



# Pediatric Feeding and Dysphagia Newsletter

Dear Fellow Feeders,

Welcome to our last issue of this subscription year. I hope you've enjoyed the newsletter and will stay with us into the 2005-2006 season! In this issue, we have permission to reprint an excellent article that gives an overview of feeding. It's a great resource for physicians and parents. Cathy Shaker talks to us about feeding preemies, I put my two sense in about FEES training and we revisit 2 old patients of mine to see how life is after an intensive program. As always, there is interesting research coming out. Cheers!- Krisi Brackett MS SLP/CCC, feeding-news@earthlink.net

**Pediatric Feeding and Dysphagia Newsletter**  
**Hiro Publishing**  
[www.feedingnews.com](http://www.feedingnews.com)

Volume 5, number 4

April, 2005

## The Failure to Thrive Pediatric Feeding Disorders

by Cathleen Piazza, Ph.D. and Jennifer Dawson, M.A.

Paradigm • Fall 2000 8-9

### 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

Feeding disorders are not the result of a single etiology; treatable by a single professional, but they represent a complex interaction among a variety of factors, warranting treatment by an interdisciplinary team.

*"Don't worry, she'll eat when she gets hungry" is the common assumption of most practitioners working with pediatric populations.*

Even though this adage applies to the majority of infants and toddlers, there is a significant minority of children that, without intervention, would become malnourished, dehydrated and in some cases would die. These children have feeding disorders, a complex and poorly understood problem that has received increasing attention in research literature and the general media.

### What is a Feeding Disorder?

Feeding disorders consist of a heterogeneous set of problems characterized by the ways that they cause significant stress to the family.<sup>1</sup> The most frequently occurring types are:

- failure to maintain weight or grow
- failure to eat a sufficient variety of foods to maintain nutritional status
- dependence on alternative nutrition such as tube or bottle feedings
- inappropriate mealtime behaviors

The behaviors that characterize feeding disorders reflect the heterogeneous etiologies of the problem. For example, medical problems such as severe gastroesophageal reflux (GER) can cause eating to be painful. Early experiences with pain during intake can cause the child to stop eating and develop

### Inside this issue:

The Failure to Thrive	1-4
ACPA, Q & A	4-5
Preemie Problem Solving	6-7
FEES Training	7,9
Case by case	9
On the Research Front	9-10

(Continued on page 2)

# The Failure to Thrive Pediatric Feeding Disorders by Cathleen Piazza, Ph.D. and Jennifer Dawson, M.A. Paradigm • Fall 2000 8-9

---

behavior problems (e.g., batting at the spoon, crying) that make it difficult if not impossible for the parent to feed the child. In addition, limited experiences with oral intake often result in failure of the child's oral motor responses to develop normally. Parents also report that their children (a) do not demonstrate hunger, (b) demonstrate aversion to or avoidance of sensory stimulation and (c) struggle with parents for control during the feeding situation. Each child is different and may present with one or several of these characteristics.

One intervention that is used commonly with children with severe food refusal or selectivity is the use of alternative supplementation (e.g., gastrostomy tube). Although such methods can be vital in improving status for children with severe failure to thrive, unfortunately, supplemental feedings may also interfere with the development of typical feeding behaviors. If tube feedings replace oral feedings, the child does not get to practice the skills required for eating, such as chewing and swallowing. Second, tube feedings may interfere with or suppress hunger and satiety cues. Thus, the child may lack sufficient internal motivation to eat or may not learn how to recognize and respond to internal cues.

Oral motor difficulties are commonly reported in children with feeding problems. These problems may be a function of inadequate development as a result of premature birth or other situations. Additionally, some children demonstrate aversion to or avoidance of sensory stimulation.

Environmental factors also may play a role in either the onset or the maintenance of the feeding problem.<sup>1</sup> For example, when a child refuses to eat by crying or batting at the spoon, caregivers often will end the meal, try to calm the child or coax the child to eat. In some cases, the caregiver, in desperation to get the child to eat something, will give the child a more preferred food if the child refuses to eat a less preferred food. Even though these techniques are meant to improve the situation, they may actually exacerbate the problem. That is, the child learns that additional payoffs in the form of increased parental attention or avoidance of non-preferred foods are available in response to inappropriate mealtime behavior or food refusal.

## What is the Prevalence of Feeding Disorders?

The reported prevalence of pediatric feeding disorders

varies. About 25 percent of typically developing children display some difficulties around mealtime. However, the number of children requiring treatment for feeding problems is probably between one and five percent.

## How do you Assess and Treat a Feeding Disorder?

Feeding disorders are not the result of a single etiology, treatable by a single professional, but they represent a complex interaction among a

variety of factors, warranting treatment by an interdisciplinary team. Team members should include professionals that may provide input into the assessment and treatment of the feeding problem, such as gastroenterology, behavioral psychology, occupational and/or speech therapy, nutrition and social work.<sup>2</sup> Critical program components include (a) evaluation of physiological problems that may contribute to the feeding difficulties, (b) determination of the safety for oral feedings, (c) intervention with respect to oral motor deficits or sensitivities, (d) monitoring the child's intake to ensure a balance between adequate calories, growth and weight gain and (e) assessment of the family's ability to carry out an intervention program.

The behavioral assessment of feeding disorders consists of gathering information provided by caregivers regarding the history of feeding difficulties, performing direct observations of the child in the eating situation, manipulating the various environmental conditions that possibly contribute to the feeding problems and conducting food, texture or toy preference identification.<sup>1, 2</sup>

Direct observations of the child in a typical mealtime setting allows the team to observe both the child's and the caregiver's behavior during the meal. Direct observation of parent and child behavior during the meal assists in the development of hypotheses as to



## The Failure to Thrive Pediatric Feeding Disorders by Cathleen Piazza, Ph.D. and Jennifer Dawson, M.A. Paradigm • Fall 2000 8-9

why the feeding problems are occurring. Hypotheses can be tested using functional analyses designed to identify why a child does not eat or what environmental factors might contribute to food refusal or inappropriate meal-time behavior.<sup>4</sup>

Analog functional analyses have been used to assess a variety of inappropriate behaviors and have become the “gold standard” in the treatment of behavior disorders. Formal assessment of inappropriate mealtime behaviors via functional analyses improve our understanding of why food refusal behaviors occur during mealtimes and help us select individualized treatments directly related to the function of the inappropriate behavior. For example, if the results of the functional analysis suggest that the child engages in inappropriate behavior to gain access to preferred foods (i.e., the child refuses to eat peas so mom will make a peanut butter and jelly sandwich), then an indicated treatment would be to present a piece of a peanut butter and jelly sandwich following consumption of peas. A different treatment would be prescribed if the results of the functional analysis indicated that the child refused food to obtain caregiver attention. In this case, the indicated treatment would consist of providing the child with attention for eating and minimizing attention for refusing food. Specific techniques are used when the child refuses to allow any food or liquid to enter his or her mouth. These techniques are known as escape extinction procedures and include providing cues to the child to open his or her mouth (e.g., touching the spoon to the child’s lip or providing a gentle prompt to the mandibular joint), thereby increasing opportunities for the child to accept and swallow food. Finally, “fading” is a technique that involves exposing the child to various aspects of the feeding situation in a gradual manner. For example, the child might be presented with an empty spoon. Once the child is opening his or her mouth consistently when the empty spoon is presented, food or liquid can then be added onto the spoon in increasing amounts.

### Where do Parents Fit In?

The caregiver is one of the most crucial aspects for the generalization and continued success of any feeding program.<sup>1</sup> Generalization can be enhanced by implementing the treatment in settings in which eating behaviors are expected to occur (e.g., at home and school). Care-

givers should be given the opportunity to implement the treatment in the presence of the therapist and alone in order to determine how well the interventions carry over from one environment to another. Also, caregivers must be trained not only in how to implement the feeding treatment, but also in the reasons why a treatment package has been designed. Including the caregivers in all parts of the assessment and treatment process can increase each caregiver’s investment in the final treatment. Parent or caregiver training can be implemented in a variety of ways, including direct observation, role playing with the therapist, discussion, handouts, verbal feedback, videotape review and in vivo training. In order to continue the gains made in a feeding program, the effective implementation of the treatment by all relevant caregivers is paramount. Data can be recorded on the parent’s accuracy of the intervention, thereby ensuring that procedures are carried out with the level of fidelity needed to maintain treatment gains. Caregivers need to understand that there is no quick fix to a feeding problem, no substitute for consistent implementation of the program.

### Summary

**In short, pediatric feeding disorders are a complex mix of medical, oral motor and behavioral issues.** Furthermore, each of these factors may contribute in varying degrees to the initiation and maintenance of the feeding disorder. Therefore, an interdisciplinary model is the most comprehensive method for assessing and treating pediatric feeding problems, and behavioral approaches can contribute substantially to the interdisciplinary treatment of these problems.

**Dr. Cathleen Piazza** is the Director of the Pediatric Feeding Disorders Program at the Kennedy Krieger and Marcus Institutes and Associate Professor of Psychiatry at the Johns Hopkins University School of Medicine.

**Jennifer Dawson** is completing her Ph.D. in clinical psychology at Louisiana State University. Currently, she is a pre-doctoral intern at the Kennedy Krieger Institute. Upon completion of her internship, she will continue with the Feeding Disorders Program as a case manager.

## The Failure to Thrive Pediatric Feeding Disorders

by Cathleen Piazza, Ph.D. and Jennifer Dawson, M.A. Paradigm • Fall 2000 8-9

**Kennedy Krieger Institute (KKI) is an internationally-renowned center for research, treatment, education and training focused on problems that affect the child's developing brain. For more information about KKI, in Baltimore, Maryland, or its Atlanta, Georgia affiliate Marcus Institute, call 1-888-554-2080 or visit their website at: [www.kennedykrieger.org](http://www.kennedykrieger.org).**

### References:

1. Shore, B. & Piazza, C. Pediatric Feeding Disorders. In E.A. Konarski, J.E. Favell, & J.E. Favell (Eds). Manual for the Assessment and Treatment of the Behavior Disorders of People with Mental Retardation, (1997).
2. Babbitt, R.L., Hoch, T.A., Coe, D.A., Cataldo, M.F., Kelly, K.J., Stackhouse, C., & Perman, J.A. Behavioral assessment and treatment of pediatric feeding disorders. *Developmental and Behavioral Pediatrics*, vol. 15 (4), pgs. 278-291, (1994).
3. Jenkins, J. & Milla, P. Feeding problems and failure to thrive. In N. Richman & R. Lansdown (Eds.). *Problems of Preschool Children*. John Wiley & Sons Ltd, pgs. 151-172, (1988).
4. Iwata, B.A., Dorsey, M.F., Slifer, K.J., Bauman, K.E., & Richman, G.S. Toward a functional analysis of self-injury. *Analysis and Intervention in Developmental Disabilities*, vol. 2, pgs. 3-20, (1982).

To access this article on line in pdf format go to: [http://www.onlineparadigm.com/archives/136-FOO\\_AD.pdf#search='pediatric%20feeding'](http://www.onlineparadigm.com/archives/136-FOO_AD.pdf#search='pediatric%20feeding')

We would like to thank the online magazine Paradigm and the authors for permission to reprint this article. Paradigm is a free online magazine from Three Springs Adolescent Treatment Programs. You can contact them at the following web address: <http://www.onlineparadigm.com/contact.html>

**American Cleft Palate -  
Craniofacial Association**  
[www.acpa-cpf.org](http://www.acpa-cpf.org)

**The American Cleft Palate-Craniofacial Association (ACPA)** is an international non-profit medical society of health care professionals who treat and/or perform research on birth defects of the head and face. The members of ACPA serve an extremely important role in the management of children and adults with cleft lip, cleft palate, and craniofacial anomalies. For 60 years, their goal has been to provide optimal care for this group of patients and their families. Because of the diverse needs of these patients, and the required services of many different specialists, interdisciplinary cooperation and team care is essential to the patients served.



ACPA is unique - it is a multidisciplinary organization of over 2500 members, representing more than 30 disciplines in 50 countries. A primary objective of the Association is to foster communication and cooperation among professionals from all specialties. ACPA holds a general scientific meeting of the membership every year where over 200 papers are presented. From the United States, Canada, and around the world, information and ideas relating to improving the care and outcome of patients with clefts and craniofacial anomalies are exchanged.

The official publication of ACPA is the bi-monthly [Cleft Palate-Craniofacial Journal](#). It is an international, interdisciplinary journal reporting on clinical and research activities in cleft lip/palate and other craniofacial anomalies, together with research in related laboratory sciences. The quarterly ACPA/CPF Newsletter reports on business affairs, meeting highlights, and member news. While ACPA's focus is on professional education, its affiliated [Cleft Palate Foundation](#) provides information to affected individuals and their families and seeks to educate the public about facial difference.

For more information contact:

ACPA/CPF  
1504 East Franklin ST, suite 102  
Chapel Hill, NC 27514-2820  
919-933-9044

**Q & A: We are following up with 2 of my favorite patients; Zachary and Spencer. While not related, I treated them simultaneously, when they were both 4. Both ate 2 foods for 2 years and subsequently needed an intensive feeding program to progress. They both attended The Pediatric Feeding Program at St. Joseph's Hospital in Paterson, NJ. (See their original write up as our case in the April 2003 issue). I asked their moms what life was like after the intensive feeding program they attended (see page 8-9). Here they answer my question: When did feeding get easy? Or feel relatively normal?**

Zachary:

Yes, feeding is relatively normal for us these days - we still struggle with trying new foods. I would say it was 8 - 10 months after getting home from the program that I felt we had a "totally" normal lifestyle - could eat out and everyone eat, we all eat the same foods at dinner, no doctor appointments, etc... Both families still deal with some gastro issues - Spencer more than Zachary - we have almost phased out the Prilosec for Zachary - do more PRN than regular dosage. Spencer is off all meds except Mylanta and is controlling his issues with allergies by trying to avoid foods.



I think new foods will always be an issue - it has to be on their terms and their willingness to try - I have no complaints though....Zachary eats like a typical kindergarten kid to me....just no pizza, bread, chips, or crackers (except goldfish). Easily will try new candy:-). Meats prepared differently are probably the hardest food to try - Zachary eats the basics - chicken, hamburger, hotdogs, ham - it's fixing it in different fashions with sauces, etc. that he doesn't like. I wash the sauces off for him. The number of foods the boys eat now has dropped since being home - but I didn't expect Zachary to continue to eat beets when the rest of us don't like them.....:-)

The other thing is that these boys don't like to eat early - breakfast at 7AM is impossible - they prefer to snack and have an early lunch or mid-morning snack. In school, lunch is early enough that breakfast is not a huge issue. I don't get up and cook eggs/ sausage so the breakfast foods they ate in the program are not on their preferred list now....may occasionally sample these foods in the evening for dinner, but not often. These kids have their own hunger schedule so you truly have to adjust them to a "regular" time frame for meals.

Spencer:

Spencer had to have a pH probe in November. He started, during the summer, having episodes of vomiting and other times he would have pain that would drop him to the floor, doubled over. At that point he was still taking 40mg of Prilosec a day. He came off all meds for the pH probe. The probe showed us that he has ~ 150 spikes a day as opposed to the average of 50.....a very active stomach! However, we've also discovered that Spencer has IBS. So we have also removed all dairy, chocolate, artificial sweeteners, soda - with the corn and rice as well. We've taken him off all the acid blockers because of the IBS and remarkably, he feels so much better. We also feed him as you would a diabetic.....small meals, frequently. As long as we follow the program, he's comfortable. Any pain we handle with OTC antacids. He was officially discharged in December!!!!!! He also doesn't want breakfast and I do my best to get some form of protein in him before school.....believe it or not, he prefers to have a hot dog or some bacon. Then at school he has a snack @ 9:30 and lunch at 12. Like Zachary, his variety isn't what it was on discharge. But he is thriving and seems to enjoy food!



# Problem-Solving with Preemies: Nuts and Bolts

by Catherine Shaker, MS/CCC, BRS-S



Many preterm infants have complex medical and developmental issues that can compromise the transition to nipple feeding. Indeed, feeding issues remain a key factor in determining the date of discharge, which in turn affects both the infant-family relationship and the cost of care. There is often need for continued intervention after discharge.

Sucking, swallowing and breathing are complex processes even when considered separately. When an infant is fed, these processes must act together, working smoothly and efficiently, with highly accurate timing and coordination, to result in safe and efficient feeding. Immaturity of the central nervous system, reduced control of the muscles that

support the trachea and the swallowing mechanism, as well as respiratory problems, all predispose the preterm infant to airway compromise. As a result there is an increasing focus on what interventions can safely support the preterm infant during the feeding process. The development of an evidence-base to support practice is just in its infancy. That said,

## What then might help the preterm infant feed more safely and successfully?

**Avoid high flow nipples.** *Provide a flowrate that is more controllable.* Of all the factors to consider during feeding preterm infants, flow rate is one of the most critical. In many NICUs, high flow nipples (“preemie”, red or blue) are routinely used with good intentions. Their potential to compromise coordination is often not understood or recognized by caregivers. Indeed, the greatest obstacle to safe and successful feeding is a high flow rate that may flood the pharynx, triggering multiple swallows, leading to an interruption of breathing. Consider a standard flow rate nipple. The Habermann Feeder or Gerber 3-hole nipple slow the flow rate. When I have tested these in radiology under video, both of these have a slower flow rate. Nipples marketed as “slow flow” are not always really slow flowing, based on my observations in radiology. Premies typically have strong sucks so don’t need high flow. They actually take greater volumes when the flow rate is more manageable (Lau, 1999; Lau, 2000; Lau 2003 )

**Position baby on his side with head higher than hips.** This is more like a typical breastfeeding position, clinically appears to decrease breathing effort and improve head and trunk alignment, increases subglottic pressure for improved airway protection (Beckman seminar), and results in better oxygen saturations and less drops in heart rate (Jenni et al, 1997) during feeding. The typical semi-upright position appears clinically to be more challenging for premies, as the head can be more easily extended out of alignment, gravity often pulls the tongue into a retracted position, and fluid can more rapidly move toward the pharynx, which can jeopardize bolus control before the swallow.

**“Pace” the infant during sucking and swallowing.** Impose a brief break from sucking when the infant shows signs of stress (increased breathing effort, gulping, pulling head back, losing fluid from the oral cavity, multiple swallows to clear bolus, color change, breath-holding or overt coughing or choking (Shaker, 1999; Law-Morstatt et al, 2003).). In radiology, I have used pacing to reduce bolus size and improve airway protection.

**Swaddle the infant in a receiving blanket during feeding.** This provides postural support and helps maintain the upper limbs/hands to the body midline for sensory-motor organization. If the infant gets drowsy, removing the blanket *momentarily* to re-alert him can be helpful. However, in these situations, actually feeding the infant unswaddled takes away needed postural support for the airway and swallowing, and may compromise feeding.

**Re-alert the infant if drowsiness is observed.** Premies who are successful feeders spend more time in a quiet/alert state than those who require supplemental gavage (McCain, 1997). Alertness is critical for the infant’s ability to communicate with the feeder regarding impending loss of suck-swallow-breathe coordination (Shaker, 1999). One might use a “fake” burping maneuver, i.e. pat or rub the infant’s back as one would during a burp to alert him. Unswaddle the blanket for a few minutes to let “fresh air in” as the nurses say, rub the infant’s head, take the t-shirt off and put it back on; then re-swaddle the infant before resuming feeding. Leaving the blanket off to “keep the infant awake” is not advised, as it removes the postural support so critical for safe and efficient feeding.

**Avoid “prodding the infant”.** Often feeders with good intentions use such maneuvers as twisting or turning the nipple, moving the nipple up and down, moving the nipple in and out of the infant’s mouth or jiggling the nipple. Although the intent is to “help” the infant, safety may be compromised. These techniques result in fluid passively entering the infant’s mouth without his *active* participation. The risk of aspiration is significantly increased, because fluid delivered *passively* may overflow the oral cavity, and move toward the airway. Until the infant *actively* swallows, which occurs only after active

# Problem-Solving with Preemies: Nuts and Bolts

## by Catherine Shaker, MS/CCC, BRS-S

sucking, the airway is *open* and in jeopardy. Thoyre (1997) noted that when mothers jiggled the nipple, preemies were actually less engaged in feeding. Our goal is to support a *successful feeder* who is active, safe and competent, *not* merely a *successful feeding*.

Catherine Shaker, MS/CCC, BRS-S is a Board Recognized Specialist in Swallowing and Swallowing Disorders through ASHA. She has worked in a large Level III NICU for over 20 years and teaches seminars nationally. Contact her at [cshaker@covhealth.org](mailto:cshaker@covhealth.org). For further information.

### References

- Lau, C. & Hurst, N. Oral feeding in infants. *Curr Probl Pediatr* 1999;105-124.
- Lau, C. & Schanler, R.J. Oral feeding in premature infants: Advantages of a self-paced milk flow. *Acta Paediatrica* 2000; 89:453-459.
- Lau, C., Smith, E.O., & Schanler, R.J. Coordination of suck-swallow and swallow respiration in preterm infants. *Acta Paediatrica* 2003; 92:721-727.
- Beckman, Debra. Oral-Motor Assessment and Intervention. 2003. Milwaukee, WI
- Jenni, O.G., von Siebenthal, K. et al. Effect of nursing in the head elevated tilt position (15 degrees) on the incidence of bradycardic and hypoxemic episodes in preterm infants. *Pediatrics* 1997; 100: 622-625.
- Shaker, C.S. Nipple feeding preterm infants: An individualized developmentally supportive approach. *Neonatal Network* 1999; 18: 15-22.
- Law-Morstatt, L., Judd, D.M., Snyder, P., et al. Pacing as a treatment technique for transitional sucking patterns. *J Perinatol* 2003; 23:483-488.
- McCain, G.C. Behavioral state activity during nipple feedings for preterm infants. *Neonatal Network* 1997; 16:43-47.
- Thoyre, S.M. Developmental transition from gavage to oral feeding in the preterm infant. *Ann Rev Nurs Res* 2003; 21:61-92.



---

## Getting trained to do FEES in pediatrics By Krisi Brackett MS SLP/CCC

Thinking of starting a pediatric FEES program? You will need to learn to scope (or designate a professional to scope), interpret the exam, and market your new skills to your facility. This article will focus on the scoping part. Becoming a “privileged endoscopist” is a skill that ASHA has approved in our scope of practice. Currently guidelines covering the topic of SLP’s passing the scope are directed by individual states. So check your state guidelines for approval.

The first step to learning to scope is to become a privileged endoscopist. The use of nasoendoscopy for swallowing assessment, while largely used in the adult population, is expanding into the infant and pediatric realm. In some facilities, the exam is performed by a physician who will physically pass the scope while a speech language pathologist feeds the child and interprets the exam. In others, the speech pathologist is independent in the passage of the endoscope and interpretation of the examination. Having access to 2 instrumental exams can be extremely informative and can assist the accuracy of diagnoses. The literature is reporting good results when compared with videofluoroscopy in adults and pediatrics (Leder et al., 2000; Miller, et al, 1994) providing the clinician with an additional objective evaluation to gain information.

At UNC hospitals, we have developed a suggested training protocol for competency for our clinicians to perform pediatric FEES exams, which includes both scope passage and interpretation by the SLP independently.

### **Getting trained: The suggested training to acquire competency includes:**

1. Participation in a FEES course
2. Observation of 10 adult FEES exams
3. 10 supervised scope passes on normal volunteers
4. 25 supervised scope passes on adult patients.
5. Observe 5 pediatric FEES
6. 5 supervised scope passes on pediatric patients

(continued on page 9)

# Case by Case: “Top Ten Points for Coming Home” (Transition From Feeding Program to Family Kitchen)

---

## **When selecting a feeding facility verify what the “follow-up” after discharge is.**

- Are staff available via phone/email
- Will insurance coverage be an issue for any follow-up medical needs
- Does the staff conduct home visits (not if you are out-of-state)
- Do you return to clinic for follow-up visits (if local)

## **Fear of Leaving Facility**

This is perfectly normal – you have just spent 4 weeks (or more) in a controlled environment and now you are returning to a home environment. You are wondering how your child will react once he/she is back at home.

## **Resources at Home/Need Network of Support**

- Contact your local feeding therapist
- Let Family/Friends help. (Some may not understand – find support from those that can relate)

## **Patience and Self Confidence**

You succeeded at the feeding program and you CAN do it at home to.  
Remember there will be days that are not as smooth as others and will simply be frustrating.  
(There are great days too!)

## **Adjust to New “Home Kitchen”**

You will need a few items to successfully carry out the feeding program in your home.

- High Chair
- Reinforcements/Rewards (Toys, books, puzzles, stickers, incentives that will motivate your child)
- Small Containers to store/serve various foods in (we both needed containers to hold 2 oz. of food that was being served – upon discharge our meals consisted of 8 ounces of food at each meal – 4 foods – 2 oz. of each)
- Food Processor to puree foods (if not on chewable foods at time of discharge)

## **Effects on Entire Family**

You have been gone for 4 – 6 weeks and the entire family has to adjust to the new routine.  
Realize that the “new feeding routine” must be adhered to for success – this will require you to alter your family feeding schedule.  
Other children in the family need to know they are loved so be prepared to dedicate special time to them individually (outside of the meal time).  
Don't forget your spouse/significant other. Schedule time together.

## **Caretakers Need to be Trained to Feed (Sitters, Family, etc)**

More than one person needs to be trained so that the child doesn't learn to only follow the feeding program of one adult (if you are a single parent this may not be possible).  
Develop a schedule that allows both parents (significant adults) to be involved (child needs to adhere to same rules from all feeders). For example, it worked for us to have the Moms doing breakfast, lunch and snack and then Daddy did the evening meal.  
Set aside time to train other caregivers – daycare workers, nanny, grandparents, etc. If you are working outside the home then all those involved with your child at mealtimes need to be trained to carry out the program.

## **FOLLOW THE ROUTINE!!!! (Can't stress this factor enough)**

Whatever you do – routine is the key – don't alter the feeding schedule until you are ready to move to the next step.  
Set the routine and stick to it – follow the discharge plan every day.  
Make sure all feeders are adhering to the same routine.  
If going out to eat as a family – conduct the feeding program at home for the child's meal and then go out.  
This is time-consuming – remember what you do now is for the future wellness of your child....

## **Fade into new routines gradually**

- Make sure each step is mastered – don't rush the program. The more confidence your child has with his new skills the better the transition will be – master each step before moving to the next feeding goal. Talk to the feeding program staff/therapist and be sure your child is ready to move ahead. Again, be patient. Remember, “baby steps” are still progressive steps.

*Think Positive!! The rewards are awesome! The first time your child eats a new food on his own at home is a priceless reward. For us it was witnessing the first Thanksgiving turkey, first enjoyment of eating their birthday cake and successfully eating an entire “Happy Meal”. By Diane Murphy and Ann Thomas*



## Getting trained to do FEES in pediatrics By Krisi Brackett MS SLP/CCC

When we originally developed the protocol, we worked with our pediatric ENT's to gain experience with scope passing on infants and children. Our adult staff who regularly uses FEES also provided support and scoping expertise as we ventured into pediatrics. Comfort with scope passing will be individual to the clinician and competencies should be adjusted accordingly.

Beth Cornell, a FEES trainer, says that "scoping is a technical skill that you learn. The trick is to put the scoping skill together with interpretation". The SLP should have a thorough understanding of pediatric normal anatomy and function. "Knowledge of normal and abnormal velopharyngeal and laryngopharyngeal anatomy as well as a thorough understanding of the developmental changes that occur in the swallowing process as the child matures is key to successful implementation of FEES in pediatric patients." (Hartnick et al., 2000) One of the key differences that we have encountered with our pediatric exams is that it requires two people; an SLP to pass the scope and someone to feed the child. This is unlike adult FEES, which can often be done independently by the clinician. The SLP performing FEES on a pediatric patient will require assistance to stabilize the child to prevent him/her from pulling out the endoscope as well as a caregiver or experienced feeder to assist with feeding a potentially difficult feeder. Passage of the endoscope can be more difficult because of the smaller size of the nasal passages. (Hartnick et al., 2000)

### KEY CONSIDERATIONS FOR TRAINING

Become a privileged adult endoscopist first (it's easier to learn on adults).  
Use a pediatric scope.  
Know normal anatomy and physiology of infant and child.  
Know normal oropharyngeal patterns in pediatrics.  
Choose patients very carefully.  
Train under ENT or other experienced pediatric endoscopist.  
Follow protocol for scope passing and interpretation.

FEES Trainers who offer courses with scoping practice:

1. Susan Langmore: [langmor@itsa.ucsf.edu](mailto:langmor@itsa.ucsf.edu), [slangmore@ohns.ucsf.edu](mailto:slangmore@ohns.ucsf.edu) (offers onsite and in CA)
2. Joe Murray: [Joe.Murray@med.va.gov](mailto:Joe.Murray@med.va.gov) (offers onsite and in MI)
3. Susan Butler: [SusanButler100@aol.com](mailto:SusanButler100@aol.com) (offers onsite)
4. Beth Cornell: [Elisabeth.Cornell@rexhealth.com](mailto:Elisabeth.Cornell@rexhealth.com) (offers onsite and in NC)
5. Micael Cray and Giselle Mann (FL)

Hartnick, C.J., Hartley, B.J., Miller, C., & Willging, J.P. "Pediatric Fiberoptic Endoscopic Evaluation of Swallowing." *Annals of Otolaryngology, Rhinology & Laryngology*, 109:2000, pp.996-999.

Leder, S.B. & Karas, D.E. "Fiberoptic endoscopic evaluation of swallowing in the pediatric population." *Laryngoscope*, 2000

Miller, C.K., Willging, J.P., Strife, J.L. & Rudolph, C.D. "Fiberoptic endoscopic examination of swallowing in infants and children with feeding disorders." *Dysphagia*, Vol. 9 (4), 1994, p. 266.

### On the Research Front:

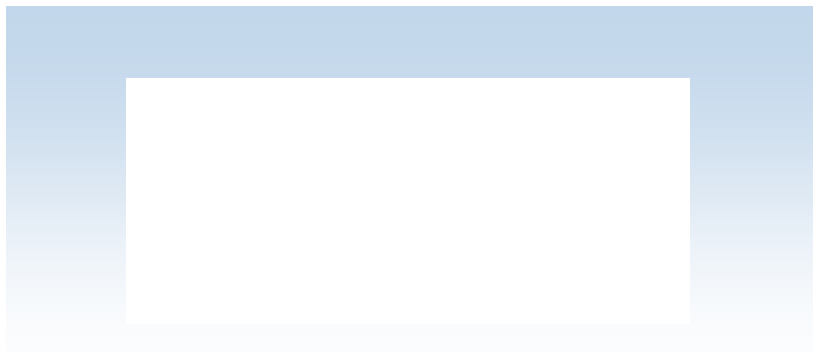
**Fessler DM, Abrams ET. Infant mouthing behavior: the immunocalibration hypothesis. *Med Hypotheses*. 2004;63(6):925-32.**

Avid mouthing, ( infant behavior of sucking objects), is a pattern characteristic of the first 2-3 years of life, with its most intensive manifestation occurring during the first year. Although traditional accounts explain infant mouthing as a source of sensual gratification and/or environmental exploration, these proximate hypotheses are inconsistent with the high costs of mouthing, including choking, poisoning, and exposure to pathogens. The authors propose that mouthing serves to proactively expose the naive gastrointestinal tract to environmental antigens and commensal bacteria while under the sheltering umbrella of breastfeeding. Mouthing functions to accurately calibrate the developing immune system, including antibody production and mucosal immunity, to the local disease ecology. The critical exposure period is not open-ended, as failure to expose the gut to an adequate number of antigens early in life is associated with an increased risk of allergies, asthma, and atopy. Weaning initiates a number of immune changes that may program the neonatal immune system into certain life-long responses.

© 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:

**Schaal B, Hummel T, Soussignan R. Olfaction in the fetal and premature infant: functional status and clinical implications. Clin Perinatol. 2004 Jun;31(2):261-85, vi-vii.**

This article considers olfaction as a functioning source of information for the fetus and the neonate, born on term or prematurely. It aims to present how odors are involved in the sensory continuity between the prenatal and postnatal environments and how they influence the earliest adaptive responses of newborns in the realms of self-regulation, emotional balance, feeding, and social interactions. Finally, it evaluates odors as sensory means to ameliorate the physiologic and behavioral responses of preterm infants to the adverse impacts of separation from mother, non-oral feeding, or iatrogenic distress.

**Miller-Loncar C, Bigsby R, High P, Wallach M, Lester B. Infant colic and feeding difficulties. Arch Dis Child. 2004 Oct;89(10):908-12.**

This study looked at the relationship between colic and feeding difficulties and their impact on parents. Researchers looked at infant oral motor skills, mother-infant feeding interactions, maternal questionnaires on infant crying, sleeping and feeding behaviors, and the occurrence of GER in the infants using abdominal ultrasound. Results indicated that infants in the colic group displayed more difficulties with feeding; including disorganized feeding behaviors, less rhythmic nutritive and non-nutritive sucking, more discomfort following feedings, and lower responsiveness during feeding interactions. Infants in the colic group also had more evidence of GER based on the number of reflux episodes on abdominal ultrasound as well as maternal report of reflux. Mothers in the colic group reported higher levels of parenting stress.