment opportunities.

The *Ps & Qs* were designed to offer an alternative tool with a firmer bitable surface. They are not tubular but solid, and offer variety as another exerciser for practicing biting and chewing skills. Babies love the *Q* as they can hold onto it and explore the stem with their tongues. Adults can bite down and experience bilateral jaw contact on the *Q*.

The *P* is also fun for babies who are gaining fine motor skill. They can grasp the circle of the *P* while biting on the leg of the letter. Typically I conduct my treatment with the red and yellow Chewy Tubes™ and then give my younger patients a *P* to explore while I chart a note. As soon as the child sticks the leg of the *P* back into the molar area I assist playfully to reinforce the up and down vertical biting pattern that we have just worked on with a Chewy Tube™.

The green Knobby Tube is our latest newcomer to the Chewy Tube family. This Chewy Tube is designed with knobs all over the bitable stem to provide additional intra-oral tactile stimulation. One bonus of using the Knobby Tube is that it encourages lingual movement within the oral cavity. The tongue wants to move around and even cross the midline to check out those bumps on the Knobby Tube. We have a new blue Chewy Tube™ under development which will debut in July 2006.

(Continued on page 9)

PART II: Interview with Mary E. Schiavoni

(Continued from page 8)

5. Can you talk about application to treatment?

Let's take a moment to talk about an important concept in oral motor treatment in general and when using Chewy Tubes™ in particular. That is the concept of working laterally within the oral cavity. When targeting the goal of developing repetitive vertical biting, I believe it is critical to move the patient away from biting in the midline as much as possible, even for self-stimulatory biting, and move the patient toward total lateral biting. Chewy Tubes™ should be presented to the mouth laterally and used laterally. That is, the bitable stem should be presented from the right or left side of the jaw, not from the midline. Biting activities are conducted with the Chewy Tube™ in contact with the molar dentition or gum region, if dentition is absent. The patient may need guidance to assure that the Chewy Tube™ stays positioned laterally and is not moved midline. This concept is key in involving the masseter for repeated closure of the jaw in the duration of biting activity.

In treating children who have bruxism or who continually bite on themselves, their shirts and other items, the concept of working laterally in the mouth can be crucial to establishing a key discrimination in the child's biting pattern between "appropriate" biting and "inappropriate", self-stimulatory or habitual biting. It is critical to work laterally in order to provide very essential proprioceptive input into the patient's temporomandibular joint which will help mature the biting pattern of the patient. "Appropriate" biting then, would target placement of the Chewy Tube™ laterally, to develop tone and strength in the masseter and to provide needed sensory input into the TMJ. This type of biting is initiated by treatment outlined in the **Jaw Rehabilitation Program** and is developed into functional, rhythmical patterns of jaw motion which favorably impacts on the mastication of more advanced food textures.

"Inappropriate" biting would be biting with/on a stimulus in the midline of the oral cavity. This type of biting does not provide the proprioceptive input needed to the TMJ to move the patient to a more mature pattern of biting. A child can stay with this type of biting for a long time and be unable to move to firmer textures in feeding secondary to an absence of a true and safe pattern of mastication.

It is very important to become a good jaw observer. I encourage all therapists to train their visual skills to follow the specific cycles of jaw movement in a patient. Learn the maximum number, the average number and the minimum number of cycles employed by your patient in masticating a bolus. Know when fatigue sets in and vary food textures during the course of a meal to accommodate your patient's skill level while constantly seeking to develop higher level biting abilities. Vary bolus texture and shape for safety and fun! Oftentimes it is helpful to present the firmer bolus at the beginning of a meal before fatigue sets in.

6. Are there case studies available regarding successful use of the protocol?

Speech Pathology Associates, LLC, very much encourages studies using Chewy Tubes™ and the **Jaw Rehabilitation Program**. My own case studies used in the development of the product are not in a formal form at this time. Over the past few years since the *JRP* has been on the market, therapists have contacted me about possible studies but to date I am not aware of completed studies. Chewy Tubes™ have been used in at least two studies I am aware of in the pediatric population to establish the presence of biting skills and to improve biting skills as part of an effective oral motor intervention protocol (Infant-Toddler Intervention, 2001, Vol.11, nos. 3-4, pp.181-200). In addition, Chewy Tubes™ have been presented as tools for jaw treatment in texts by Sara Rosenfeld-Johnson, MS, CCC-SLP and Suzanne Evans-Morris, Ph.D. To request information or support for on-going research, please contact us at www.chewytubes.com.



For practicing Biting
and Chewing Skills



Case by Case: Food Refusal without a diagnosis

Sydney is a 34 month old female with a history of inconsistent intake and failure to thrive. Her parents are tired of the struggle to feed her and have resorted to great lengths to encourage intake.

History: Sydney was referred to early intervention at 30 months for difficulty feeding and poor weight gain. She was born at 39 weeks at 6 1/2 lbs. without complications and fed well the first year of life. She has no known medical problems and her development is on tract. Parent's report difficulty starting after her first birthday when she became harder to feed. However, no clear reason for why problems developed could be determined. She received sensory therapy from ages 1 1/2 –2 1/2 in another city for soft signs of sensory problems such as not liking textures on her hands and feet. It affected minimal change in eating patterns. Parents have been instructed to power pack calories with cream, butter, honey and oil and give Pediasure during the day.

Evaluation: Assessment revealed an energetic engaging (albeit stubborn) girl whose intake was table foods (of her choice), inconsistent intake, and meal times that lasted over an hour. She insisted on feeding herself and often made food requests only to refuse them and ask for something else when her mother presented it to her.

GI: Sydney has a daily bowel movement with some straining. There is no history of vomiting, spitting, or gastroesophageal reflux. She has not had any formal GI testing but did have a RAST test (blood test for allergy) that came back as normal. She is less than the 3rd percentile for height to weight ratio.

Oral –motor pattern/feeding: normal for structure and mildly delayed function. She demonstrated a rotary chewing pattern, however chewing movement was slow and resulted in long meal times and less intake. She refused purees and attempts from her mother to feed her and needed distraction during meals. Her Parents were bringing toys to the table during family meals and attempting distraction and bribing.

Intervention: Without a clear understanding of why Sydney was failing to thrive, it was difficult to know how to proceed. Changes were made in terms of easiest to hardest and they were made systematically to determine progress.

Goals:

1. adequate weight gain,
2. easier feeding with less refusals in a reasonable amount of time.

Initial recommendations: (thought process is in parentheses)

An easy behavioral plan was put into place:

1. Feed Sydney 4 smaller meals per day one on one with parent and child. *(allowing for the child and parent to focus on feeding and to prevent the feeding issues from disrupting family meal times)*
2. Meals should be 1/2 -3/4 puree and 1/4—1/2 chewables. *(Purees will allow for a faster and easier transport pattern and will reduce the over all meal time while allowing for the ability to increase*

Case by Case:

caloric density in a variety of ways. Purees can be high calorie baby foods, pudding, yogurt, mashed vegetables, or any meal put into a food processor. Calories were increased with Duocal powder, a tasteless mixed calorie source powder that can easily be added to purees and liquids.)

3. Parents should feed Sydney. At family meal time she can sit with the family and self feed if she wants with no pressure to eat or not eat. *(Sydney would need to be taught to accept the spoon bites from her parents.)*
4. Use distraction or rewards for acceptance of the spoon. *(Sydney was playing during the meal, however, there was no consequence for not eating or refusing. Therefore, a behavioral program was taught to the parents reinforcing Sydney for the acceptance of bites, allowing for distraction during the meal. Special toys were saved only for meal time. If she refused the bite, toys were removed from the table and the feeder was instructed to turn away from her for 20 seconds.*

Results: Parent's loved the idea for one on one feeding and the use of duocal, having been told to distract during meals, and power pack with cream with poor success for the past year. Sydney responded well to the reinforcement and accepted purees better although with some inconsistency. Illness slowed her down and even resulted in mild weight loss.

5. GI referral— A trial of mirilax to increase ease and amount of stooling as well as a trial of periactant, an appetite stimulant was requested. Interestingly, soon after the medications were started, feeding became much easier. Sydney continued to stool one time per day but with ease and a larger amount. While the periactant made her sleepy at first, she began to request food and accepted food willingly at mealtime. (The periactant is given 5 days on, 2 days off to continue the hunger side effect).

Thoughts: Without a definitive diagnosis we can only speculate, but it appears that Sydney may have slow or irregular motility. She appears to be responding to a combination of recommendations: medication to keep her system moving and increase hunger, an easier textured food to decrease mealtime length, and the use of distraction during meals to improve acceptance of foods.

Over the next few months, her weight will be tracked as well as slowly increasing texture as ease of oral patterns and food acceptance continue.

Pediatric GERD: A Problem-Based Approach to Understanding Treatment

<http://www.medscape.com/viewprogram/4715>

Check out this web tutorial!

This activity is offered in two formats: [Slides and Audio Version](#) (A multimedia presentation with synchronized audio, slides and transcript.) or --Slides with transcript:

1. [The Natural History and Epidemiology of Pediatric GERD](#)
by Suzanne P. Nelson, MD, MPH
2. [Extra-Esophageal Manifestations of Pediatric GERD: Recognizing the Indicators](#)
by Benjamin D. Gold, MD
3. [Long-term Issues in Pediatric GERD: Identifying Children at Risk for Complications](#)
by Harland S. Winter, MD

© all rights reserved.

Hiro Publishing
3106 Lincoln Street
Salt Lake City, UT 84106
www.feedingnews.com
phone: 801-599-8250
Email: feedingnews@earthlink.net

Special for Feeding Therapists and Professionals!

This material is provided for informational and educational purposes only; it does not contain specific medical advice. If you have specific health questions or problems, consult a health care professional for personal medical advice.



On the Research Front:

Bekem O, Buyukgebiz B, Aydin A, Ozturk Y, Tasci C, Arslan N, Durak H. Prokinetic agents in children with poor appetite. Acta Gastroenterol Belg. 2005 Oct-Dec;68(4):416-8.

Poor appetite is probably one of the most common complaints by parents of children with feeding disorders. Since gastric motility disorders may be the cause of this symptom, the aim of our study was to investigate the effect of prokinetics on children with poor appetite and delayed gastric emptying. 21 children were studied. At the end of treatment, weight and height standard deviation scores improved significantly and malnutrition rate decreased from 81% to 66.7%. Improvement of gastric emptying was shown in 11 out of 16 children but was not statically significant. The visual analogue scale scores of appetite showed significant improvement with therapy. In conclusion, children with poor appetite who have delayed gastric emptying might benefit from prokinetic agent therapy combined with behavioral feeding recommendations.

Rogers B, Arvedson J. Assessment of infant oral sensorimotor and swallowing function. Ment Retard Dev Disabil Res Rev. 2005;11(1):74-82.

The purpose of this article is to review the neurobiology, development, and assessment of feeding and swallowing during early infancy. Progress in developing standardized, reliable, and valid measures of oral sensorimotor and swallowing function in infancy has been slow. However, there have been significant advances in the instrumental analysis of feeding and swallowing disorders in infancy, including manometric analyses of sucking and swallowing, measures of respiration during feeding, videofluoroscopic swallow evaluations, ultrasonography, and flexible endoscopic examination of swallowing. Further efforts are needed to develop clinical evaluative measures of dysphagia in infancy.