



Pediatric Feeding and Dysphagia Newsletter

Dear Fellow Feeders,
 In this issue we cover The TR-eat Model, My Munch Bug, and Button Buddies. We also include our usual research and case examples.
 Enjoy, Krisi feedingnewsletter@gmail.com



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The TR-eat™ Model

by: Carol Elliott, OTR/L and Elizabeth Clawson, PhD

The **Transdisciplinary Effect Assessment and Treatment (TR-eat™)** model melds medical management, skill building and behavioral interventions to create a distinctive treatment method with outstanding outcomes for children with complex feeding problems. It is a treatment method where disciplines work collaboratively to address complex issues as they relate to feeding difficulties. TR-eat™ was developed by Elizabeth Clawson, Ph.D. and Carol Elliott, OTR/L in their search to find a treatment model for children with complex feeding problems that was consistently successful, easy to administer and met the needs of the child and family.

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Development of the Model:

Elizabeth, having a strong rehabilitation background and then receiving training in pediatric feeding disorders at the Kennedy Krieger Institute, saw the value of behavioral psychology for children with feeding difficulties. The challenge with using an Applied Behavioral Analysis approach was how to integrate this effectively with other disciplines. She found limitations with using solely an ABA approach for children who lacked oral motor skill or had difficulty processing sensory information. Unfortunately, these deficits were typically found in most cases.

When Elizabeth began working at Children's Feeding Program at Children's Hospital of Richmond in 1999 she partnered with Carol. Faced with many complex cases, it was necessary to problem solve and think creatively how their two areas of expertise could be used collaboratively. The behavioral strategies were integrated with hands on skill building, facilitation, sensory desensitization and oral motor intervention. The response and progress noted in these patients was outstanding. Working as a team was not a new idea in the area of feeding therapy however melding discipline boundaries was novel. Elizabeth and Carol found it was essential that all members of the team were crossed trained and had an understanding of all the variables in the case i.e. medical, behavioral, oral motor, sensory, and psychosocial. The model incorporates the theory of transformational leadership within the team, including the families, with a goal of

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achieving valuable and positive outcomes. Transformational leadership enhances the motivation, morale and performance of members through a connection with the mission of the program. It inspires the team to think about patient care and figure out better ways to improve patient progress by challenging members to take greater ownership for their work. By understanding the strengths and weaknesses of followers, leaders can align them with tasks that optimize their performance.

The TR-eat™ model is research based and has 12 years of outcome data to support it. The model has been used in a variety of clinical settings and found to have consistent positive results across all areas. The TR-eat™ model is based upon the following principles:

- Disciplines work together and become crossed trained in oral motor skill treatment and behavioral interventions to provide Transdisciplinary care.
- The model is collaborative not consultative, all disciplines work together.
- Treatment is closely integrated with medical intervention and nutrition as this is typically the underlying cause of feeding difficulties.
- Positive reinforcement strategies are used to not only teach, but increase the rate of learning new skills.
- Treatment is a child guided rather than child directed. Therapists observe subtle signs from the child to find the “just right challenge” to work within. There is structure; however treatment is advanced at a rate where the child is able to develop skills and confidence.
- Sensory deficits are respected. Although traditional sensory integration treatment is not directly incorporated into the model, systematic desensitization (slow progression with sensory challenges) is used as part of treatment and found to be highly successful.
- The model is easily implemented in a variety of treatment settings (i.e., center-based, home & school).
- Treatment is systematic, structured and built on individual successes.
- It is easy to learn and teach caregivers.
- No specials tools or certifications are needed.

Pediatric Feeding Institute:

The Pediatric Feeding Institute (PFI) provides workshops and training seminars in the area of pediatric feeding disorders. PFI follows the TR-eat™ model (Transdisciplinary Effective Assessment and Treatment) for working with children presenting with feeding problems. The company was developed to educate healthcare professionals about the incidence and etiology of this problem. PFI also offers training in treatment interventions through workshops, seminars and on-site consultation. The workshop, *Mealtime Miseries*, has been conducted throughout the US and Canada for 4 years. Research in the area of pediatric feeding disorders has been published in peer-reviewed journals.

TR-eat™ Model Outcome Data: 425 patients (245 boys, 180 girls)

Variable	Admission	Discharge	Significance
Accepts	50.4%	91.7%	p<.001
Swallowing	46.5%	90.4%	p<.001
Total Inappropriate Behaviors (refusal, gagging, vomiting, expelling, packing)	64.8%	24.1%	p<.001
Total Correct Caregiver Behaviors	6.6%	84.0%	p<.001
If Tube Fed, % Calories Taken by Mouth (at day tx)	14.9%	73.4%	p<.001
Daily % of Calories in Feeding Tube	78.8%	30.9%	p<.001
Calories taken by mouth (at day tx)	198.9	692.0	p<.001
Grams Consumed	53.9	167.9	p<.001

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Our Workshops:

Carol and Elizabeth began conducting workshops with the goal of helping therapists by sharing the TR-eat model, tips and experiences based upon their years of work in this field. They share their 30 years of combined clinical practice and expertise in a unique 2-day feeding course, Mealtime Miseries. This dynamic course covers innovative strategies, using video case examples, to address oral aversion, food refusal, poor transition onto solid foods, texture grading, learning to chew, self feeding and feeding difficulties related to autism and picky eaters. This course is packed with practical solutions and extensive written handouts that will empower you with new treatment methods for complex pediatric feeding patients. These interventions are systematic and evidence based with research supporting outcomes. This course is appropriate for clinicians with all levels of experience. Positive feedback from course participants has been overwhelming. Workshops are conducted through the following companies:

Pediatric Feeding Institute Inc. – www.pediatricfeedinginstitute.com

Education Resources Inc. – www.educationresourcesinc.com

Motivations Inc. – www.motivationsceu.com

Formations E.P.A.T. Inc. – www.formationsepat.com

Treatment Centers Using the TR-eat™ Model:

The model was originally developed and tested over the 10 years that Elizabeth and Carol worked together at Children's Feeding Program at the Children's Hospital of Richmond. Care via this model has now been extended to the Midwest where Elizabeth directs the Behavioral Feeding program at St. Mary's Center for Children in Evansville, Indiana. Both programs offer interdisciplinary assessment and treatment including feeding clinic evaluations, outpatient therapy, and intensive day program services. For more information and patient referrals please use the following contact information.

St. Mary's Medical Center, Pediatric Feeding Program

3700 Washington Avenue

Evansville, IN 47714

812.485.7425

www.stmarys.org

epclawson@stmarys.org

Children's Hospital of Richmond

2924 Brook Road

Richmond, VA 23220

www.childrenshosp-richmond.org

celliott@chva.org

Case Study of NB

Background/Medical History: NB is a 2.5 year old boy born full-term with a history of left congenital diaphragmatic hernia repair, pulmonary hypoplasia, gastroesophageal reflux disease and oral aversion. He was placed on ECMO for 7 days and a ventilator for an additional 27 days. Prior to 6 months of age he also had a nissen fundoplication surgery and gastrostomy tube placement including exploratory laparotomy and lysis of adhesions. He developed a problem with retching after receiving his nissen. He has had multiple revisions of the feeding tube due to leaking and granulation tissue and then conversion to a GJ tube secondary to feeding intolerance. His diaphragm reherniated prior to 12 months of age requiring a repeat primary repair with a patch. He has required resting of his GJ tube and the prior site closed resulting requiring him to be NPO for several weeks. There have been multiple replacements of the GJ tube which parents described as traumatic

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for him. At the time of admission he was being given Nutren Jr and Kids Boost Essentials 1.5 into the g-tube (daytime bolus and overnight) but progress with oral feeding had been minimal. NB was admitted to an intensive day treatment feeding program with 4 therapeutic feeding sessions per day involving transdisciplinary care across occupational therapy, speech therapy and psychology.

Initial Evaluation/Baselines: NB cried with any attempt of the therapists coming near him or even looking at him. NB was observed from a closed-circuit monitor while his parents attempted a meal. He cried with the transition to the treatment room. He sat in his mother's lap for most of the first session due to refusal to sit in the booster seat. For the next two sessions he tolerated sitting for part of the meal in a Tripp Trapp chair but preferred to be in his mother's lap. His parents provided verbal cues for him to take bites which he refused. They also tried handing bites to him and attempted to feed him, but all efforts were refused by either turning his head away, pushing away, keeping lips pursed closed, saying no and/or crying. He did not consume any food or drink during the baselines. He did take a few small sips of water independently from an open cup but volume was insignificant. Standard baselines with therapists feeding were not conducted due to NB's extreme anxiety about the environment and separation from his parents.

Summary of Progress:

Medical: During week 1 NB was noted to be a very fussy child who generally acted like he did not feel well with random outbursts of screaming without any provocation. Admission medication included Zantac (2ml) 3 times per day. After consultation with the CDH team that had been providing his care, Zantac was reduced to twice per day and Prevacid was added once per day (15mg) via g-tube in the evening 20-30minutes before his overnight tube feeding. Because of loose stools, retching and report of previous reactions to dairy his formula was slowly converted from Boost Kids Essential 1.5 to Elecare during the first week. Retching during meals was an ongoing problem despite efforts at slow stretching. During the fourth week, following additional consultation the CDH team, Prevacid was increased to 15mg twice per day and Zantac (3ml) was given twice per day. To rule out a hernia or problem with his diaphragm patch a MBS, esophagram, UGI, and small bowel follow through were completed with up to 8oz combined orally & via g-tube for the study. No retching occurred during the study. His diaphragm patch and nissen fundoplication were intact. Follow-up with a motility specialist was recommended after discharge from the intensive treatment program.

Oral Motor: Due to significant defensives to touch to the face, NB required two weeks of gradual desensitization paired with positive reinforcement in order to tolerate the Beckman Oral Motor Assessment. Findings upon admission showed non productive patterns in almost all areas. Oral motor exercises were performed prior to each feeding session throughout the admission. Significant functional and measurable improvements were noted in the following areas upon discharge: Lower lip protrusion, elongation and strength, bilateral lateral tongue movement to the lower gum and cheek, tongue tip elevation, bilateral cheek ROM and strength, bilateral jaw strength and patterns for chewing.

Feeding Treatment Progression/Plan:

Week 1: The first week of treatment started with NB adjusting to transitioning to the treatment room, sitting in the Tripp Trapp Chair with the seatbelt fastened, playing with toys and remaining seated until the timer rang. His mother sat next to him and therapists gradually moved closer to him in the room during the first day. Oral motor exercises were initiated with his mother touching his upper and lower lip with approximations toward lip stretches. By the second day of therapy desensitization to the therapists wearing gloves was introduced. A dry cup, squeeze bottle and EZ spoon touched to his lips became part of the meal with even

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rotation. Touches to the lips gradually worked up to acceptance of the squeeze bottle straw and spoon into his mouth. A continuous reinforcement protocol with 1:1 schedule using video and toys was utilized after each bite/acceptance. The length of treatment sessions was increased from 10 to 15 minutes. By the third day of treatment water was placed in the cup, squeeze bottle and on the spoon prior to presentation. Sessions focused on acceptance of the spoon into his mouth. He initially demonstrated consistent swallowing of the water between 1-3g per trial from the squeeze bottle with small tubing. As NB demonstrated improved tolerance for therapy, meal sessions were increased from 15 to 25 minutes. By the end of the first treatment week he was consuming 19-22g of water per session.

Week 2: NB showed remarkable improvement in desensitization to the treatment environment. He was able to transition to the therapy room without crying; tolerated oral motor exercises to the face and inside his mouth, and his mother did not need to sit right next to him in the room. Titration of Elecare into therapy sessions starting with 1cc dilution in 4oz of water and gradually increased ratio until achieved 100% by the end of the week. Elecare was presented on the EZ spoon and also in the squeeze bottle with small tubing straw. Handling was needed to help facilitate lip closure for clearing the spoon and swallowing due to his inefficient upper and lower lip strength and range of motion. Meal time was increased to 30 minutes in addition to time spent on oral motor exercises (total 45-60min) which continued for the remainder of the admission. Total volume of Elecare averaged 2oz from the squeeze bottle and 3-8g from the spoon.

Week 3: Introduction of Stage II fruits and sweet potato on the EZ spoon was initiated. Elecare (100% concentration) continued to be presented in the squeeze bottle with small tubing straw. NB demonstrated understanding of continuous reinforcement protocol and was motivated by the anticipated positive reinforcement after each trial. The volume of Elecare consumed increased (ranging from 36g-84g per meal) as did volume of puree (ranged from 6g-21g per meal). NB continued to be volume sensitivity with reflux symptoms, discomfort and retching noted when higher amounts were consumed. This also seems to occur after meals 2 and 4 even without increased volume at these meals. Retching overnight continued.

Week 4: Spoon size was upgraded from and EZ spoon to the First Years Take-and-Toss Infant spoon. This allowed for a larger bolus to be given of the stage 2 foods. Crunchy dissolvable foods wrapped in organza mesh were introduced for exploration of chewing. By end of the week he tolerated Gerber puffs (no longer wrapped in mesh) using placement to molars. He was instructed to chew up to the count of ten. Vertical chewing patterns were noted bilaterally. Rate of presentations of baby food and drink was slowed as needed to minimize retching. Volume for Elecare increased (ranging from 61g-78g per meal) as did volume of puree (ranging from 10g-27g per meal). NB continued to have volume sensitivity with reflux symptoms, discomfort and retching with higher volumes. No overnight retching was noted over the week. The CDH team was contacted and Prevacid was increased to 15mg twice per day along with Zantac 3ml twice per day.

Weeks 5&6: A wider variety of stage 2 foods and mixed dinner combinations boosted with Elecare were introduced. Straw size for the squeeze bottle was upgraded to the large straw to allow for greater volume of Elecare per trial. Volume for Elecare consumed remained relatively unchanged however NB demonstrated occasional self initiated sucking from the straw of the squeeze bottle. Volume of puree consumed continued to improve slightly.

Week 7: NB was transitioned from baby foods to smooth pureed table foods which provided more calories and better nutrition. The spoon was once again upgraded to the larger Take and Toss toddler spoon. Soft solids and solid foods were introduced this week. They were placed on his molars to assist in facilitating a functional chewing pattern and decrease tongue mashing and suckling of food. Attempts were made to increase average volume consumed to greater than 3 ounces per meal. Total volume (combined drink and puree) ranged from 68-175g per meal.

Week 8: NB continued to take soft solids and solid foods in addition to pureed foods. Attempts were made to consistently increase average volume consumed to greater than 4 ounces per meal. Total volume (combined drink and puree) ranged from 101-176g per meal. He was able to achieve 52-58% of his daily ca-

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loric needs by mouth. NB had reaction to milk including a rash around his mouth and hives after being fed small sips of milk shake at home over the weekend.

Nutrition: NB was admitted receiving 60ml bolus feedings of Nutren Jr without fiber 5-6 times per day. He also received 800-850 ml total overnight of Nutren Jr plus 237ml of Kids Boost Essentials 1.5 at a rate of 65ml/hr. His recommended daily caloric needs were estimated at 1250-1350kcal per day. At admission his parents adjusted his tube feedings based on his degree of retching on any given day and weight gain had been poor. Prior to admission his oral intake was negligible. During the first week of admission he had not taken any calories orally. Over the course of the first week his formula was changed to Elecare in an effort to improve tolerance and decrease retching episodes. By week 4 he was able to consume 342 kcal/day by mouth across his 4 therapy sessions. By discharge, on week 8, average volume consumed increased to 620 kcal/day orally which met 52-58% of his daily caloric needs by mouth. NB was able to gain 5.13 grams per day over the course of the admission which met expected growth velocity of 5-6 g/day while going through the process of reducing tube feedings.

Parent Training: By the second week of therapy, NB's mother was trained in the structured meal protocol including the timer, supportive seating, administration of the reinforcement schedule as well as use of the squeeze bottle and EZ spoon. She was trained in all oral motor exercises by the 3rd week. Parent training was integrated into daily therapy sessions throughout the admission. NB's mother replicated what she had learned daily by feeding him in the evenings and over the weekends.

Recommendations upon Discharge from Intensive Feeding Program:

1. Continue outpatient feeding therapy 1-3 times per week with First Steps and 1-2 times per week with Psychologist from St. Mary's Pediatric Feeding Program via telemedicine. If his First Steps therapist was not able to meet the need for increased frequency or did not see ongoing progress then 1-2 times per week therapy with OT/SLP from St. Mary's Pediatric Feeding Program via telemedicine could be added.
2. Further evaluate of food intolerance due to observed reaction to milk, odor of maple syrup, intermittent skin rashes, intermittent edema, retching, GI discomfort and ongoing concerns about his bowel movements. Suggested starting with blood test for reactions to milk – casein & whey, soy, egg, peanut, wheat, corn.
3. Continue Prevacid and Zantac to manage GI irritation and symptoms of discomfort.
4. Referral was made to Pediatric GI specialist for evaluation of motility and reasons for ongoing retching. Rule out possible low gastric pain threshold or visceral hyperalgesia as reason for volume sensitive retching. A possible trial of medication such as Neurontin (gabapentin) or Elavil (amitriptyline) was suggested to see if this would relieve symptoms and allows for better tolerance of higher volume during meals.
5. Meal schedule of 3 meals and 2 snacks or 4-5 small meals per day. These should include smooth pureed table food and Elecare 30cal per ounce as well as ~1oz or less of soft table foods (mainly for practicing chewing skills). Meals should be fed evenly rotating through food and drink along with using the structured meal protocol and positive reinforcement after each bite/drink. Use the squeeze bottle for Elecare and the toddler spoon for purees. Meal duration 30min.
6. Continue Elecare mixed at 30cal/ounce for meals. Adjust overnight feedings of Elecare 30cal/ounce based on oral intake during the day for a total goal of 1350-1400cal/day. Overnight feedings can be mixed less than 30cal/oz to decrease osmolality when daily oral intake is greater than 500cal. Do not recommend a formula change until food intolerance and GI issues are well managed.
7. Monitor weight closely with weekly weight checks either at home or PCP office, especially if continuing to decrease overnight tube feedings.
8. Continue the prescribed Beckman Oral motor Exercises 3-5 times per day. Recommended exercises include: Upper and lower lip stretch, side-to-side lip stretch (upper & lower), diagonal nasal bridge stretch, Z-stretch, mini-C stretches, gum massage, lateral pressure to the tongue, cheek stretches with posterior stretch, resistive chewing.

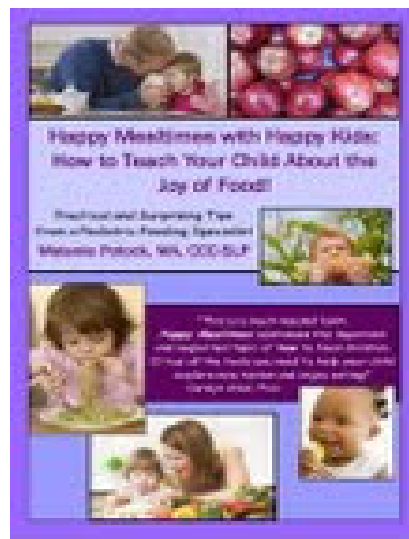


As a speech language pathologist who specializes in feeding, I observe first hand the daily stress that encompasses a family when a child has difficulty eating orally. Whether a child with a g-tube or your garden variety picky eater, the atmosphere is thick with anxiety - you can cut it with a knife. Over time, bite by bite, we progress to more independent, adventurous eating and the cloud of worry dissipates as mealtimes transform into joyful, meaningful memories as friends and family come together.

Although our role as therapists is to help the child develop oral motor skills and organize his sensory system in order to try new foods, the ultimate goal is to establish consistency across all environments; and that, simply put, means fun, social and relaxed mealtimes for the entire family. Recent studies from Columbia University demonstrate that children and teens who eat dinner on a regular basis with their families are more likely to make sound, healthy decisions when it comes to food choices, substance abuse, and peer and family relationships. (<http://www.casafamilyday.org>)

I began to wonder, "How can I reach more families and teach them to focus on the fun when gathered around the table? Aren't stress free mealtimes important even if your child is a mini-gourmet and dinner tonight is calamari or beef wellington?"

As a particular Food Network chef would say, "BAM!" or as Oprah would say "I had an ah-hah moment" or as my husband would say "You're nuts...but go ahead and do it." Thus, *Dancing in the Kitchen* was launched just a few months ago to wonderful reviews from parents and press, but most importantly, to little munch bugs ages 2 to 6 who love to celebrate the joy of food! The children's CD offers multiple genres of food songs, from Latin to pop, a funny little tune entitled "Blueberry Blues" and even a silly opera! The CD packaging opens to include professional tips on how to foster stress free mealtimes and the lyrics to the original songs are designed to build confidence in not only the kids, but in parents too. Moms and Dads appreciate the festive atmosphere that they can create as they sing and dance their way to what's really important - being together over a family meal and loving it!



up

Happy Mealtimes with Happy Kids: How to Teach Your Child About the Joy of Food is the new parent guidebook that teaches the fundamentals of parenting in the kitchen. Babies don't come with an instruction manual -especially when it comes to eating at the family table! *Happy Mealtimes* is designed to be a quick read and offers a touch of humor to help parents understand that they are not alone in their child's new learning adventure called "eating". At the recent ASHA convention in Philly, I was thrilled to see students and clinicians buying the book with such enthusiasm to bring it to their therapy sessions. One therapist wrote to tell me "I hand my little client's mother the book while I do some warm up activities with her 12 month old son and say 'Read the chapter on straw drinking - that's what we are going to do today! Meet me in the kitchen in 15 minutes.' Later, she reported, "Then, I

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leave the book for Dad to read and literally, everyone is on the same page."

Like many of the games and tools we love to use in therapy, both *Dancing in the Kitchen* and *Happy Mealtimes* are popular with all children. *Dancing in the Kitchen* was featured in three different holiday guides as the perfect gift for children ages 2 to 6 and we have sold over 300 copies of *Happy Mealtimes* in less than three months. Here's a taste of what the media is reporting on both products:

The Examiner: Melanie Potock has spent more than a decade helping munchkins deal with eating problems; with her company, My Munch Bug, she offers tips and products to help the little ones eat right. The CD...puts the music where their mouths are: *Dancing in the Kitchen* encourages kids to be adventurous eaters and parents to get their kids out of the mac-n-cheese rut. Includes songs like "The Operetta: I Love Peas!" and "Gimme Something to Chew."

Mile High Mamas' Ultimate Gift Guide : I love anything food-related, so when the *Dancing in the Kitchen* CD came across my desk, I popped it right in to hear the tunes. This is darling. I was impressed by the different music genres present throughout the songs. The classic "On Top of Spaghetti" and newbie "Jam Jam Jam" will turn the kitchen into a festive atmosphere for mealtime. There's a kid chorus, adult voices and a band—it's amazing how children's music has evolved. Founded by Melanie Potock, a certified Colorado speech therapist with over 12 years' experience working with children who have difficulty eating, Mel makes mealtimes fun while helping children learn to try new foods, never an easy task!

Times-Call on Happy Mealtimes with Happy Kids: In the quick read, she uses success stories gleaned from 12 years of helping ... kids have fun with food to give caregivers ways to transform a so-called hesitant eater into an adventurous one. Apart from the lifelong benefit of eating more healthfully, Potock's how-to comes in handy at the holidays give the onslaught of party and dinner invitations easily spoiled by a child throwing a tantrum at the table.

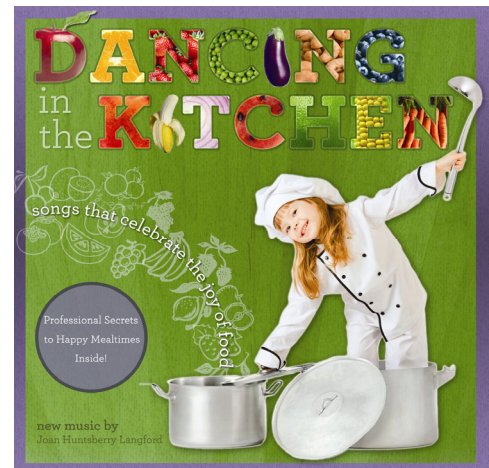
If you feel like dancing today (and, really...who doesn't?) go to www.mymunchbug.com to listen to music samples. The website will link directly to resources for both products - *Dancing in the Kitchen* is available at www.cdbaby.com and *Happy Mealtimes with Happy Kids* is available at www.lulu.com. Both products will soon be available in the Mayer-Johnson catalogue and on Amazon.com. Be sure to visit My Munch Bug's facebook page for coupon codes and the latest news on the joy of food!

Melanie Potock, MA, CCC-SLP has specialized in the treatment of feeding disorders for over 12 years. She can be reached at Melanie@mymunchbug.com.

Recent Rave Reviews of *Dancing in the Kitchen!*

The Examiner: Melanie Potock has spent more than a decade helping munchkins deal with eating problems; with her company, My Munch Bug, she offers tips and products to help the little ones eat right. The CD, with music from local children's singer songwriter Joan Huntsberry Langford, puts the music where their mouths are: *Dancing in the Kitchen* encourages kids to be adventurous eaters and parents to get their kids out of the mac-n-cheese

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www.mybuttonbuddies.com (A client of mine uses these with her daughter and highly recommended them). This info is from their website.

ButtonBuddies are cloth pads designed to be worn around the gastric tube "button". They are used in place of medical gauze for anyone who uses a gastrostomy feeding tube (Enteral feeding tube). Each cloth pad is about 2 - 2.5 inches across (diameter) and is placed around the G-Tube "button" and secured with the soft velcro closure.



They are highly absorbent for leaks from formula and stomach fluids, and customers report less granulation tissue when using ButtonBuddy pads compared to gauze. ButtonBuddy cloth G tube pads are washable and can be used over and over again., unlike gauze which is thrown out.

ButtonBuddies are made of three layers of material sewn together: soft fleece next to the skin for comfort and to wisk away moisture., absorbant Cotton terry cloth in the middle to prevent leaks, colorful Fun Designs, and a soft Velcro closure securely sewn in place..

Because of the colorful child-friendly designs, the ButtonBuddy also adds a little FUN into the lives of children who need G-tubes. Flesh-colored (ivory, tan, brown) cloth pads are available for adults with a G tube "button" that are practical and neater looking than medical gauze.



By Melanie Potock M.A. CCC-SLP

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rut. Includes songs like "The Operetta: I Love Peas!" and "Gimme Something to Chew."

Yellow Scene Magazine's Holiday Gift Guide for Kids: Do a little dancing- Longmont Speech Pathologist, and Pediatric Feeding Specialist, [Melanie Potock](#), recently completed a CD called [Dancing in the Kitchen](#), that will make you and your child dance and enjoy good food! This CD contains funny and lovely songs that will help to create the positive environment we need to make mealtime less stressful. Included in the CD is her professional advice for each song to encourage your child trying new food. A song about peas before lunch time will help your little one eat some peas with a big smile! Visit her website and listen to sample songs and read more about her experience helping children with feeding/swallowing disorders.

Mile High Mamas' Ultimate Gift Guide : I love anything food-related, so when the Dancing in the Kitchen CD came across my desk, I popped it right in to hear the tunes. This is darling. I was impressed by the different music genres present throughout the songs. The classic "On Top of Spaghetti" and newbie "Jam Jam Jam" will turn the kitchen into a festive atmosphere for mealtime. There's a kid chorus, adult voices and a band—it's amazing how children's music has evolved. Founded by Melanie Potock, a certified Colorado speech therapist with over 12 years' experience working with children who have difficulty eating, Mel makes mealtimes fun while helping children learn to try new foods, never an easy task!

On the Research Front:

Leder SB, Baker KE, Goodman TR. Dysphagia testing and aspiration status in medically stable infants requiring mechanical ventilation via tracheotomy. *Pediatr Crit Care Med.* 2010 Jul;11(4):484-7; quiz 488.PMID: 20124944

Medically compromised infants who require mechanical ventilation via tracheotomy and receive nothing by mouth are conventionally deemed as being at risk for aspiration and feeding difficulties. There is little information available in the literature regarding diagnostic testing and habilitation intervention to promote safe and timely initiation of oral alimentation when these infants are medically stable. 14 medically stable but mechanically ventilated infants referred for swallow evaluation were studied. Aspiration status was determined by objective testing with videofluoroscopic and fiberoptic endoscopic evaluations of swallowing. 8 infants exhibited a coordinated suck-swallow reflex, and 6 infants exhibited an oral dysphagia characterized by a weak, inconsistent, or absent suck. Nonetheless, 13 of 14 (93%) infants demonstrated a successful pharyngeal swallow with no evidence of aspiration and were started successfully on an oral diet. In conclusion, objective dysphagia testing is recommended for medically stable infants who are ventilator dependent via a tracheotomy. The prevalence of aspiration in this group is low and a negative examination can promote safe and timely oral alimentation.

Borrero CS, Woods JN, Borrero JC, Masler EA, Lesser AD. Descriptive analyses of pediatric food refusal and acceptance. *J Appl Behav Anal.* 2010 Mar;43(1):71-88.PMID: 20808496

Functional analyses of inappropriate mealtime behavior typically include conditions to determine if the contingent delivery of attention, tangible items, or escape reinforce food refusal. In the current investigation, descriptive analyses were conducted for 25 children who had been admitted to a program for the assessment and treatment of food refusal to determine if the consequences commonly delivered during functional analyses were observed during parent-conducted meals. The conditional probabilities for the delivery of attention, tangible items, and escape following food refusal and acceptance were compared to the unconditional probabilities of each event. Results showed that attention and escape most frequently followed refusal and differed depending on the topography of refusal. Implications for further evaluations of food refusal using similar methods are discussed.

Feldens CA, Faraco IM, Ottoni AB, Feldens EG, Vítolo MR. Teething symptoms in the first year of life and associated factors: a cohort study. *J Clin Pediatr Dent.* 2010 Spring;34(3):201-6.PMID: 20578655

500 children were recruited at birth. Research assessments including structured interviews, anthropometric measurements and dental examination that were carried out after birth, at 6 months and at one-year of age. The primary outcome of this study was defined as the occurrence of one or more teething symptoms within the first year of life, as reported by the mother. Teething symptoms were reported in 73% of the children analyzed (273/375). The symptoms most frequently reported were irritability (40.5%), fever (38.9%), diarrhea (36.0%) and itching (33.6%). Dentists had little influence on the management of symptoms and self-medication to relieve them was a common practice.

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On the Research Front:

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Davis AM, Bruce A, Cocjin J, Mousa H, Hyman P. Curr Gastroenterol Rep. 2010 Jun;12(3):189-94. Empirically supported treatments for feeding difficulties in young children. PMID: 20446068

Pediatric feeding problems are common among children and present severe issues for families. Unfortunately, treatment outcome studies with this population are sparse. The current study reviews the literature regarding treatment studies of children with severe feeding issues, provides an overview of empirically supported treatments for children who do eat orally, and finally summarizes interventions that attempt to reintroduce oral feeding to children who have been fed by gastrostomy tube or other non-oral feeding route.

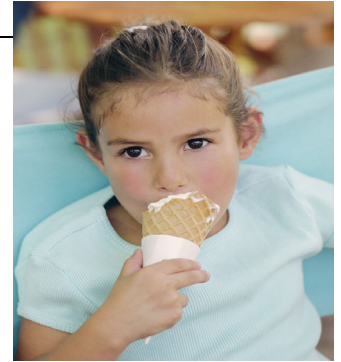
Haas AM. Feeding disorders in food allergic children. Curr Allergy Asthma Rep. 2010 Jul;10(4):258-64. PMID: 20425004

Feeding disorders are increasingly being recognized in children with food allergy. For some children, symptoms of feeding dysfunction may persist after allergens are removed from the diet secondary to learned associations with food and discomfort and reinforcement of maladaptive feeding behaviors. Many food allergic children require care from a multidisciplinary team of specialists, which includes allergists, gastroenterologists, mental health professionals, and feeding specialists. Early referral for feeding assessment by a pediatric feeding specialist can be a critical component of the food allergic child's care. This article reviews and discusses the recent literature regarding feeding disorders in food allergic children. A literature review was conducted using the PubMed database for English language articles published between January 1980 and February 2010. Additional information was obtained via review of recent textbooks and review of the general information web page of several established pediatric feeding programs.

Mukkada VA, Haas A, Maune NC, Capocelli KE, Henry M, Gilman N, Petersburg S, Moore W, Lovell MA, Fleischer DM, Furuta GT, Atkins D. [Feeding dysfunction in children with eosinophilic gastrointestinal diseases](#). Pediatrics. 2010 Sep;126(3):e672-7. Epub 2010 Aug 9. PMID: 20696733. PMID: 20696733

The author's aim was to further characterize feeding dysfunction in children with eosinophilic gastrointestinal disease (EGID). A medical record analysis of 200 children seen over 12 months in a multidisciplinary Gastrointestinal Eosinophilic Diseases Program was performed. Of 200 children with EGIDs, 16.5% had significant FD. The median age of this group was 34 months. A variety of learned maladaptive feeding behaviors were reported in 93.9%. Frequent gagging or vomiting occurred in 84.8%. Food sensitivity was documented in 88% while 52% had other allergic disease. Twenty one percent were diagnosed with failure to thrive and 69.7% required individual or group feeding therapy. Forty-two percent had residual eosinophilia of >15 per HPF on esophageal biopsies performed at the time of symptoms. In conclusion, FD is prevalent in children with EGIDs often presenting as maladaptive learned feeding behaviors with altered mealtime dynamics and physical difficulties in eating mechanics. FD can persist even after eosinophilic inflammation is successfully treated. Awareness of the increased prevalence of FD in children with EGIDs with enable earlier recognition of this problem, resulting in a comprehensive, individualized treatment plan with the desired outcome of improving the development, feeding, and nutrition of these children.

Case by Case: 5 year old female (LB) with new onset of dysphagia in the hospital



Background: 5y/o previously healthy Caucasian female referred by her PCP to rheumatology for evaluation/treatment of recurrent infections and fevers that have been present for the past 2.5 months. In addition to the infections, speech therapy was consulted for difficulty swallowing and a 5 lb weight loss in the last 2 months.

Assessment:

Information from Mother: 2 months prior, LB went to the ER with right sided abdominal pain that was diagnosed as constipation. They were given instructions to use mirilax. LB has also had several choking episodes and now refused to eat solids. She is also complaining of sore throat.

Current Intake: In the past month, LB was drinking liquids and eating dry crunchy foods such as crackers, chips and dry cereal. She had 3 choking episodes on foods such as mashed potatoes and bread and now rejected any solid food. LB is stooling every 2 days and complaining of right side abdominal pain.

Oral Motor Exam: normal for structure and function. Vocal quality was strong and clear. There was no drooling.

Swallowing observation: LB self fed dry cereal and crackers. LB demonstrated good bolus formation and transfer. Noted throat clear after the swallow. LB was able to drink water and soda with consecutive swallows. Intermittent cough observed after the swallow. LB refused a chicken nugget.

Intervention/Recommendations:

Based on the clinical history and symptoms, speech therapy recommended a GI and dietician consult for solid food dysphagia, weight loss, and history of constipation. Differential diagnosis included reflux, constipation, and/or eosinophilic esophagitis (EE).

Difficulty swallowing solids is often indicative of gastroesophageal reflux or esophageal motility problems. It can be related to poor chewing of solids, however, because LB had a history of “typical eating” and no neurological diagnosis that was ruled out. When observed with eating, symptoms of cough and throat clear occurred after the swallow. We also know that LB had severe constipation 2 months ago and has not been followed up for this. Constipation can slow motility throughout the digestive tract and increase reflux. Lastly, if symptomatically, patients do not improve with constipation and reflux treatment, EE can also cause reflux-like symptoms including cough, poor esophageal motility, and discomfort.

Outcome: A KUB (x-ray to evaluate for constipation) was performed which revealed moderate constipation. LB was discharged with instructions for a cleanout. She will follow up with GI as an out-patient. Nutrition recommended high calorie supplements, such as Pediasure, to maintain weight and nutrient needs until she feels comfortable eating again.