# Pediatric Feeding and Dysphagia Newsletter

Dear Fellow Feeders,
Greeting from Utah! Many of you know that I recently relocated to Salt Lake City. We have a new address , phone and email. Please write with comments, suggestions or inquiries at www.feedingnews.com, or feedingnews@earthlink.net

- Krisi Brackett MS SLP/CCC

**Pediatric Feeding and Dysphagia Newsletter**
**Hiro Publishing**
**www.feedingnews.com**
Volume 5, number 2
October, 2004

## Behavioral Feeding Interventions for Older Children: How is it done?

MaryLouise E. Kerwin, Ph.D., Associate Professor, Rowan University

Behavioral interventions are successful in managing children's feeding problems, such as food refusal and eating only a few foods (see Kerwin, 1999, 2003 for a review). These interventions are typically very structured and can seem unnatural (for details see Kerwin & Eicher, 2004). One example of a commonly used behavioral intervention is differential attention (more technically known as differential reinforcement). That is, an adult puts the feeding utensil in front of the child's mouth and the child is given an instruction (e.g., "Abbey, take a bite."). If the child opens her mouth wide enough for the utensil to be placed inside the mouth and keeps it open long enough for all the food to be deposited within her mouth, then the adult gives the child brief access (e.g., 20 seconds) to "positive" events, such as praise, singing, and playing with a toy. At the end of the specified time period, a new trial begins with the presentation of the next bite of food. If the child does not open her mouth wide enough or does not allow all the food to be placed in her mouth, the adult removes the feeding utensil and waits for the brief time period (i.e., 20 seconds) to elapse before starting the next trial. Differential attention is a good way to increase food acceptance; however, implementing it the way it is described above is most appropriate for young children under the age of six years and/or children with developmental delays. How do you adapt or modify this behavioral intervention for children who are older than six years?

There are several ways in which the "trial" procedure described above can be adapted to be more appropriate for older children. First, you can change the way in which the food is presented. Rather than an adult feeding the child, you could a) prepare a single bite of food on a utensil and then place that bite on a plate or bowl in front of the child, b) prepare a few bites of food and place them on a plate or bowl in front of the child, c) prepare a plate with small portions of foods, or d) place all the food in front of the child at once. The decision about which method of presentation to use would depend on what the child's

*(Continued on page 2)*

**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

**Inside this issue:**

feeding problem is, how severe it is, and how well the child responds to the intervention. For example, suppose Tom is a 10-year-old typically developing child who is an extremely picky eater (e.g., his diet consists of a total of three foods) and you are trying to expand his variety. You might use the single bite method when presenting a new food. After Tom consistently eats 4-5 bites of this new food each session for several sessions in a row without any problems (i.e., he doesn't gag or spit the food out), you might switch to presenting a small portion of the food on a plate.

The second way of adapting the "trial" method for older children is changing the reward event and how they are offered. Rather than the child engaging in an activity after each bite, the child's success in accepting the bite can be acknowledged with a "token" (e.g., poker chip, penny, star, hash mark on a paper). Depending upon the age of the child and the severity of the feeding problem, the tokens can be exchanged for prizes at the end of a specified number of bites (e.g., there is 2 minutes of play time after 5 tokens are earned), at the end of the meal, at the end of the day, or at the end of the week. But, a word of caution is in order. The child should receive the pay-off or access to the rewarding activity frequently enough to keep up a high rate of acceptance. It is often tempting to assume that because a child is 12 years old, the tokens should be exchanged at the end of the week. However, the exchange of tokens for rewards should be determined by the child's feeding behavior and what they need to keep performing at a high level; not their age.

The third way of adapting the "trial" method of behavioral intervention for older children is through contracts. Prior to the intervention, you and the child draft a contract. The contract includes the following elements: a) what exact, specific behavior(s) the child will perform and in what time period, b) what the consequences are for performing the behavior (and possibly what consequences there are for not performing the behavior), and c) what the adult's responsibilities are. A sample contract may specify that Gail accepts and swallows three bites of a nonpreferred food within 15 minutes. If she accepts these bites, she earns $1.00 or she earns 10 minutes of phone time. The contract should also specify that the adult agree to provide the rewards within 8 hours of Gail earning it.

A final point in implementing behavioral interventions for children's feeding problems is that behavioral interventions are not static. They need to be adjusted and tweaked constantly based on how the child is doing. Therefore, a basic understanding of behavioral principles is critical. The cardinal rule is that the child should be succeeding. If the child is not succeeding, you need to evaluate whether what is being asked of the child is too hard or whether the payoff is not strong enough. For example, Dwayne eats only a few foods and gags when he is asked to eat a new food. He also tends to spend a lot of time in solitary activities such as watching television or playing on the computer. His behavioral program requires that he eat five bites of peas. If he does this, he will earn 20 minutes of television. In this example, there is a high probability that both the behavior expected is too hard and the payoff is too little. The trick with behavioral interventions is finding that fine line of increasing behaviors with the smallest possible "reward". Once you find this line, you need to be vigilant in keeping it balanced over the course of the behavioral program. As the child succeeds, what is expected of the child is increased gradually and systematically so that he continues to succeed.

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**Question:** I just completed reading the VPI article in your July newsletter. It was interesting and informative. The author mentioned two specialty bottles that I am not acquainted with. They were the Haberman and the Pigeon. Do you have any information of where to purchase these or get further information about them? Thank you.

*The Haberman Feeder is made by Medela and can be purchased from the company at their web site; http://www.medela.com. It is also available in many therapy catalogues and can be purchased in individual components (nipples, valves separately). The Pigeon bottle (as we have nicknamed it) is actually called the cleft palate nurser and is made by the Pigeon Company of Japan. However, Children's Medical Ventures imports this bottle making it easier to order. Contact them at http://www.childmed.com/. For more information on how to use the bottles and where to order them, go to the TelAbility website at www.TelAbility.org , click on handouts, and look at the handouts; How to Use the Cleft Palate Nurser by the Pigeon Company and How to Use the Haberman Feeder. They are also available in Spanish.*

## **Recommendations:** Beckman's E-Z Spoon

Developed by Debra Beckman, MS, CCC-SLP, speech pathologist, Internationally Recognized Expert on Oral Motor Function. "I could not find a utensil thin enough to use in the mouth for those individuals with extreme oral hypersensitivity, so I designed the **E-Z spoon**". This spoon has a shallow blade which promotes lip closure, but is small enough so that it does not set off gagging. Because the material is flexible, if a tonic bite occurs, the teeth and oral tissue will not be injured. Because the utensil is narrow, the caregiver can easily place the food to the side or to the center of the mouth. The slip resistant handle makes is easier for the caregiver to hold. The utensil is light weight, flexible and a fun color. All of these factors make it more likely that the individual, no matter what age, will accept the utensil into the mouth, which is often the most difficult part of the meal time. It is a utensil for all ages, easy for the caregiver and easy for the person who is eating.

**Caregiver Comments for the E-Z spoon**

*"I've never seen "A" open her mouth so easily for a spoon. This is great."*
– (Tammy G., Mother of a nine year old who is currently moving from tube to oral intake)

*"M" usually has difficulty after about 3 ounces of food. With the E-Z spoon, he took 4 ounces with no gagging. I'm amazed that she did so well."*
– (Jaime M., Mother of a 2 year old who has recently transitioned from tube to oral intake)

*"We tried cereal for the first time, and "M" had no splillage with the E-Z spoon."*
– (Julie W., Mother of a 4 month old just beginning to eat pureed food.)

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Debra Beckman's schedule for the rest of the year is on her website: www.beckmanoralmotor.com

# Pharyngeal/Upper Esophageal Sphincter Manometry: A New Frontier in Pharyngeal Dysphagia Diagnostics

by Susan G. Butler, PhD, CCC-SLP, Center for Voice and Swallowing Disorders, Department of Otolaryngology, Wake Forest University, Baptist Medical Center

**What is Pharyngeal/UES Manometry?**

Pharyngeal/Upper Esophageal Sphincter (UES) manometry is a diagnostic tool that evaluates pharyngeal and UES functioning during swallowing. Manometry used to evaluate the esophagus has been published and used clinically for decades by Gastroenterologists and Otolaryngologists. Manometry used to evaluate the pharynx and UES has also received the attention of publications dating back to the early 80s, yet is just now being studied and used clinically by Speech Pathologists to acquire truly objective information on their patient's dysphagia.

The two most frequent diagnostics in pharyngeal dysphagia are the Modified Barium Swallow Study (MBSS) (Logemann, 1985) and the Flexible Endoscopic Evaluation of Swallowing (FEES) (Langmore, 2001). Our field has moved from referring to these diagnostics as "objective evaluations" to now referring to them as "instrumental evaluations." That is, we realize that the MBSS and the FEES are largely objective in their ability to identify penetration and aspiration; however, much subjectivity exists when identifying certain physiologic aspects of swallowing such as base of tongue retraction, pharyngeal contraction, and upper esophageal sphincter opening (UES).

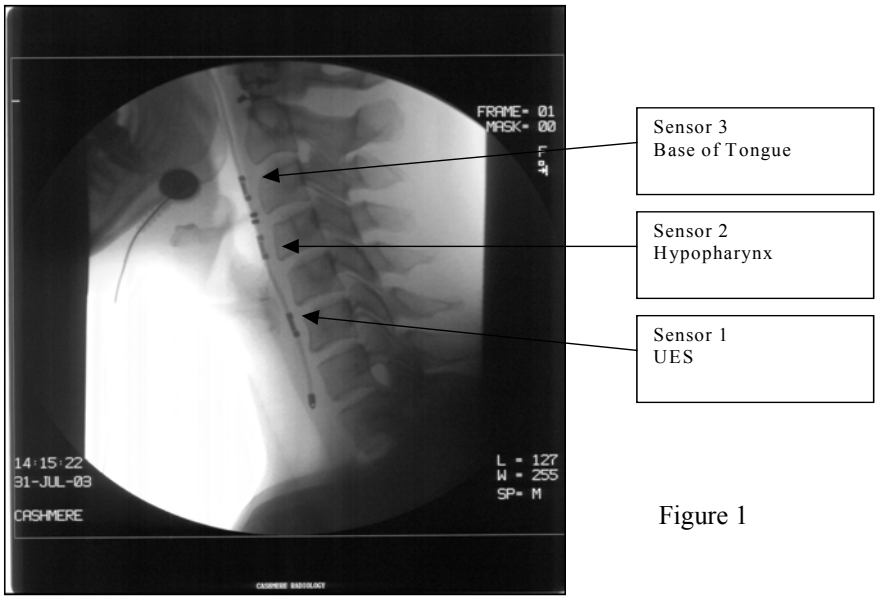


Figure 1

**Why is Pharyngeal/UES Manometry Needed?**

Because the MBSS and FEES require subjective interpretation of study findings; inter-rater reliability is poor. For the MBSS, the kappa coefficient ranged from 0.01 to 0.56 for interobserver reliability on various oral and pharyngeal swallowing assessment parameters (Stoeckli, Huisman, Seifert, Martin-Harris, 2003). Such poor interobserver reliability diminishes the confidence in its findings and therefore its usefulness in swallowing treatment planning. In fact, McCullough, Wertz, Rosenbek, Mills, Webb and Ross (2001) reported that "interjudge reliability for most measures, with the exception of a binary rating of aspiration, appears to vary among clinicians and is unacceptable" (p.117). Instrumentation, such as manometry, combined with a MBSS or FEES, that yields quantifiable data will decrease the chance for misinterpretation and mismanagement of the patient with swallowing problems.

Quantifiable information on disordered swallowing physiology is needed to plan dysphagia therapy. When a clinician sees residue in the pyriform sinuses after a swallow, is it decreased pharyngeal contraction or decreased UES relaxation? As noted above, dysphagia experts may disagree on the physiologic breakdown from watching the same video and dysphagia rehabilitation techniques vary according to weak pharyngeal contraction vs. decreased UES relaxation.

In addition, an instrumental swallowing evaluation of manometry that provides objective measurements may subsequently have greater predictive value in identifying patient's at risk for the development of pneumonia. Olsson, Castell, Castell, and Ekberg (1995) used a large, 4.6 mm manometric catheter but demonstrated that

*(Continued on page 5)*

manometry improved diagnostic ability in assessing individuals with dysphagia. The authors concluded that manometry best appreciates the pharyngeal and UES peak pressures and timing.

Olsson, Castell, Johston, Ekberg, and Castell (1997) also investigated the relationship of UES opening duration and dysphagia with simultaneous MBSS and manometry. The authors reported that when pharyngeal residue was present, UES relaxation duration was significantly decreased. Most would expect that decreased pharyngeal peak pressures would be most frequently associated with residue in the pharynx, yet Olsson et al. reported that it was UES relaxation duration and not peak pharyngeal pressures that was statistically different. Certainly pharyngeal peak pressures may be decreased when residue is present in certain locations in the pharynx, yet this study clearly points out that quantifiable means of evaluating swallowing is important to the correct diagnosis and management of the individual with dysphagia.

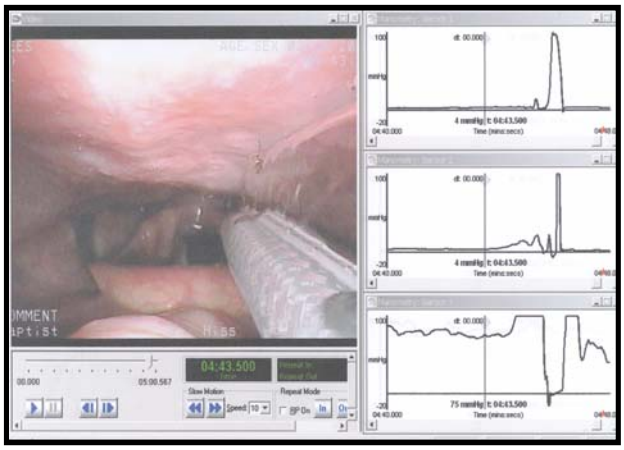


Figure 2

**Problems with Pharyngeal Manometry in the Past:**

Pharyngeal manometry has been utilized to measure pharyngeal pressures and/or timing of pharyngoesophageal events (Hila, Castell, Castell, 2001; McConnel, 1988; McConnel, Cerenko, Jackson, Guffin, 1988; Olsson, Nilsson, Ekberg, 1995; Kahrilas, Logemann, Lin, Ergun, 1992; Bulow, Olsson, Ekberg, 1999, 2001, 2002). Many of these original pharyngeal manometry studies were investigated with a 4.6 mm in diameter catheter. A 4.6mm catheter has deterred many clinicians due to the size of the catheter to be passed transnasally and general technical challenges (McConnel, Cerenko, Mendelsohn, 1988). Salassa, DeVault, and McConnel (1998) later posed catheter standards with a much smaller manometric diameter of approximately 2.1 mm. The 2.1 mm catheter is easily passed transnasally without topical anesthetic with only mild discomfort to the patient. Due to the small catheter size it could be employed with pediatric patients as well.

**How We Do It:**

**Equipment :** We use a Kay Elemetric Swallowing Workstation (Kay Elemetrics, Lincoln Park, NJ) to obtain concurrent manometric and videoendoscopic data. For the manometry, a 100 cm long round catheter 2.1 mm in diameter (Model CTS3 + emg, Gaeltec, Hackensak, NJ) similar to that described by Salassa et al (1998) is utilized. The catheter employs solid-state unidirectional, posteriorly oriented sensors spaced 3 cm between sensors one and two and 2.33 cm between sensors two and three. Pressures are measured in the UES, level of inferior constrictor, and upper pharynx with sensors one, two, and three, respectively.

**Procedure:** Catheter calibration is easily done and conducted according to manufacturer's specifications prior to exam. A 3.4 mm flexible endoscope is passed transnasally to obtain a superior view of the hypopharynx. Once endoscopic placement is assured, the manometric catheter is passed transnasally through the other nare, into the hypopharynx, and through the UES. Using a pull-through technique, the catheter is pulled back until the high pressure zone of the UES is observed in the waveform of sensor one. A posterior orientation of sensors two and three at the levels of the inferior constrictor and base of tongue, respectively are obtained and assured (see Figure 1). The catheter is taped to the nose of the participant to minimize catheter displacement. Once the catheter is in place, the patient is asked to swallow their saliva five times with 30 second pauses between swallows and then

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swallow five 1 tsp amounts of water. Often the manometric catheter is removed and then the FEES exam is then conducted according to the individual's clinical needs. However, the manometric catheter can be left in during the FEES exam if desired.

Once the exam is complete, the waveforms are measured and analyzed with the findings of the FEES (please see Figure 2 for an example). The results of the FEES largely dictate diet recommendations and the results of the manometric analysis guides the dysphagia rehabilitation. For example, during a FEES, a patient may demonstrate severe pyriform sinus residue after the swallow on puree which results in aspiration after the swallow. Puree may be restricted if no compensatory techniques were helpful in eliminating the aspiration. The manometry will reveal if the residue observed was secondary to weak pharyngeal pressures and/or decreased UES relaxation in amplitude and/or duration. If UES relaxation was observed to be decreased, then perhaps the Shaker exercise would be recommended. If decreased pharyngeal pressures were observed, then the effortful swallow with biofeedback or etc. may be recommended.

**Limitations of Pharyngeal/UES Manometry:** The limitation in immediate implementation of manometry into one's clinical practice is the lack of a normative database for the 2.1 mm manometric catheter. Pharyngeal/UES manometry is relatively new to the clinical world of Speech Language Pathology. We are currently using data acquired from a pilot study of 22 young adults (Hiss & Huckabee, accepted) for comparison to our disordered swallows and we are also acquiring additional pilot data from 22 older adults. Once the pilot data is obtained, then comprehensive databases can be developed that are comprised of older, middle-aged, and young adults; adolescents; children; and infants.

In addition, the use of manometry requires new technical skills for the Speech Language Pathologist. If s/he is currently performing nasoendoscopy, then passing the manometric catheter through the nares and into the UES requires minimal supervised practice. However, if one is not trained in nasoendoscopy, then s/he would need considerable training and supervised practice to perform this technique.

**Conclusion:** Pharyngeal/UES manometry is new to our field, and we need to continue to develop it as no other tool on the near horizon offers such access to quantitative information on swallowing physiology. Implementation of pharyngeal manometry into swallowing assessment protocols will greatly enhance the accuracy and interpretation of what is causing the swallowing problem and improve the efficacy and appropriateness of behavioral, medical, and surgical swallowing treatments for the pharynx and UES.

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# The Mighty Whey Protein by Krisi Brackett MS SLP/CCC

Whey protein is written about as " a perfect protein" which has far reaching health potential. As feeding therapists we recognize this protein in infant and toddler formulas, especially used for fussy babies or intolerant GI tracts. So what is all the fuss and hype about and does whey deserve its reputation?

Whey is a byproduct of the cheese making process. Archibald (2002) writes that it takes 100 lbs. of milk to yield about 10 lbs. of cheese and 90 lbs. of residual liquids known as whey. Whey contains water, high quality protein, lactose, minerals (calcium, phosphorus, magnesium, and zinc), vitamins, and fat. (Archibald, 2002; Dairy Digest, 2003) Whey has a high amount of sulfur containing amino acids important for the biosynthesis of glutathine (antioxidant, anticarcinogenic, and immune stimulating properties) and is the highest natural source of branched chain amino acids. (Archibald, 2002) Studies are showing that whey protein can be beneficial in many areas of health including; inhibiting microorganism activity, antiviral activity, anticancer activity, and lower blood pressure.

Whey protein consists of several different proteins:

- beta-lactoglbulin
- immunoglobulins
- lactoferrin
- glycomaacropeptide
- alpha-lactalbumin
- bovine serumalbumin
- lactoperoxidase

The composition of whey products varies according to the milk source, type of cheese, and manufacturing process. There are two types of whey; sweet whey from enzyme produced cheeses such as cheddar, mozzarella, and Swiss and acid whey from cottage, ricotta, or cream cheese. Whey is typically concentrated by evaporation, reverse osmosis, or ultrafiltration to a condensed product or concentrated by drying. (Dairy Council, 2003) Whey protein isolate is pro-

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# Case by Case...:

Our case was submitted by one of our subscribers:
CB is 3-year 3-month old boy. He was born 8 lbs. 9 oz at 38 weeks gestation.
He has the following medical history:

1. Diagnosis of mild CP, hypotonia
2. chronic ear infections (several sets of tubes since 6-months of age)
3. GI issues: severe reflux, projectile vomiting as an infant was treated with medications, esophagitis at 6-months of age
4. S/p removal of adenoids

Presently, there are no reflux concerns per parent. After age 1, food stayed down because it was thicker cereal. Now, CB eats stage 2 baby foods, chips, small pieces of cut fresh fruit, applesauce, and cereal. He REFUSES a cup without a lid and will dehydrate himself before he uses one. When I presented a regular cup he opened his mouth wide - but did not seem to know how to close his mouth on the rim and then he backed away and would not try it again. He has weak lip rounding noted during my evaluation but closed lips at rest and poor speech intelligibility. He recently began eating rice & fresh corn from the cob - one piece at a time. He has daily bowel movements and if not, Mom provides raisins. CB often cries out in pain when eating as he will bite down on his inner cheek or tongue by accident. He has never been tested for food allergies and his ENT wants to test for environmental allergies if ear infections continue. CB would prefer to drink only milk but Mom has gotten him to take some juices and water now.

I'm thinking that his reflux may not be totally gone and his ear infections are related to the reflux. Milk & milk products should be eliminated, chewing & swallowing skills are not matured. Speech therapy is needed for feeding, oral motor skills and articulation. Do you think it is appropriate to recommend that the child be tested for food allergies? Would the ENT think I was crazy if I called and suggested that the ear infections are related to reflux? And what other ideas do you have? Any information would be appreciated.

Thanks Lynn A. Gallagher, SLP

# Recommendations:

From Krisi Brackett MS SLP/CCC: I think you are on the right track. I would of think of possible reflux or allergies (especially to casein and whey), and a learned aversion pattern. What are his chewing skills like? Any siblings with similar histories or family history of food allergies or GER? You have several ways to proceed, you can try reflux meds empirically, get a RAST test done and then try some behavioral strategies to increase acceptance of new foods and a cup. I would start with a dry spoon and dry cup and get acceptance for that first. Sometimes the over 3's are hard and may need an intensive program but you can do a lot of the ground work first!

From Cathy Fox MS OT/L: I reviewed the case and I think she needs to look at palatal competence especially since he has had so many ear infections and a T&A. I am wondering, if she puts a little barium into the nostral, she will be able to out line the palate and see if it closes off or if he has NPR. That may be why he does not do a cup because liquids flow too fast. If he still has GER he may not have UES opening that allows the bolus to pass so even if it closes of the palate, he gets a blast up into the nose from the decreased opening of the UES. I would hold on the food allergy test until she looks at the palate function. His not drinking would not lead me to food allergies first. I would also think of the ear infections from a mechanical issue not a food allergy. I think she needs to think mechanical before allergies. I agree that the GER is probably not gone but look at the UES and palate first.

# **The Mighty Whey Protein** by Krisi Brackett MS SLP/CCC

*(Continued from page 7)*

duced from whey and can be made into hydrolyzed whey protein or broken down proteins that are more easily digested. This product contains very little if any lactose.

Milk of most mammal's contains the same classes of proteins; casein and whey. Milk proteins are divided into two classes based on their relative solubility in acid; whey (soluable) and casein (insoluable). (Tsang & Nichols, 1988) Human milk is whey predominant while cows milk is casein predominant. Whey protein makes up 20% of total cow's milk protein. Compared with casein, whey proteins rapidly empty from the stomach intact and transit to the upper intestine. (Dairy Council, 2003)

The whey to casein ratio of human milk changes with the stage of lactation. In early lactation the whey: casein ratio is 90:10 and changes to 60:40 in mature milk, and drops further to 50:50 in late lactation. (Dr. Lloyd, 1989) Dr. Lloyd explains that infants will benefit from improvements that more closely match the plasma essential amino acid profile of the breast fed infant. Amino acids serve as a substrate for protein synthesis. Data has revealed that a formula with a whey: casein ratio of 48:52 yielded a plasma essential amino acid profile of closest to that of breast milk.

Infant formula manufacturers often add whey protein to cow's milk formulas to match the high concentration of whey proteins found in human milk and to formulas marketed for children with special needs (colicky, fussy, and with intolerance's or allergies to cows milk proteins). (Dr. Lloyd, 1989) Dr. Lloyd (1989) elaborates that the use of hydrolyzed whey protein for milk protein allergy has been documented in the literature and is used because of it's high biological value, superior taste and smell compared to casein hydrolosate formulas. Whey protein is also used in formulas made for premature infants, toddlers, and sports drinks for adults. Dr. Lloyd adds that whey protein isolate and concentrates are valuable as food ingredients not only for their ability top aggregate and provide structure to foods but because they are highly soluble over a wide pH range.

All the articles agreed that further research in the area of whey protein's far reaching health benefits would only continue to strengthen the argument that this is protein has much potential.

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# On the Research Front:

**Garro, Adrienne. Coping Patterns in mothers/caregivers of children with chronic feeding problems. *Journal of Pediatric Health Care*. May/June, 2004, p.138-144.**

This study examined the coping behaviors of 35 mothers of children with chronic feeding problems during hospitalization for intensive feeding treatment. The authors point out that little information is available about stress, family function, or coping patterns despite the prevalence of feeding problems. Results indicated that caregivers were most likely to cope through understanding of the problem. Assistance should be provided to families in terms of resources, access to support and informational groups.

**Haapalahti, M., Mykkanen, H., Tikkanen S., Kokkonen, J. Food habits in 10-11 year-old children with functional gastrointestinal disorders. *European Journal of Clinical Nutrition*, 58, 2004, 1016-1021.**

This study looked at the food habits and nutrient intake of children with functional gastrointestinal disorders (FGID's). 49 children with FGID's and 78 controls were studies with questionnaire's, diet recalls, and anthropometric and hematological measurements. Results indicated that the children with FGID's had less family dinners, ate less vegetables and fruits but more ice cream, soft drinks, and had a higher sucrose intake and lower lactose intake. Overall, they has less organized food habits, higher milk avoidance, and behavioral/emotional problems associated with the occurrence of FGID.

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# On the Research Front:

**Mennella, J. A., Griifin, C.E., & Beauchamp, G.K. Flavor programming during infancy. *Pediatrics*, vol. 113, no. 4, April, 2004. P.840-845.**

This interesting study looked at flavor preferences in infants. It was based on clinical observations which indicated that early experience with formulas established subsequent preferences. Infants were randomized into groups by the second week of life (Enfamil group, Nutramagin group, and 2 groups of varying combinations of Nutramagin for 3 months/ Enfamil for 4 months). Results looked at intake, duration of feeding, facial expressions, and mothers judgement of acceptance. Early exposure to Nutramagin enhanced subsequent acceptance of both Nutramagin and Alimentum. The authors recommend that if an infant requires a hydrolosate formula that it be introduced as early as possible, preferable before 4 months of age.

**Rogers, B. Feeding method and health outcomes of children with cerebral palsy. *The Journal of Pediatrics*, Aug, 2004, s28-s32.**

Feeding problems are common among children with cerebral palsy and can impact development, growth, nutrition parent-child interaction, family life and overall health. Oral motor therapy can be helpful for oral skills but have not been shown to be effective in terms of feeding efficiency or weight gain. G-tubes are a reasonable alternative for severe feeding problems.