



Pediatric Feeding and Dysphagia Newsletter

Dear Fellow Feeders:

Welcome to issue 2 of our 9th year. In this issue we start a 3 part series on behavioral aspects to feeding. We also feature an NY times article about picky eating and follow-up interview with researcher Dr. Lucy Cooke as well an interesting case, book review, a wonderful free resource from the Cleft Palate foundation, editorial, and current research review.

I get lots of emails from across the country about difficult patients. Keep them coming! I would love some ideas for the kinds of articles or information you want to see in the newsletter.

Enjoy, Krisi Brackett

Write me: feedingnews@earthlink.net



The Pediatric Feeding & Dysphagia Newsletter

Hiro Publishing

3106 S. Lincoln St.

SLC, UT 84106

801-599-8250

feedingnews@earthlink.net

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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

Behavior Analysis: An Effective Tool to Correct Pediatric Feeding Disorders Part 1: An Introduction to Conceptual Foundations

By Ben Y. Zimmerman, BS, MS Behavioral Psychology, Los Altos Feeding Clinic

Email: pediatric_feeding@sbcglobal.net for correspondence, www.pediatricfeeding.org

This is the first part in a three part series on the effectiveness of Behavior analysis in reducing or eliminating pediatric feeding disorders. The first part will be an introduction to behavior analysis and a discussion of relevant conceptual foundations. Part 2 will describe specific techniques of Behavioral Feeding Therapy. Part 3 will examine case studies.

What is Behavior analysis?

In the simplest terms, behavior analysis is the scientific analysis of environmental inputs and outputs to predict, control, and modify behavior (Watson, 1919). Behavior is constant and behavior analysts seek to find patterns in behaviors of individuals. These patterns are then manipulated by changing environmental variables to increase, decrease, or eliminate the occurrences of targeted behaviors.

What is Behavior?

In Behavior analysis, behavior is defined as any electrical, muscle or chemical change in an organism (Malott, 2007). Anything that a person does, positive, negative or innocuous, is considered behavior.

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Behavior analysis: An Effective Tool to Correct Pediatric Feeding Disorders

Part 1: An Introduction to Conceptual Foundations

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(Continued from page 1)

Misconceptions and fallacies

It is a common misconception that behavior analysis implies the correction of "misbehavior" through "punishment" or the increase of desired behaviors through "bribes." More correctly, behavior analysis breaks down behavior into sequences, rates, and contexts in which the behavior occurs, among other criteria, in order to systematically modify them.

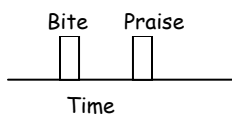
Many believe that behavioral analysis argues that there is no mind, only reactions to rewards and punishment. Behavior analysis does not deny the existence of a mind, but argues that the best way to study the mind is to study behavior, which is measurable.

What Is a Reinforcer?

A reinforcer is any stimulus or event that increases the probability that the behavior preceding the reinforcer will occur in the future, e.g. taking a bite → verbal praise → increase in bites taken.

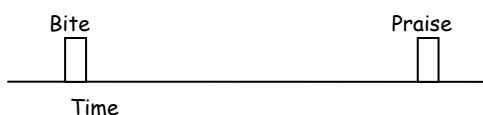
Reinforcer Effectiveness

A. 15 second delay



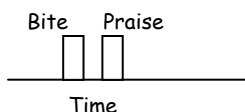
Second best conditioning because praise follows reinforcement, but not as closely as in C.

B. 15 minute delay



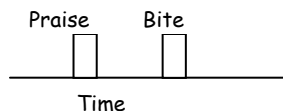
No conditioning, praise is too far from reinforcer.

C. 2 second delay



Best conditioning produced. The closer the reinforcer follows the behavior, the better the conditioning.

D. 15 second delay



No conditioning, reinforcer occurs prior to behavior.

(Continued on page 3)

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Part 1: An Introduction to Conceptual Foundations

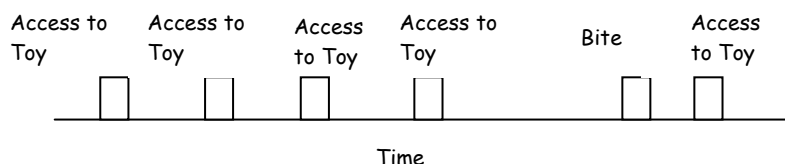
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Deprivation

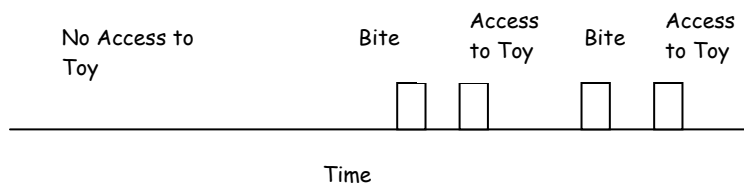
Having more access to a reinforcer lowers its value.

A. Prior Access to Reinforcer Used with Target Behavior



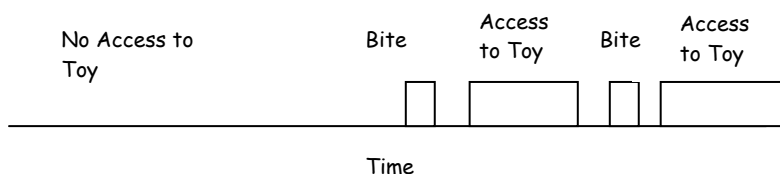
Previous exposure to toy lowers its value.

B. 15 Seconds of Access to the Reinforcer Before the Next Bite



This sequence produces the best conditioning.

C. 10 Minutes of Access to Reinforcer Before the Next Bite



Access to toy for a larger percentage of the interval of each trial will decrease reinforcer effectiveness.

Context

Generalization is when the target behavior occurs in other settings. The more settings or contexts in which a behavior is performed, the stronger the behavior will become. Eating in randomized settings will elicit stronger conditioning than just eating in the kitchen (Miller and Matzel, 1989).

Pediatric Behavioral Feeding Therapy

Behavioral Feeding Therapists try to increase the frequency of desired behavior, such as increasing quantity and variety of food intake, by reinforcing desired behaviors (reinforcement) and ignoring behaviors that interfere with food intake (extinction). Cattle prods are certainly not used during treatment.

Behaviorists do not bribe, they reinforce. Bribery occurs before a behavior and reinforcement occurs after a behavior. If bribery was used to increase food intake, it would need to continue indefinitely. Reinforcement, on the other hand, can be faded out and eliminated over time until the child is reinforced only by the natural feeling of satiation after a meal.

(Continued on page 4)

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Email: peditric_feeding@sbcgobal.net for correspondence, www.peditricfeeding.org

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What are some of the advantages to using a behavioral viewpoint to change behavior?

One of the most important advantages of using Behavior analysis to change behavior is that all behaviors can be measured before, during and after treatment to verify if the treatment is working. Behaviorists can measure several behaviors, which take place during mealtimes, such as frequency of crying, latency of food consumption after food presentation, meal duration, and frequency of packing (holding food in the mouth without swallowing), expels, or vomiting, among other behaviors. These measurements are an important tool to measure progress.

Behavioral change usually occurs quickly and the effects of treatment are long-lasting. In pediatric feeding in particular, it can be very important to modify behavior quickly. Rapid behavior change can be particularly important in children who are losing weight, are diagnosed as failure to thrive, or may need an ng-tube or g-tube placement, when quick intervention could prevent the tube placement.

Behavior analysis also allows for flexibility in treatment. No two children do the same things during a meal, so it is imperative to be flexible in treatment to create the best possible protocol for each child with the greatest results.

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Miller, R.R. & Matzel, L.D. (1989). Contingency and Relative Associative Strength. In S.B. -15- Klein & R.R. Mowrer (Eds.), *Contemporary learning theory* (pp. 61-84). Hillsdale, NJ: Erlbaum.

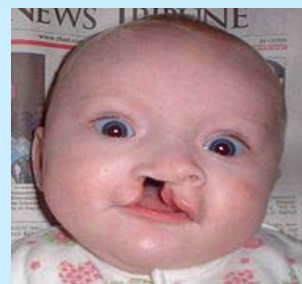
Watson, J.B., (1919). *Psychology: From the Standpoint of a Behaviorist*. Philadelphia: J.B. Lippincott Company.

Free Resource from The Cleft Palate Foundation!

What is it: A new DVD called Feeding Your Baby, is available free to healthcare professionals and hospitals. It is divided into sections and covers information on how to get started feeding your baby with a cleft, detailed instructions on the use of various bottle and nipple systems, frequently asked questions, connecting with a craniofacial team and resources. It is geared toward parents and families. The information is clear, accurate, and the DVD is extremely user friendly. It addresses the psychosocial, practical, and educational aspects of clefts.

Where to Get it: From the Cleft Palate Foundation. Go to www.cleftline.org, call 1-800-24-cleft or 919-933-9044. They are located at 1504 E. Franklin St. suite 102, Chapel hill, NC 27514.

How much does it cost? It's free!!



Picky Eaters? They Get It From You

By [KIM SEVERSON](#)

Published: October 10, 2007,

"From The New York Times on the Web (c) The New York Times Company. Reprinted with Permission."

A WEEK'S worth of dinners for young Fiona Jacobson looks like this: Noodles. Noodles. French fries. Noodles. On the seventh day, the 5-year-old from Forest Hills, Queens might indulge in a piece of pizza crust, with no sauce or cheese.

Over in New Jersey, the Bakers changed their November family vacation to accommodate Sasha, an 11-year-old so averse to fruits and vegetables that the smell of orange juice once made him faint. Instead of flying to Prague, Sasha's parents decided to go to Barcelona, where they hope the food will be more to his liking.

And at the Useloff household, young Ethan's tastes are so narrow that their home in Westfield, N.J., works something like a diner.

"I do the terrible mommy thing and make everyone separate dinners," Jennifer Useloff said.

All three families share a common problem. Their children are not only picky eaters, prone to reject foods they once seemed to love, but they are also neophobic, which means they fear new food.

But for parents who worry that their children will never eat anything but chocolate milk, Gummi [vitamins](#) and the occasional grape, a new study offers some relief. Researchers examined the eating habits of 5,390 pairs of [twins](#) between 8 and 11 years old and found children's aversions to trying new foods are mostly inherited. The message to parents: It's not your cooking, it's your genes.

The study, led by Dr. Lucy Cooke of the department of epidemiology and public health at University College London, was published in the American Journal of Clinical [Nutrition](#) in August. Dr. Cooke and others in the field believe it is the first to use a standard scale to investigate the contribution of [genetics](#) and environment to childhood neophobia.

According to the report, 78 percent is genetic and the other 22 percent environmental.

"People have really dismissed this as an idea because they have been looking at the social associations between parents and their children," Dr. Cooke said. "I came from a position of not wanting to blame parents."

Nutritionists, pediatricians and academic researchers have recently shifted focus to children who eat too much instead of those who eat too little. But cases of [obesity](#) are less frequent than bouts of pickiness.

In some families, communal meals become brutal battlegrounds, if they haven't been altogether abandoned. Cooks break under the weight of devising a thousand variations on macaroni and cheese. Strolls through the farmers' markets are replaced with trudges through the frozen food aisle.

For parents who know that sharing the fruits of the kitchen with family is one of the deep pleasures of cooking, having a child who rejects most food is a unique sort of heartbreak.

Hugh Garvey, an editor at Bon Appétit magazine, knows the heartbreak firsthand. He shares his experience on [gastrokid.com](#), a blog he created with a British pal that details the gastronomic life of families. His daughter, 6, is an omnivore's dream child. But his son, 3, will eat only brown food.

"The way I comfort myself is the way any quasi-sane parent comforts himself," Mr. Garvey said. "It's like potty

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training. Eventually, they're going to graduate from diapers. In the end, he'll eat something green."

Most children eat a wide variety of foods until they are around 2, when they suddenly stop. The phase can last until the child is 4 or 5. It's an evolutionary response, researchers believe. Toddlers' taste buds shut down at about the time they start walking, giving them more control over what they eat**. "If we just went running out of the cave as little cave babies and stuck anything in our mouths, that would have been potentially very dangerous," Dr. Cooke said.



A natural skepticism of new foods is a healthy part of a child's development, said Ellyn Satter, a child nutrition expert whose books, including "Child of Mine: Feeding With Love and Good Sense" (Bull Publishing, 2000), have developed a cult following among parents of picky eaters.

Each child has a unique set of likes and dislikes that Ms. Satter believes are genetically determined. The only way children discover what they are is by putting food in their mouths and taking it out over and over again, she said. "Of course, it's hard when children are just so blasé about food or refuse it, especially for parents who spend a lot of time thinking about it and preparing it," she said.

The genetic link makes sense to Jennifer Useloff, whose son enjoys only variations on the same theme: bread and cheese, with some fruit and the occasional chicken nugget. His younger sister, Samara, isn't as picky but sometimes follows her brother's lead.

Mrs. Useloff, 36, was once a picky eater herself. Although she drank gallons of milk, she couldn't abide raw fruits or vegetables. New foods with strange textures literally frightened her. The aversion lasted until her 20s, when she worked to overcome her fears. Even today, she refuses to buy cucumbers.

"I feel guilty," she said. "I worry that I've done this to them." Even though food neophobia appears to be genetic, doctors say parents of picky eaters can't just surrender and boil another pot of pasta.

"We have to understand that biology is not destiny," said Patricia Pliner, a social [psychology](#) professor at the University of Toronto. "This doesn't necessarily mean there is nothing we can do about the environment."

People who study children prone to flinging themselves on the floor at the mere mention of broccoli agree that calm, repeated exposure to new foods every day for between five days to two weeks is an effective way to overcome a child's fears. (Other strategies for getting children to eat are included in an accompanying article.)

Of course, attempting to introduce the same food week after week can be a Sisyphean task. Some parents just give up. That is more or less what Jessica Seinfeld did. Mrs. Seinfeld, the wife of the actor [Jerry Seinfeld](#) and the mother of three young children, became fed up with trying to get her children to eat fruits and vegetables. The oldest, Sascha,

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who is 6, is so picky she used to dictate what the rest of the family ate.

"It made cooking in my house impossible," Mrs. Seinfeld said. "I was so miserable every night. I felt like a failure as a cook and a failure as a mother."

So Mrs. Seinfeld took an end run around the problem and developed a method of feeding her children that is, essentially, based on lying.

Her new book, "Deceptively Delicious" (Harper Collins), outlines a series of recipes based on fruit and vegetable purées that are blended into food in a way that she says children won't notice. Half a cup of butternut squash disappears into pasta coated with milk and margarine. Pancakes turn pink with beets. Avocado hides in chocolate pudding and spinach in brownies.

"My theory, and my husband will back me up on it, is that all of this food tastes better," she said.

And even though she admits to leaving a box of macaroni and cheese on the counter when she's making the stealth vegetable version, she doesn't think her children will mind when they discover that mom's pulled a fast one.

"My kids now are really starting to get that this is a special way my mom knows how to cook," she said.

Some experts don't buy the method.

"It doesn't strike me as the best strategy," Dr. Pliner said. There is the issue of being found out, at which point a child might not trust new foods the parents present. And hiding foods doesn't help a child learn to appreciate new tastes, she said.

"What we want children to do is like a lot of different foods," she said. "If squash is perfectly disguised, children are not learning anything. Well, they are learning something, but it's not to like squash." If neither repeated introduction nor hiding the vegetables works, and as long as a pediatrician is keeping an eye on the child's health, the experts suggest nothing more than patience.

"Unless it becomes a huge issue, it tends to be a little more fleeting than parents think," said Harriet Worobey, director of the Nutritional Sciences Preschool at [Rutgers University](#). "I know a year can seem like five to parents, but these food jags are normal."

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** Dr. Cooke requested this clarification: "It is not true to say a toddler's taste buds shut down at the time they start walking. It is more accurate to say that they become more conservative, less willing to eat anything. It is not a physiological change but a psychological response."

1. What is food neophobia? (this is not a term clinicians typically use, is it picky eating?)

No, it refers only to the rejection of new or unfamiliar foods. Picky eating is a broader behaviour pattern, although there is currently no accepted definition.

2. Does research indicate that this is a genetic trait? Does it run in families in terms of siblings having the same food preferences? What about parents passing it to their children?

Estimates from our twin analyses indicate that neophobia is approximately 78% heritable, with roughly 22% attributable to environmental factors. This means that the closer people are related genetically, the more alike they will be in their degree of neophobia so identical twins (sharing 100% of their genes) are more alike in this respect than non-identical twins (who share 50% of their genes). Parents may transmit neophobia to their children both via their genes and via their food-related behaviour.

3. As a feeding therapist, I have noticed that most of my picky eaters avoid fruits and vegetables preferring carbohydrates, do we know why?

The evolutionary explanation holds that the predisposition to avoid new foods is protective against the possibility of accidental poisoning. In our caveman days children would have been running around picking berries/leaves off trees and bushes and putting them into their mouths. Plant foods present the most potential danger in terms of the presence of toxins so it makes sense for children to be most wary of these.

4. When does food neophobia typically start? when first foods are introduced around 6 months or later as the child gets older?

Typically around the age of two, remaining fairly stable until around the age of five and then tailing off.

5. Are there indications that these children have other medical issues such as gastroesophageal reflux or allergy?

I don't work at the clinical end of the spectrum, but all children exhibit neophobia to some extent and it does not appear to be associated with other medical problems.

6. Are children who are breast fed less likely to have food neophobia?

Yes, probably, because breast fed babies have been exposed to a variety of flavours via breast milk at a very early age.

7. Do these children typically grow out of it or do they need treatment?

Most children will grow out of it with a bit of encouragement from parents. Some will be wary of new foods for life. Few are a suitable case for actual treatment.

8. In your 2007 article, you mention PROP, can you explain what this is and how it relates to food neophobia?

PROP (6-n-propylthiouracil) is a compound which roughly 25% of the population perceive as very bitter, 45% as slightly bitter and 30% cannot taste it at all. There is some evidence that adults who are PROP tasters particularly dislike cruciferous vegetables as do neophobic individuals, but as yet the link (if any) between PROP taster status and neophobia is unknown. This something we are about to investigate.

9. What about the family environment and food neophobia?

The more foods a child is familiar with, the less neophobia will be an issue. Parents making a wide variety of foods available to their child, eating with their child at mealtimes and showing that they enjoy the foods they want their child to eat will all help.

10. In therapy, we see children who avoid new foods but also children who avoid types of food such as textured foods. Is this also considered food neophobia?

No this is an example of pickiness.

Case by Case: Angela M Haas, MA, CCC-SLP Feeding Disorders Program Specialist, The Children's Hospital Feeding and Swallowing Program, Denver, Colorado

This case presents a patient who was seen in the Gastrointestinal Eosinophilic Diseases Program, a combined program of The Children's Hospital of Denver, National Jewish Medical and Research Center and The University of Colorado School of Medicine. He was evaluated and followed by a multi-disciplinary team comprised of a gastroenterologists, allergists, feeding specialists, dieticians, psychologists, and social workers.



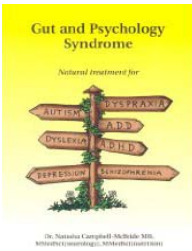
Background: This school age boy presented with the primary complaint of abdominal pain, constipation and esophageal dysphagia, particularly with solid foods. He had previously been diagnosed with Attention Deficit Disorder with Hyperactivity, Obsessive Compulsive Disorder, and sensory processing dysfunction. His parents described him as anxious, with a flat affect and a long-standing history of picky eating and food refusal. This child was home-schooled due to frequent abdominal discomfort resulting in absences from school. Mealtimes in the home were described as a "battle." He also avoided social situations where food or eating was the activity (i.e., school cafeteria, birthday parties.). Endoscopy confirmed the diagnosis of eosinophilic esophagitis, and allergy testing revealed multiple foods allergies. This child was placed on a diet of an elemental formula for 6 months, with no other foods allowed. He was also treated with acid suppression, swallowed topical steroid treatment, and laxative (in addition to medication for ADHD). He was able to meet caloric needs with a flavored elemental formula only, however, only by drinking the formula in small volumes throughout the entire day and into the late evening. He was subsequently retested for food allergies with several foods now safely allowed. Upon introduction, these foods were generally refused, despite the child reporting that he was motivated to eat again.

Treatment: Intensive, daily feeding treatment was established for two weeks with a feeding specialist working in concert with this child's treating allergist, gastroenterologist and dietician. Caregiver teaching was provided to establish a mealtime schedule of predictable mealtimes and snacks at regular intervals throughout the day to limit grazing on formula. Direct therapy sessions were held to introduce systematic desensitization strategies to approach, interact with and eventually eat newly re-introduced foods, as well as model and provide caregiver education to utilize these strategies in the home. Elemental Formula was reduced by 40%. Foods were presented before formula, with all formula presented during a meal or snack time while sitting at the table. Ongoing consultation with a dietician occurred to make adjustments to his elemental formula needs as oral intake increased.

Progress: The intensive treatment schedule was weaned from daily to three times weekly, twice weekly, and then once weekly prior to discharge after 4 months. This child benefited from ongoing therapy with a consistent therapist to develop rapport and trust around mealtimes and eating. This also contributed to an atmosphere which allowed him to use the systematic desensitization treatment strategies effectively. Significantly improved affect and decreased anxiety were noted by all team members. Establishing a mealtime schedule and reducing formula intake supported natural hunger/satiety cues which lead to improved motivation to eat newly re-introduced foods. Ongoing caregiver education was provided which resulted in significantly fewer mealtime "battles." Elemental formula need was reduced by 80% overall at the time of discharge. Occupational therapy with a focus on global sensory processing was also initiated. Follow up at 8 months following treatment revealed that elemental formula could be discontinued, and the patient was able to return to school. Occupational Therapy had been weaned to twice monthly.

What is Eosinophilic Esophagitis (EE)? Eosinophilic Esophagitis (EE) is a disease characterized by inflammation of the esophagus caused by an allergic white blood cell, the eosinophil. Symptoms of EE can range from food refusal, severe heartburn, difficulty swallowing, food impaction in the esophagus, nausea, vomiting, and weight loss. There appears to be some age-related differences in symptoms, with younger children having more symptoms of food refusal, weight loss, and older children and adults having food impaction and difficulty swallowing.

Book Review for *Gut and Psychology Syndrome: Natural Treatment for Dyspraxia, Autism, A.D.D., Dyslexia, A.D.H.D., Depression, and Schizophrenia* by Dr. Natasha Campbell-McBride; Medinform Publishing, U.K., 2004. by Jennifer Minelli M.S. CCC-SLP



Dr. Campbell-McBride is a mother of a child with Autism who found an out-of-the-box cure for her child, which inspired her to help other families. She holds a degree in medicine and postgraduate degrees in Neurology and Nutrition. She runs a clinic in Cambridge, U.K., which specializes in nutrition for children and adults with behavioral and learning disabilities, and nutrition for adults with digestive and immune system disorders.

Dr. Campbell-McBride's book outlines a new, research-based nutritional approach to treating the complicated childhood diagnoses of our time, especially Autism, A.D.D., A.D.H.D., Dyspraxia, and Dyslexia. Although this approach has not yet garnered mainstream support, it offers nutritional solutions that heal the child's whole system, rather than removing foods from a child's diet that their bodies cannot tolerate. Dr. Campbell-McBride posits that "all diseases begin in the gut," and that a properly-functioning gut with healthy gut flora is the root of good health. Conversely, she says that, like a tree with sick roots which cause brown branches, a child with poor gut health will have developmental and neurological sequelae because the rest of the body cannot function without a well-functioning digestive system, also known as the "gut-brain connection." In her book, she uses the term "gut dysbiosis" to describe gastrointestinal symptoms of patients who also have Autism. We know from our practice as feeding therapists that children with Autism, in particular, have very rigid eating habits and limited food repertoires, as well as irregular stooling patterns, poor motility, food allergies and poor gut function.

Dr. Campbell-McBride provides a concise, well-researched overview of gut function and digestion, the roles of both healthy and "opportunistic" (bad) flora, and their impact on the immune system. At the back of the book are 17 pages of single-spaced medical references. Her proposal includes a caution to parents about the culprits that cause damaged gut flora and poor digestive health, including: overuse of antibiotics and other over-the-counter drugs, a diet of processed foods, certain diseases and viral infections, and stress. She also cites the contribution made by air and water pollution and exposure to toxic metals, which can further damage a child's immunity and put stress on the digestive system. Of note is her use of stool pattern analysis in making nutritional recommendations to families.

In her book, Dr. Campbell-McBride offers a three-fold path to healing the gut, which includes:

Diet

Supplementation

Detoxification and lifestyle changes

Diet: In a nutshell, she advocates for a diet rich in meats and fish, eggs, non-starch fresh vegetables, all fruits, nuts and seeds, beans, honey, healthy oils (coconut and flax seed) and fats, and filtered water. Certain kinds of cheeses are GAPS-approved. Milk is eliminated for the first few months, and then slowly reintroduced, based on tolerance. Foods to avoid include all grains and anything made out of them, starchy vegetables, sugar and anything that contains it, starchy beans, lactose and anything that contains it, processed foods, chips, crisps and starchy snacks, and soy. She includes 2 helpful lists, one of recommended foods, and one of foods to avoid, as well as recipes for parents to try.

Supplementation: Dr. Campbell-McBride recommends the following supplementation for GAPS patients: an effective, therapeutic-strength probiotic, essential fatty acids, Vitamin A, digestive enzymes, and vitamin and mineral supplements.

Detoxification means juicing fruits and vegetables to get a high concentration of the right kinds of antioxidants, minerals and vitamins in a small concentrated amount. The pasteurization process that commercially sold juice undergoes destroys the enzymes, and most of the vitamins and phytonutrients that the gut needs. Lifestyle changes

Book Review for *Gut and Psychology Syndrome: Natural Treatment for Dyspraxia, Autism, A.D.D., Dyslexia, A.D.H.D., Depression, and Schizophrenia* by Dr. Natasha Campbell-McBride; Medinform Publishing, U.K., 2004. by Jennifer Minnelli M.S. CCC-SLP

that she recommends include looking at the toxic load of chemicals that your family comes into contact with, including personal care products, cleaning detergents, and heavy metals, and eliminating exposure to them. Parents may ask: how is it possible to change the diet of a child with autism with rigid eating patterns? Dr. Campbell-McBride provides a simple behavioral protocol which can be used to introduce new foods, and gradually eliminate unhealthy foods from a child's diet. Although it is beyond the scope and intention of the book, she does briefly discuss educational management of GAPS children, from the perspective of both a parent and a physician.

Gluten-free, wheat-free, dairy-free diets have been billed as a new fad cure for Autism and A.D.D./A.D.H.D.; however, those diets contain a lot of processed, pasteurized foods and strip the diet of many essential nutrients. As a speech language pathologist who specializes in feeding and a mother of a child on the autism spectrum, I wanted an approach that would incorporate whole, natural foods. Using a modified-GAPS approach with my child, I have seen dramatic improvements in my child's social skills, muscle tone, motor planning, and overall functioning across many settings, as well as stronger immunity against colds and stomach bugs. This book is an excellent read for therapists who want to move beyond treating symptoms in this population. I recommend having this book as another tool in your feeding therapy bag.

To order:
gutandpsychologysyndrome.com

Submitted by Jennifer Minnelli, M.S., CCC-SLP, jminnelliSLP@nc.rr.com

Editorial: The Benefit of Practice

Feeding is a learned behavior. Dr. Peggy Eicher, Medical Director for the Center for Pediatric Feeding and Swallowing, St. Joseph's Children's Hospital, Paterson, NJ, says



“ Skill acquisition = positive practice X rate of maturation.”

What that means for feeding therapists is that we must give our clients a chance to have successful practice over time in order for them to acquire skills. I set all of my feeding therapy patients up with a daily home program. We break down our therapy goals to a level where the child can have success. For some children, this may mean sitting in the high-chair for 2-5 minutes and playing without gagging and tantrumming. For another client, it will be lateral placement of puree ten times each side, three times per day. I ask the parents to practice everyday with the child. The more the child practices, the quicker they learn.

It is difficult for a child to master a new skill in once a week or bi-monthly therapy. The time it takes a child to learn a new skill will be dependent on many factors; gastrointestinal management, consistency of practice, illness, and the skill being worked on to name a few. For example, a child may learn to take a dry spoon fairly quickly while chewing may take months or years to master.

The other important benefit of daily programs is that we are teaching parents and caregivers how to feed their children successfully. This is very important and empowering for caregivers. They need to be able to feed their kids.

So, set up those home programs and let's get everyone practicing these important skills.

On the Research Front:

Cooper-Brown L, Copeland S, Dailey S, Downey D, Petersen MC, Stimson C, Van dyke DC. (2008) Feeding and swallowing dysfunction in genetic syndromes. [Dev Disabil Res Rev. 14\(2\):147-57. PMID: 18646013](#)

Children with genetic syndromes frequently have feeding problems and swallowing dysfunction as a result of the complex interactions between anatomical, medical, physiological, and behavioral factors. This chapter provides an overview of some of the feeding difficulties experienced by some of the more common genetic disorders including identification, interventions, and management.

Altamirano MA, Sood MR. (2008) The nervous system and gastrointestinal function. [Dev Disabil Res Rev. 14\(2\):87-95. PMID: 18646012](#)

The enteric nervous system is an integrative brain with collection of neurons in the gastrointestinal tract which is capable of functioning independently of the central nervous system (CNS). The enteric nervous system modulates motility, secretions, microcirculation, immune and inflammatory responses of the gastrointestinal tract. Dysphagia, feeding intolerance, gastroesophageal reflux, abdominal pain, and constipation are few of the medical problems frequently encountered in children with developmental disabilities. Alteration in bowel motility have been described in most of these disorders and can result from a primary defect in the enteric neurons or central modulation. The development and physiology of the enteric nervous system is discussed along with the basic mechanisms involved in controlling various functions of the gastrointestinal tract. The intestinal motility, neurogastric reflexes, and brain perception of visceral hyperalgesia are also discussed. This will help better understand the pathophysiology of these disorders in children with developmental disabilities.

Clawson B, Selden M, Lacks M, Deaton AV, Hall B, Bach R. (2008) Complex pediatric feeding disorders: Using teleconferencing technology to improve access to a treatment program. [Pediatr Nurs. May-Jun;34\(3\):213-6. PMID: 18649810](#)

Feeding difficulties are increasingly common issues in pediatric care. To provide quality care, video teleconferencing with specialized providers offers outstanding opportunities for comprehensive treatment and communication to enhance long-term outcomes. This article provides results of a teleconferencing pilot project addressing the needs of children with complex feeding disorders referred from locations up to 3,500 miles away. Fifteen patients participated in the 26-month project from September 2002 to October 2004. The impact of the intervention on family satisfaction, costs to family, provider satisfaction, and clinical outcomes is also reported.

Sheppard, JJ. (2008) Using motor learning approaches for treating swallowing and feeding disorders: a review. [Lang Speech Hear Serv Sch. Apr;39\(2\):227-36. PMID: 18420525](#)

Deficiencies in swallowing and feeding may encompass eating, saliva control, swallowing during oral hygiene, and swallowing medications. Motor learning literature provides a rich foundation of evidence-based theory and educational strategies for the development and remediation of motor-based skills such as swallowing and feeding.

Delaney AL, Arvedson JC. (2008) Development of swallowing and feeding: prenatal through first year of life. [Dev Disabil Res Rev. 14\(2\):105-17. PMID: 18646020](#)

The development of feeding and swallowing involves a highly complex set of interactions that begin in embryologic and fetal periods and continue through infancy and early childhood. This article focuses on swallowing and feeding development in infants who are developing normally with a review of some aspects of prenatal development that provide a basis for in utero sucking and swallowing.