Sensory Based Feeding Issues

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What is the Difference Between a Picky Eater And a Resistant/Problem Eater?

Typical Picky Eater

http://www.youtube.com/watch?v=kYw_kVXd12
8&feature=related

Reasons Children Won't Eat

Physical

A. Pain

1. GERD
2. Vomiting
3. Retching/gagging
4. Esophagitis/sore throat
5. Acute illness
6. Colitis/stomach pain
7. Respiratory disease
8. Infectious conditions

B. Malaise/Discomfort

1. Nausea
2. Allergies
3. Cardiac condition
4. Fatigue
5. Constipation
6. Nervous system arousal
7. Stomach distension
8. Congestion
9. Renal conditions

C. Immature Motor, Oral-Motor and/or Swallow Skills

1. Choking/overstuffing
2. Aspiration
3. Cannot breathe
4. Oral hypersensitivity
5. Immature chew and/or tongue coordination
6. Oral processing problems
7. Balance problems/instability
8. Poor hand-to-mouth coordination

Behavioral/Emotional ©Kay A. Toomey, PHD. 1998

A. Child Factors

1. Difficult temperament
2. Highly distractible
3. Low frustration tolerance
4. Neophobic
5. Hyperactive
6. Anxious and/or fearful
7. Depression
8. Lack of responsiveness to internal hunger cues
9. Texture hypersensitivity
10. Oral aversion
11. Information and/or sensory processing problems

B. Parent Factors

1. No positive reinforcement
2. No social modeling of appropriate eating
3. Model poor eating behaviors or personal dislikes
4. Restricts diets due to fears of child getting fat
5. Extreme fears about lack of weight gain
6. Inappropriate developmental expectations
7. Focuses primarily on weight gain vs. interaction
8. Does not set clear limits on child because of fears and/or guild about medical/emotional fragility of the child
9. Inconsistent/non-contingent parenting
10. Punishes child verbally/physically
11. Coerces child
12. Tricks child
13. Distracts child
14. Repetitively interrupts child

C. Environmental Factors

1. Lack of exposure to food
2. Allowed to graze all day
3. No exposure to a "normal" meal
4. Lack of structure to meals
5. Chaotic/distracting household
6. Toys/television/games allowed during meals

FOOD NEOPHOBIA

is an eating disorder sometimes referred to as the "fussy eating" disorder. As the word 'neo', means 'new', and the word 'phobia' means fear, it quite literally means a fear of trying new things. (Wikipedia)

Characteristics of Children with Severe Food Selectivity

- 1. Limited food selection. Total of 10-15 foods or less.
- 2. Limited food groups. Refuses one or more food groups.
- 3. May only eat select brand names.
- 4. Will only eat foods of a select texture, taste or color.
- 5. Eats significant amounts of select foods to maintain weight, however, nutrition is compromised.
- 6. Anxiety and/or tantrums when presented with new foods. Thoughts or smells of non-preferred food result in gagging or vomiting even when the food may not be present.
- 7. Selectivity inhibits the child from participating in social functions such as birthday parties, sleep-overs, family meals, etc.
- 8. Child may be unable to eat preferred food (even when prepared at home) outside of the home.
- 9. Experiencing "food jags". Require one or more foods be present at every meal prepared in the same manner.
- 10. When faced with new food, the child may refrain from eating for a prolonged period of time.

Ernsperger & Stegan-Hanson (2004)
Elliott & Clawson (2009)

"Resistant eaters with sensory-based feeding problems experience difficulty eating because their sensory systems do not support the eating and drinking process....."

Ernsperger & Stegen-Hanson (2004)

Resistant eating for a child with SPD may be caused by any of the following:

1. Sensitivities to smell
2. Sensitivity to taste or texture
3. Poor muscle tone
4. Poor jaw and/or tongue control
5. Decreased oral motor skills
6. Under-responsive or over-responsive to gustatory input
7. Visual processing issues
8. Vestibular processing difficulties
9. Difficulty perceiving and interpreting proprioceptive input
10. Auditory processing issues
11. Swollen tonsils and/or adenoids

Other Reasons Children Have Difficulty Eating (prevalent in children with ASD)

- Compulsivity
- Impulsivity
- Fear of novelty
- Exaggerated sensory responses
- Rigid thinking
- Deficits in social compliance
- Biological food intolerance

(Cumine, Leach & Stevenson, 2000)

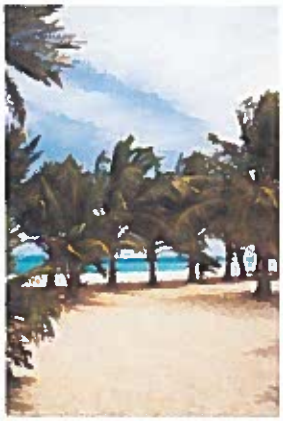
Mealtime Anxiety

http://www.youtube.com/watch?v=NYwncU3w5LY&feature=related

- **Anyone here a picky eater?**
- Who would like to try a delicacy from my backyard that is nutritious and flavorful?

How can I get you to eat worms and learn to like them?

Scenario 1



- You are marooned on a small desert island
- Fresh water available at all times
- No "normal" food but worms are plentiful
- No rescue for three months

Scenario 1

You would most likely:

Not eat the worms the first day

Feel very anxious when tasting your first worm

Over time, learn to like them and develop favorite worm species and recipes

Scenario 2

Same desert island as in Scenario 1 with plentiful worms

A magic food tree produces your favorite food once per day at 12:00 Noon

But, the amount it produces is only 50% of your daily calorie needs

Scenario 2

- You would most likely:
- Learn to ration the food during the day
- Conserve energy
- Lose weight slowly for three months
- **But never eat worms**

And the moral of the story is:

- If we have a fear of a food we will only eat it if:
- **We are extremely hungry**
- **We are convinced that no other food is or will be available**
- **Access to favorite foods, even though insufficient in total calories will negate willingness to try new foods**

Do children with ASD have more feeding problems?

- Study included 472 children aged 7-9.5 yrs.
- 298 without autism; 138 with autism
- Children with autism diagnosed both by a professional and cutoff score on GARS
- No significant differences in weight, height, or age
- More medical problems among children with autism (seizure disorders, GERD, lactose intolerance, OCD, anxiety problems, constipation, and diarrhea)

A Look at Diet

Foods eaten as reported by caregivers on the Food Preference Inventory

Foods eaten	With ASD	Without ASD
Fruits	8.09	15.75
Dairy	4.32	8.07
Vegetables	4.00	8.23
Proteins	7.82	14.24
Starches	15.82	24.08

Why do children with ASD have such limited diets?

- The severity of autism is not related to the degree of food selectivity.
- Food selectivity in the children affects variety in parents....children do not eat what their parents serve, parents serve what their children eat. Most parents expose their children to a food less than 5 times but children need exposure at least 10-15 times to develop a taste preference.
- Sensory imprinting; early sensory exposure contributes to flavor preferences later in life.
- Children with ASD tend to imitate less social behavior making it less likely they will be exposed to novel food.
- Most children reject novel foods based upon appearance, not taste, with children making inferences about how novel foods will taste...children with ASD may be less able to make this type of inference.
- There is currently no evidence that children with ASD are hypersensitive to taste.
- There is also no evidence that children are "driven" to eat certain foods that contain gluten or casein.

How do children decide which foods to taste?

- New foods are tasted based upon modeling, either by peers or parents.
- New foods may be tasted based upon information about the food, such as how it tastes similar to a preferred food.
- New foods may be tasted because they are available and other foods are not.
- For some children, new foods are tasted due to the health benefits or perceived health benefits.
- Most significantly, new foods are tasted based upon how they look.

The Sequential Oral Sensory (SOS) Approach

The SOS approach is a developmental feeding therapy that allows children to interact with food in a playful, non-stressful way. It helps increase children's comfort level by exploring different properties of foods, including the color, shape, texture, smell, taste and consistency. The SOS approach follows a systematic hierarchy to feeding from tolerating foods in the room, interacting with foods, smelling, touching, tasting and eventually eating the food. It can be used in individual sessions as well as with small groups of 3-4 children.

The Top Ten Myths of Mealtime in America

1. Eating is instinctive.
2. Eating is easy.
3. Eating is a two-step process: 1) You sit down 2) You eat.
4. If a child is hungry enough, he/she will eat. Kids won't starve themselves.
5. Kids only need to eat three times a day.
6. It is inappropriate to touch and play with your food.
7. Mealtimes are a solemn occasion. Children should be seen and not heard.
8. When kids don't eat, they have EITHER a behavioral or an organic problem.
9. Certain foods are eaten only at certain mealtimes (i.e. breakfast foods for breakfast, lunch foods for lunch, etc.)
10. "Junk foods" are ALWAYS a bad thing.

Myth #1: Eating is instinctive.

Why it's False

Eating is only instinctive for the first month of life. After your 5th month of life, primitive reflexes drop out and eating becomes solely a learned behavior.

Learning about food happens through two main ways:

1. When a connection is made in time between one natural event, behavior, or object (stimulus) and another neutral stimulus.
2. Learning through reinforcement and punishment.

- Eating →praise (positive reinforcement) → more eating
- Refusing to eat →lots of attention & interaction (positive reinforcement) → more refusal
- Eating →choking & fear (punishment) →less eating
- Eating → being yelled at (punishment) → less eating

Myth #2: Eating is Easy.

Why it's False

Eating is the most complex motor and sensory behavior that children have to do. It takes almost every muscle of the body and simultaneous coordination of our sensory systems to eat.

8 Senses

- Sight/Visual
- Hearing/Auditory
- Taste/Gustatory
- Touch/Tactile
- Smell/Olfactory
- Proprioceptive (the input from joints & muscles)
- Vestibular (inner ear/balance)
- Kinesthetic (awareness of the space you are in OR the awareness of where something is in your mouth)

Myth #3: Eating is a two-step process.

Why it's False

There are actually 5 major "steps to eating" and each major step is composed of several sub-steps.

1. The child is able to TOLERATE THE PHYSICAL PRESENCE/SIGHT OF THE FOOD (i.e. will be in the same room or at the same table as the food.
2. The child is able to INTERACT WITH THE FOOD (i.e. uses a napkin or other food to touch the target food.
3. The child is able to TOLERATE THE SMELL OR ODOR OF THE FOOD.
4. The child is able to TOUCH THE FOOD TO HIS/HER SKIN (i.e. tolerates the food touching a body part, including fingers, hand, face – the closer the physical proximity to the mouth, the more threatening.
5. The child is able to TASTE THE FOOD (i.e. **any** action which results in the child getting a taste of the food.

Myth #4: If the child is hungry enough, he/she will eat. Kids won't starve themselves.

Why it's False

For children with feeding problems, eating is not a fun experience and can often be a painful experience. Children are organized simply: if it hurts, don't do it. Therefore, kids with feeding difficulties often learn to shut off their appetite recognition

Myth #5: Kids only need to eat three times a day.

Why it's False

In order to meet their daily calorie requirements, kids would have to eat almost an adult-size meal if they only eat three times per day. Given their small stomachs, it often takes them six small meals a day to eat enough calories for proper growth and development.

Myth #6: It is not appropriate to touch and play with your food.

Why it's False

Wearing your food is part of the normal process of learning to eat. You can learn a lot about foods and what they will do in your mouth by touching them first. It is play with a purpose.

Myth #7: Mealtimes are a solemn occasion. Children should be seen and not heard.

Why it's False

Kids eat better when meals are fun and when dinnertime conversation is focused on food.

Create a situation which positively reinforces normal, healthy eating patterns. There are five main categories of strategies:

1. Structure
2. Social Modeling
3. Positive Reinforcement
4. Making foods manageable
5. Accessing cognitive skills

Myth #8: When kids don't eat, they have EITHER a behavioral OR an organic problem.

Why it's False

97% of the feeding problems we see are due to a combination of physical and behavioral issues.

Myth #9: Certain foods are eaten only at certain mealtimes

Why it's False

Often times we tend to classify foods by the time of the day some people tend to eat them. Instead, it is more important to create balanced meals with a food from each of the following food groups: protein, starch, and a fruit/vegetable. Each time a child sits down to eat, they need one food from each of these group, regardless of what time of the day or which meal it is.

Myth #10: "Junk foods" are ALWAYS a bad thing.

Why it's False

"Junk foods" often play an important role in helping children with feeding problems to eat. "Junk food" manufacturers are very smart. They make foods that have high flavor appeal and/or are easy to manage from an oral-motor standpoint.

Cues to Eating

TIME	>day, night, noon
ROOM	>which room
	>familiarity
	>location in school or home
FURNITURE	>arrangement of furniture in room
	>location of child's seat
	>location of others at the table
PEOPLE	>number of people
	>who is present
UTENSILS	>dishes
	>silverware, serving ware
FOOD	>texture, consistency
	>temperature
	>color
	>size, shape
	>type
	>odor

Steps to Eating

TOLERATE

- Being in the same room
- Being at the table with the food on the other side of the table
- Being at the table with the food ½ way across the table
- Being at the table with the food approximately in front of the child
- Looks at food when directly in front of child

INTERACTS WITH

- Uses utensils or a container to stir or pour food/drink
- Uses utensils or container to serve self
- Assists in preparation/set up with food

SMELLS

- Odor in room
- Odor at table
- Odor directly in front of child
- Leans down or picks up to smell

Playing in Ketchup Video

://www.youtube.com/watch?v=4AF0fpvqRko&feature=related

TOUCH

- Fingertips, fingerpads
- Whole hand
- Chest, shoulder
- Top of head
- Chin, cheek
- Nose, underneath nose
- Lips
- Teeth
- Tip of tongue, full tongue

TASTE

- Licks lips, tongue licks food
- Bites of piece and spits out
- Bites pieces, holds in mouth for "x" seconds and spits out
- Bites, chews "x" times and spits out
- Chews, partially swallows
- Chews, swallows with drink
- Chews and swallows independently

Feeding Therapy Video

http://www.youtube.com/watch?v=5yrmHVxT998&feature=related

Key Phrases for Creating a Positive Feeding Experience

"YOU CAN": replace as many of your questions with "YOU CAN" vs "can you?"

1. The "you can" phrase implies confidence that the child can do the task being show them; it avoids the power struggle you set yourself up for by asking a question.
2. If the child replies with, "No, I can't", you can just say "When you are ready, you can!" And avoid that power struggle all together.
3. Talk about others - "Joey can (action)" or "We can (action)".
4. Ask ONLY choice questions - "Do you want A or B?" and ONLY when the child is not already eating.
5. REMEMBER - If NO is not an acceptable answer, don't ask it as a question!

Neutral or Positive Educational Language: use language that is focused on teaching the child about the sensory properties of the food, the mechanics of how the food breaks apart/moves AND how this food is similar to a known food.

1. Give the food a name and describe what it looks like (color, shape, size, texture)
2. Teach the "Physics of Food" - explore with hands and eyes. We want the children to understand as much about the food as possible and what is going to happen to the food once it gets into the mouth, BEFORE it gets in the child's mouth.
3. If it is too threatening to talk about the child's food, talk about your food. Manipulate your food with your hands and mouth. Teaching the child to eat is a Show & Tell exercise.
4. If the child is struggling with food (sensory or oral-motor wise), show them and tell them exactly how to manage the food - "You look worried about the food. If it is making you worried, you can movie it up here; you can cover it up". "See how I can take a bite of my chip and move my tongue sideways to put it on my molars so I can chew & swallow".

"DO" Language vs. "DON'T" Language – use language that is rule based and helps the child understand the exact, correct behavior you expect. "Do language" tells the child the rule rather than saying "stop", "don't" or "no". It also then gives the appropriate behavior in specific terms.

1. Instead of "stop throwing" say "food stays on the table" OR "if you don't want it, put it up here".
2. Instead of "sit down!" say "chairs are for sitting, not standing" OR "we sit on our bottoms in the chair".
3. Instead of "stop screaming" say "we need to use an inside voice" OR "if something is upsetting you, you can use your words in an inside voice".
4. Instead of "don't spill that drink" say "cups are for drinking" OR "if you are going to spill, the cup will go over here until you are ready to take a drink".

Food Jags

Preventing Food Jags:

1. Offer any particular food no more than every other day.
2. If the child cannot wait to have a given food every other day, then change one thing about the shape, color, taste or texture of the food every time you serve it.

   Changing Shape: Cut the food into different forms than it is usually presented. A good way to do this is with cookie cutters.

   Changing Color: Add different shades of food coloring to favorite foods.

   Changing Taste: Add a new flavoring to the food. Our suggestions include adding different spices, condiments, cheeses, flavored syrups, etc.

   Changing Texture: With eggs, you could make scrambled, fried, poached or an omelet.

The goal is to change the food enough that there is **just a noticeable difference** so the child notices but it doesn't cause him/her to have a major meltdown. If the child reacts with a tantrum, you've changed the food too much. Simply change the food a little less and re-offer.

Examples of Food Continuums (SOS Approach)

- Slim Jim
- Pretzel Rod
- Circular Pretzel
- Pepperoni Slice
- Ritz Cracker
- Saltine Cracker
- Bread Slice
- Milk
- Cheese Pringles
- Orange Fruit Loops
- Orange Lifesaver Gummies
- Orange Pudding
- Cheese (cut in circles)'
- Carrot chips
- Turkey (cut in circles)
- Apple rings (soak in 7-UP to keep from getting brown)
- Lemon licorice
- Apple Juice (use licorice as straw)

Examples of Food Chains (Food Chaining Approach)

- Kraft Macaroni & Cheese
- Kraft Macaroni & Cheese (cut into smaller pieces)
- Variety of pasta noodles (elbow, shells, spiral, etc.) prepared with Kraft Macaroni & Cheese powder
- Other brands of boxed Macaroni & Cheese (Velveeta, Great Value, etc.)
- Homemade macaroni & cheese prepared with Velveeta cheese
- Accepted pasta noodles with other sauces (alfredo, marinara, etc.)

- McDonald's chicken nuggets
- Different brands of chicken nuggets
- Nuggets with varied batters (lightly battered, heavily battered, cheese blended into batter, etc.)
- Chicken strips
- Other breaded meats (popcorn shrimp, fish nuggets, etc.
- Breaded vegetables or cheese

Other Intervention Strategies

- Mix new food into preferred food
- Combine preferred and new food in novel way
- Flavor conditioning/Food masking
- Plate A – Plate B
- Escape Extinction
- Token Economy
- Positive Reinforcement
- Mealtime Social Stories
- First – Then

**Never feed from the original containers
Rotate through cups, plates & utensils
Vary Feeders

Group Therapy Session

http://www.youtube.com/watch?v=CEkL135ak2w&feature=related

Mealtime Reward

http://www.youtube.com/watch?v=pOAivs58SOU&feature=BFa&list=PL3ACDE7BB2C79C619

Resources

Elliott, C & Clawson, E (2009). *Mealtime Miseries: Management of Complex Feeding Disorders.* (Workshop Notes)

Ernsperger, L & Stegen-Hanson, T. Just Take A Bite: Easy, Effective Answers to Food Aversions and Eating Challenges.

Fraker, C; Fishbein, M; Cox, S; Walbert, L. Food Chaining.

Linscheid, T. *Picky Eating in Children with Autism and How to Treat It.* (Workshop Notes)

Picky Eaters and Resistant Eaters. (The SPD Companion, Issue #015)

Toomey, K (2001). *When Children Won't Eat: Understanding the "Whys" and How to Help using the SOS Approach to Feeding.* (Workshop Notes)

Williams, K. *Eating Problems in Autism Spectrum Disorders: What They Are and What to Do. (Workshop Notes)*