Pediatric Feeding Therapy: It’s all fun and games until it’s time to eat

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Oral Reflexes

Primitive Reflexes

A. Definition: Any of a group of reflexes seen during gestation and infancy that typically become integrated by an early age (most by 6 months)
   1. Innervated by the brainstem
   2. Used to identify if function is going to be intact, strength of responses and potential for feeding difficulties

B. Types
   1. Gag: typically present at 32 weeks gestation but can be seen as early as 26-27 weeks gestation
      a. Can be a transient response so should be checked regularly on children who may have neurological involvement
      b. The ONLY one of the responses that remains into adulthood
   2. Rooting: should be present at 37 weeks gestation
      a. A baby will turn head toward “food source” when touched on that side of face, lips, or cheek.
      b. Babies can distinguish if source is on left or right.
      c. Typically elicited when hungry or held in feeding position
      d. Will attempt to suckle with head turn

C. Fading
   1. As a child grows and matures, reflexive responses diminish and then extinguish with the exception of gag and swallow which remain intact into adulthood
   2. Phasic bite: disappears around 9-12 months
   3. Rooting: disappears around 3 months
   4. Suckling begins to diminish around 3 months and disappears around 6 months
   5. Transverse tongue: disappears between 6-9 months

3. Transverse Tongue: present at 26 weeks gestation
   a. A response present in all babies regardless of neurological status
   b. elicited by providing pressure touch on lateral side of tongue (tongue will point to stimulus)
   c. this reflex is NOT used to establish functional bottling skills

4. Phasic bite: should be present at 37 weeks gestation and is elicited when pressure is put on the gums

5. Suck: non-nutritive should be present at 37 weeks gestation, could be seen as early as 17 weeks gestation

6. Swallowing: usually present at 29 weeks gestation
   - ability to suck/swallow/breathe present at about 34 weeks
**Oral Motor Assessment**

**Oral Structures and Function**

**A. Cheeks/Lips**

1. **Observation**
   - a. Open Mouth Posture At Rest (OMPAR)
   - b. Try it
   - c. Mouth breathing
   - d. Drooling
   - e. Retracted
   - f. Cleft (type, repaired vs unrepaired)

2. **Function**
   - a. Pursing/Kissing
   - b. Retracting
   - c. Resist passive opening
   - d. Puttng air in cheeks
   - e. Rooting (if age appropriate)
   - f. Sensitivity (external vs internal, hypo vs hyper)

**B. Palate**

1. **Observation**
   - a. Elevation
   - b. Symmetry
   - c. OMPAR
   - d. Range

2. **Function**
   - a. Strength (resist opening/closing/removal)
   - b. Isolate side to side movement
   - c. Bite (phasic, tonic)
   - d. Chewing (during feeding portion of eval)

3. **Impact**
   - Once a baby has volitional control over sucking you may not be able to introduce it as a functional feeding skill. At that point it may be necessary to skip bottle and move to spoon feeding and/or open cup drinking.
   - It is possible to be an oral feeder without all of the oral reflexes.

**C. Jaw**

1. **Observation**
   - a. Position/Size (retracted or protruding)
   - b. Symmetry
   - c. OMPAR
   - d. Range

2. **Function**
   - a. Strength (resist opening/closing/removal)
   - b. Isolate side to side movement
   - c. Bite (phasic, tonic)
   - d. Chewing (during feeding portion of eval)

**D. Palate**

1. **Observation**
   - a. Breathing/snorring
   - b. OMPAR
   - c. High Arch or Vaulted
   - d. Cleft (type and repaired vs unrepaired)
   - e. Uvula and tonsils

2. **Function**
   - a. Elevation
   - b. Nasality
   - c. Nasopharyngeal reflex (clinically or via VFS)
   - d. Sensitivity (hypo vs hyper)
   - e. Non-nutritive suck (thumb, finger(s), pacifier)

**Feeding Reflexes**

**I. Instinctive**
   - an automatic unlearned reaction to a stimulus
   - present during the first month of life only

**II. Reflexive**
   - a. simple response to a specific stimulus
   - b. Present during months 1 to 3-5

**III. Volitional**
   - a. Where many feeding problems begin
   - b. Babies can choose not to eat
   - c. Evident especially with any medical issues (i.e. GER, food intolerances, allergies, etc)
   - d. Begins at 3-5 months
E. Teeth
1. Observation
   a. Eruption Status (child vs adult, ease of eruption)
   b. Bite (over, under, open, cross)
   c. Cleanliness (smell of breath, visual caries)
   d. Cariogenic Risk Assesment
   e. Bruxism
2. Function
   a. Bite
   b. Chewing pattern (i.e. suckle, munch, rotary, mixed)
   c. Non-nutritive suck (thumb, finger(s), pacifier)

Clinical Feeding Assessment

I. Current Feeding Status
A. Oral Feedings
1. Liquids
   a. Breastmilk
      i. Fortified
   ii. Maternal dietary modifications
b. Formula
   i. Standard
   ii. Soy
   iii. Semi Elemental
   iv. Elemental
   v. Pediatric
   vi. Adult
   vii. Standard recipe vs fortified

2. Solids
a. Type
   i. Smooth puree
   ii. Textured puree
   iii. Mixed puree
   iv. Dissolvable solid
   v. Soft solid
   vi. Hard solid
   vii. Chewy solid
b. Preferences
   i. Taste
   ii. Temperature
   iii. Timing of preferences
   iv. Tools

B. Non-Oral Feeding
1. Type
   a. Oral gavage
   b. Gastrostomy (Gt)
   c. Nasojejunal (Nd)
   d. Nasojejunal (NN)
   e. Gastrostomy(GT)
   f. Gastro-jejunal (GJ)
   g. Total Parenteral Nutrition (TPN)

2. History
   a. When
   b. Why

3. Who
   a. Physicians/specialists
   b. Therapists

About the Author

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4. Formula
   a. Infant
   b. Pediatric
   c. Blenderized

5. Schedule: MUST be addressed in order to assure appropriate hunger cuesing
   a. Bilious
   b. Continuous Drip
   c. Oral

C. Importance
   1. Tactile: the skin on the body is essentially the same as the skin in your mouth. If you have difficulty tolerating touch and textures on your body you will have difficulty tolerating them in your mouth.
   2. Modulation: a child of any age must be in tune and comfortable with their surroundings in order to be able to calm, center and focus on the difficult task of eating.

D. Specific Sense Issues
   1. Deficits: lack of one particular sense (i.e. vision) makes the other senses work harder to provide input regarding the situation
   2. Hyper acuity: excessive sensation in one area will cause an overreaction to the situation making calming and focusing a challenge.

II. Sensory Function: the ability to detect any information from our senses including: hearing, vision, taste, smell, and touch
   A. Occupational Therapy: ideally evaluated by an OTR/L who is trained in sensory integration therapy
   B. Speech Language Pathology: watch for RED FLAGS of hyper or hypo sensitivities in the following areas:
      - TACTILE
      - OLFACTORY
      - MOVEMENT
      - VISUAL
      - AUDITORY
      - GUSTATORY (taste)

E. Evaluation/Screening
   1. Environment
      a. Touch
      b. Sight
      c. Sounds
   2. Clothing
   3. Foods
      a. Touch
      b. Sight
      c. Sounds
   F. Treatment
      1. Refer to OT
      2. Implement: always try to incorporate as many senses as you can during your own treatment sessions and home recommendations

III. Motor Development: defined as the "growth of muscle coordination in a child"*
   *The American Heritage® New
A. Muscle Tone: high, low, mixed
B. Facial Tone: high, low, mixed
C. Motor Function
D. Developmental Skills
   1. Proximal to distal (Gross motor to fine motor)
      a. Skills develop from center outward
      b. Trunk and head stability
      c. Chewing is a FINE MOTOR skill
   2. Positioning
      a. Head and trunk support
      b. Only work on feeding while eating
   3. Try It

Pulling it all together
Meeting your new friend
Referral
- Physician, parent/caregiver, family, teacher, friend, etc.

What brings you here today?
- Differentiate between parental concern vs. outside pressure/concern
- Variety, nutrition, functional issues, medical

Medical History
- Pregnancy and birth history, food allergies/sensitivities, growth patterns, developmental milestones, medications, medical diagnosis/syndromes, GERD, dysphagia, airway issues

Feeding Observation
- Parent to feed/allow child to self feed, bring food from home both favorites and challenging foods, seating needs (i.e. high chair, booster, bouncy seat, lap, etc.), support needs (i.e. reclining, side support, dycem, etc.)
- Oral motor structures and function (slides 9-13)
- Foods presented and accepted
- Swallowing evaluation/aspiration
  - Can include cervical auscultation as able/appropriate

Assessment and Recommendations
- Written and verbal
- Realistic and achievable recommendations for parent/caregivers
- Additional testing
- Medications
- Tools, seating, equipment needs
- Treatment and/or home programming
- Follow up needs and contact information for questions

Goal of evaluation/treatment
- G-tube wean, increase variety, increase weight gain, eat what family is eating, social acceptance, etc.

Feeding History
- Bottle/breast history, aspiration, transition to purees/table foods, current preferences, previous food jags, food checklist

Current feeding status (slides 14-19)
- Sensory Function (slides 20-22)
- Motor Development (slide 23)
- Oral Motor Assessment (slides 9-13) as able/appropriate

Feeding Intervention
- Therapist led with guided parent/caregiver interaction
- Food manipulation and exploration
- Trial of modified diet (i.e. thickened liquid, chopping, blenderizing, etc.)
- Behavioral modifications
- Food chaining: a technique used with a sensory and behavioral approach to feeding that is based on the relationship between food/liquids in regards to taste, temperature, and texture that reduces the risk of food refusal because it is based on the child’s preferences. Developed by Cheri Frisker, MS, CLC, CCC-SLP and Laura Walbert, MS, CLC, CCC-SLP
- Determine starting point for ongoing treatment

Treatment Time
Let’s get this party started!
Who do we treat?

- We treat any child whose oral motor and/or feeding skills:
  - has a negative impact upon themselves and/or their family
  - may be affecting their growth and overall nutrition
  - is judged to be socially and/or developmentally inappropriate and in turn impacts their acceptance among peers

Dysphagia

- Diagnosis
  - Clinical Feeding Evaluation
    - Bolus management and manipulation, signs and symptoms of aspiration, changes in respiratory status/airway issues
  - Cervical Auscultation
    - Increase in wetness especially on exhalation, coordination of breathing and swallowing
  - Videofluoroscopic Swallow Study (VFS, VFSS, MBS)
    - NOT an Upper GI, NOT an esophagram, NOT a test for reflux

Oral Motor

- Diagnosis
  - Oral Mechanism Evaluation
    - Range, strength, structural anomalies, issues with dentition, etc.
  - Clinical Feeding Evaluation
    - Bolus manipulation and management, developmental abilities/level
  - Speech/Articulation Evaluation/Screening
    - Lisp, class of sound errors
  - Observation especially at rest
    - Retracted upper lip, mouth open at rest, tongue beyond lower labial border, open bite, drooling, etc.

How do we choose the type of treatment?

- Differentiate the origin of the feeding problem
  - Dysphagia: difficulty swallowing or difficulty moving food from mouth to stomach
  - Oral Motor Disorder/Dysfunction: the inability to use the oral mechanism for functional speech or feeding, including chewing, blowing, or making specific sounds
  - Sensory Processing Disorder: a neurological disorder causing difficulties with taking in, processing, and responding to sensory information about the environment and from within one's own body (visual, auditory, tactile, olfaction, gustatory, vestibular, and proprioception)

Treatment

- Diet modification
  - Mechanical soft, puree, honey thick, nectar thick, etc.
  - VitalStim
    - www.vitalstim.com
  - Compensatory Strategies
    - Chin tuck, positioning changes, thermal changes, etc.
- Equipment
  - Nipple changes, sippy cups, cut out cups, etc.
  - Food Chaining
    - Thickened by spoon to thickened by bottle or cup, etc.

- Treatment: Should be functional to address specific issues as they relate to speech and feeding (e.g. desensitizing, increase awareness, etc.). The goal should be what’s next not what didn’t they do.
  - Facial Stretches
  - Cheeks and upper lip (!)
    - Inter-oral Stimulation
  - Cheek, cheek, tongue, top
    - Visual and Proprioceptive Feedback
  - Mirror, washcloth, vibration
    - Equipment
  - Gloved finger, Infadent, Nuk brush, toy, spoon, medicine pacifier 🍼, oral syringe 🍼, “Boon” 🍼
  - Food Chaining
**Sensory Processing Disorder**

- **Diagnosis** (formal diagnosis must be made by a qualified Occupational Therapist)
  - Clinical Feeding Evaluation slides 24-29
    - When assessed by SLP watch for RED FLAGS of hyper or hypo sensitivities in the following areas (slides 20-22)
      - TACTILE
      - OLFACTORY
      - MOVEMENT
      - VISUAL
      - AUDITORY
      - GUSTATORY (taste)

**Treatment cont.**

- Gustatory input
  - Increase flavor, use child’s preferred taste categories (sweet, salty, spicy, sour, bitter)
- Auditory input
  - Music, ability to manage multiple/distracting sounds, prepare food outside the room so can’t hear blender, microwave, etc.
- Olfactory input
  - Prepare food outside of room, have child smell before eating to talk about food and desensitize to it, scent play
- Visual input
  - Do or don’t prepare food in front of child (start with what’s preferred), use preferred bowl/spoon/cup, TV/iPad
- Food Chaining

**Where do we start?**

- **Developmental**
  - Where is the child in terms of developmental skills?
    - Feeding/eating/oral motor is a fine motor skill and they need core stability before they can master more advanced foods.
    - The ONLY thing the child should be working on is eating so keep them well supported in their seating apparatus.

- **Sensory**
  - What are the sensory components that are challenging, especially as they relate to feeding.
    - If they cannot tolerate touching a food, for example, they will not put it in their mouth
    - If they are sensitive to their environment without food, adding the challenge of food will make it worse

**What are the family and child’s goals?**

- Oral motor vs feeding
- Eat what the family is eating
- Eat outside the home (friend, family, restaurant)
- Expand variety
- Social acceptance (birthday parties, friends, school lunches, etc.)
- Improve nutritional status
- Do NOT assume anything
  - Our role is not to push our agenda on a family but to guide them toward achieving the best outcome for the child and their family.

**What does the child currently eat?**

- Make a list, what do they eat at a restaurant or if out of the house, is it a specific taste/texture/brand/color/temperature

**What foods have been tried? When?**

- What did they try, how often was it tried, what was the reaction when it was tried, when was the last time they were challenged

**What foods have been previously accepted and dropped? Why? When?**

- Is it a food jag, was it dropped altogether or replaced with a different food, can you correlate a stressor/factor in the dropping of the food

**Treatment** (formal treatment must be done by OTR/L who is trained in SLP)

- Tactile input
  - Lotion massage prior to working on face/mouth, begin at feet and work toward mouth

- Proprioceptive input
  - Swinging, bouncing, carrying/pushing/pulling heavy objects, joint compressions, foot stability, seating stability/developmentally appropriate seating (they should NOT work on sitting while also working on eating), “Bumbo Chair”
What is the treatment plan?

- Pick a modification
  - Taste, texture, temperature, color, brand, etc
  - Take small steps and make the changes at a time that least impacts the family (e.g. breakfast/lunch/dinner/snack)

- Create a rating scale
  - Older kids: thumbs up/thumbs down, number scale
  - Younger kids: smiley face/frown face, observe changes in behavior/responses
  - “The Food-Chaining Rating Scale” by Cheri Fraker, CCC-SLP et al.

What techniques can we use during treatment?

- Children’s Hospitals and Clinics Feeding Clinic Food Picnic
  1. Discuss the plan with the child:
     - “We are going to have a picnic. Some foods will be your favorite foods and we know those are easy. Some foods are new and different foods and we know those are tricky. You need to know that you do NOT have to eat the tricky foods today, we are just going to talk about them.”
  2. Choose the foods
     - Be sure there is all different textures, we always have a puree, a dry solid, a wet/chewy solid and a liquid
     - “Did you bring any food with you today or would you like to see what we have?”

6. Clean up
   - Use your fingers to clean/scrape plates and bowls as another good “screening” for sensory issues

- “All-done Spot”
  - Choose an age appropriate place to put the food when the child is done or cannot tolerate the activity/food. This prevents throwing, spitting, dropping, feeding to the dog, etc

- Alternating bites
  - This will vary depending on age of child
  - Use favorite/preferred foods as one of the choices
  - Can be one new to one preferred, could be a few new going to preferred with signs of distress, could be 5 new followed by 5 preferred, could be finish this then get preferred, etc

Establish a behavior plan/contract

- Reward for completing challenge (e.g. reading a book, alone time with parent, ending the meal, earning points toward a larger reward, etc)
- Consequence for not completing (e.g. session ends, loss of privilege, not getting reward, etc)

Pick a target food

- Start with what is the goal
  - Based on their core diet what foods can be the most easily modified
  - What modifications and new foods will have the biggest impact on overall nutrition
  - How can we expand the overall diet

3. Pass out the food
   - Have all “picnic goers” wash their hands
   - Have child pass out the food to each person with their fingers
   - Have all “picnic goers” wash their hands
   - Each “picnic goer” gets a turn to decide a food and what we get at least 3 turns.
   - “mine tasted sweet and a little bit chewy, what do you think?”

4. Kiss/Lick/Bite/Eat
   - Child gets to choose if for each food they want to kiss it, lick it, bite it and put it in the all done bowl or eat it
   - Each “picnic goer” gets a turn to decide a food and what we do with it. Typically we go around in the circle so each person gets at least 3 turns.

5. Talk about the food
   - Discuss the qualities of the food and ask them to rate it (thumbs up/down, yummy or yucky)
   - Discuss the sensory qualities of the food
     - “taste tasted sweet and a little bit chewy, what do you think?”

Talk about the food

- Become a “food scientist” and discuss the properties of the food such as taste, texture, smell
- Use descriptive words (e.g., sticky, salty, sour, crunchy, squishy, etc.)
- Compare and contrast foods (e.g., color, packaging, texture, form)

Help with shopping/cooking/cleanup

- Have family pick what’s for dinner/snack and the ingredients needed to make it
- Allow child to help with gathering, measuring, stirring, cooking, serving, etc.
- Encourage child to help scrape the plates, put food into storage containers, wipe table, wash dishes/load dishwasher, etc.
My two most very favorite…

1. ‘Block program’ (by J. Joan Shepard)
   - Concrete way for child to understand the beginning and end of the expectation
   - Pick the activity (oral stim, tasting, eating, drinking, etc.), pick the number of repetitions (what is used and how
     many will vary based on age of child, use how old they are as a starting point), pick the throw away item and
     container (e.g. blocks, sorting bears, stickers, potato head pieces, etc)
   - Idea behind it is you don’t necessarily have to like to eat but you must do it to stay healthy... all challenging
     activities are easier when you know when it will end
   - Stick to your word no matter what so start reasonable and successful

Flavors
   - Does the child prefer bland or strong?
   - Are there patterns in the preferred flavors?
   - (sweet, salty, sour, spicy, bitter)
   - Is there a flavor that can be used to make another food more appealing?
     - For example:
       - Sweet: ketchup, sugar, syrup, kool aid powder, jelly, sweet
         and sour sauce, ice cream toppings, etc
       - Salty: salt, herbs, ranch dressing, etc
       - Sour: lemons/limes, undiluted juice concentrates, pickles
       - Spicy: barbeque sauce, salsa, tobasco sauce, pepper, herbs
       - Bitter: plain yogurt, unsweetened baker’s cocoa, dark
         chocolate

Extreme Selectivity
   - Does the child have a diet limited to 5-10 or less
     core foods?
   - Do they only eat food of a certain color or brand?
   - Is there a commonality that can be used to make other foods more appealing?
     - For example: change the color but keep the
       same food (food coloring, kool aid powder, etc),
       change the brand by starting with not letting
       child see package preferred food comes from,
       altered preferred food appearance to gradually
       introduce new types of same food

2. Food chaining A technique used with a
   sensory and behavioral approach to feeding that is based on
   the relationship between food/liquids in regards to taste,
   temperature, and texture that reduces the risk of food refusal
   because it is based on the child’s preferences. Developed
   by Fraker and Walbert
   - Find a preference and grow by changing only ONE
     variable at a time

Texture
   - Does the child like liquids, smooth purees, dry
     crunchy, hard solids, chewy solids?
   - Are there foods that they like that don’t fit the
     preferred? Why?
   - Is there a texture that can be used to make a flavor
     more appealing?
     - For example: Snap pea crisps instead of peas,
       dehydrated/dried fruit instead of the raw fruit,
       fruit leather instead of fruit snacks, toast instead
       of bread, nut butters instead of nuts, frozen
       fruits/vegetables instead of fresh, etc.

Equipment

How to build your best toolbox

Equipment
General principles

- **Simple**
  - Washcloth
  - Spoon
  - Toothbrush
  - Food items

- **Follow the child’s lead**
  - Toys
  - Clothing
  - Fingers
  - Utensils

- **Buyer beware**
  - Beware of any product that promises to fix feeding problems. Look at the purpose behind the tool not the tool itself.
  - There are tools that are incredibly helpful but no “one thing” can make a child eat.

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My Must Haves

- Infadent
- Nuk brush
- Chewy tube
- z-vibe
- Great but pricey

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- blocks
- “all done” bowl
- Sorting” toys/objects

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- straw cups
- Bubble tea straws
- Coffee stir straws

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- lotion
- Cut out cup
- Take and toss

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- bouncy seat
- Washcloth(s)
- Reclining highchair with tray
**Case Study #1: Kate**

- **Date of Birth:** 7/1/2009
- Born at 38 weeks gestation with known congenital anomalies
- Diagnosed shortly after birth with Type 2 Pfeiffer Syndrome with craniosynostosis and mid-face hypoplasia resulting in tracheostomy at less than 1 week of age
- VFS revealed aspiration of all consistencies and UGI revealed malrotation
- G-tube and LADO procedure and discharged with no oral feeds
- To date Kate has had more than 35 surgeries for cranial, airway, shunt and gastrostomy issues
- Each surgery results in regression in oral intake
- At 9 months of age Kate had safe swallow of thin liquids but refused all oral intake, initiated feeding therapy at that time.

**Treatment**

- Patient has been seen by speech therapy anywhere from one time per month to weekly. Currently she is on a “treatment break” with re-eval in 3 months
- Session
  - Facial and intracranial stimulation using block program
  - Mealtime target
    - Infant: extreme fear with swallowing so started with single swallows of smooth purée
    - Toddler: prefers only smooth purées worked toward pureed table foods
    - Early preschool: was chewing dissolvable solids and soft solids until surgery in December and has regressed to purées only, working back to eating dissolvable and soft solids
    - School age: eating all foods, limited fruits and veggies at home

**Evaluation:**

- Dysfunctional oral motor skills including no tongue lateralization or tongue cupping, no bite, no defined chewing skills, limited swallowing
- No sensory issues on body
- Significant developmental delays
  - At onset of therapy she held up head, flipped from stomach to back, needed fully supported sit

**Family goals**

- Mom insisted that Kate would eat everything any other child her age eats, no exception, no excuses.
- Therapy goals need to include setting of realistic expectations for a very medically complex child

**Chaining progression**

- Smooth puree by spoon (prefers pudding and yogurt)
- Bites of target solid (one dissolvable and one soft solid)
  - 10 bites of dissolvable solid
  - Followed by 10 bites of smooth purée
  - Eat predetermined amount (1 cheese puff) then move to predetermined amount of other (1/4 cereal bar)
  - All bites tracked with “block program” but she is so familiar with it now only need to count down from target #
  - Cheese puff chosen by Kate. Cereal bar chosen by SLP as it is a flavor of yogurt she likes

- Session ends when predetermined quantity goal is met
  - Shown and told to her at start of each session
  - Same food is sent home for mom/dad/nursing to use
  - Only send remainder of what was not eaten that day, family supplies additional amount for home
**Case Study #2: Wyatt**

11 months adjusted age

- **Evaluation:**
  - Delayed oral motor skills including no tongue lateralization, weak bite, no defined chewing skills
  - Mild tactile hypersensitivity on body and severe oral hypersensitivity, gags with all purees
  - Family has offered a variety of baby foods, all of which results in gagging, they stopped trying 2 months ago and is now only drinking formula

- **Family goals**
  - Want Wyatt to eat an age appropriate diet like the other kids at daycare so that he can transition to the toddler room
  - Therapy goals need to include appropriate nutritional guidance for a child of his age

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**Wyatt**

- Date of Birth: 8/29/05
- Premature birth at 33 weeks gestation following Rh sensitivity
- Pregnancy complicated by maternal smoking and 1st trimester vaginal bleeding
- Transferred to NICU due hemolytic disease and prematurity complications
- VFS on 10/04/05 revealed silent aspiration of thin liquids
- Developmental milestones met appropriately
- Referred for clinical feeding evaluation at repeat VFS when mom indicated he would not take anything but his thickened bottles

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**Treatment**

- Patient to be seen by speech therapy one time weekly
- Session
  - Begin with lotion rub and sensory play
  - Facial and intraoral stimulation using block program
  - Messy play in the highchair
  - Mealtime target: started with predetermined number of swipes/tastes of purees due to poor oral motor skills again utilizing block program

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**Chaining progression**

- Honey thick liquid by spoon
- Messy play with target puree (sweet potatoes)
- Swipes of target puree on lips
  - Initially used child’s own fingers and toys
  - Moved to swipes on lips by feeder using block program
- Swipes of target puree using spoon
  - Block program
- Small boluses in mouth using spoon
  - Block program
- Measurable volume of target food accepted in therapy worked to transition this food to home
- Chose new target food similar in taste and texture to the first (carrots)

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**Examples of Goals (start with only 1 or 2 attainable goals and add more as goals are met)**

- Long term oral motor goal: Initiated on ___: Pt will demonstrate functional oral motor skills as determined by feeding therapist in order to eat an age appropriate diet which is necessary for adequate nutrition by ___.
- Short term oral motor goal: Initiated on ___: Pt will tolerate introral stimulation at least 10 times per session w/out gagging, crying or fussing in order to decrease oral hypersensitivity by ___.
- Long term feeding goal: Initiated on ___: Pt will swallow at least 10ml of a pureed food without gagging, crying, or vomiting each session for 3 consecutive sessions by ___.
Outcome
- Wyatt was in feeding therapy for 9 months. Upon acceptance of 4-5 vegetables and 2-3 fruits we introduced dissolvable solids. Once he accepted dissolvable solid he quickly progressed to eating a variety of age appropriate solid foods likely due in large part to the improvement in his oral motor skills.

Jake
- Date of Birth: 9/14/2007
- Full term, no complications
- Developmental milestones met appropriately
- Transition to baby foods was difficult but he would eat 3-4 different types
- Refused and fought all oral cares
- Described as a "picky eater" but has definite favorites including: "junk food" (cookies, crackers, chips), Eggo homestyle toaster waffles, cereal (Frosted Flakes, Cocoa Puffs), juice, soda, milk, pizza, deli meat and cheese but not as a sandwich, noodles, fast food French fries (any but not homemade)

Family goals
- Mom and dad had differing goals. Mom concerned about nutrition and variety. Dad had no concerns and does not like to see Jake upset.
- Therapy goals need to include expanding the diet to include fruits and vegetables and decreasing food rigidity
- Due to differing parental views, frequent review of goals and implementation of home programming was important

Evaluation:
- Functional oral motor skills, mild oral hypersensitivity but will now tolerate oral cares by parents
- Mild sensory issues on body
  • Dislikes hugs and kisses, needs to have feet covered at all times, "gross motor kid" loves to run/jump/crash, overly dramatic emotional responses to discipline and/or consequences
- No developmental delays

Chaining progression
- Picked target fruit that fit Jake’s preferred texture and taste profile (prefers crunchy and sweet-chewy apples)
- Started with help with preparation of apple
  • Wash apple, peel, cut it, put 1 on plate
  • Jake rated how he felt about the apple before eating
- Used kiss/lick/bite/eat process with apple at each session
  • Building on progress from each session we gently pushed Jake to next level
  • Once 2-3 whole pieces of apple were eaten in therapy, this food was transitioned to home
- Chose next food based on success of apple (pear)
  • Discussed similarities and differences of fruits and then began process of rating, kiss/lick/bite
**Chaining progression**

- We also started to work on putting foods together to make them more "functional" (e.g., Ham into a sandwich)
- Started with ham on a cracker
  - Chose favorite ham and cracker
- Jake rate how he felt about the "sandwich" before and after eating
  - Continued to work on eating this target until Jake could give it a thumbs up
- Next change cracker to crunchy toast
- Gradually decrease the amount of crunch to the bread until it was untoasted bread
- Next we worked on different meat in the sandwich (ham to turkey)
- Using these target foods, we encouraged the family to allow Jake to help with making the sandwiches at home and have this for a meal 1-2 times during the week

**Chaining progression**

- The next food we worked on was adding sauce to the noodles (i.e., plain noodles to spaghetti and macaroni and cheese)
- Started with plain noodles and dipping small pieces in ketchup (which he did like on his French fries)
- Jake rated his comfort with getting this "sauce" before and after eating
  - Continued to work on eating this target until Jake could give it a thumbs up
- Next had family bring in their preferred spaghetti sauce and we worked on dipping
- Gradually increased the amount of sauce on the plate until it was on a majority of noodles
- To work on macaroni and cheese, we made the cheese sauce from Kraft and dipped the noodles
- Using these target foods, we encouraged the family to add new foods based on similarities (e.g., noodles to rice-similar texture, color, and flavor)

**Outcome**

- Jake responded well to therapy. He added 4 new fruits (apples, pears, grapes, oranges) and 2 vegetables (carrots & green beans) to his diet. He was also able to eat sandwiches (ham and turkey), hot dogs, hamburgers, yogurt, chicken (baked and fried), spaghetti, mac & cheese and rice. He continues to be hesitant to try new foods but is more willing to work through these challenges with a slow, methodical approach.

**Good to know…**

- Choose foods based on similarities (e.g., noodles to rice - similar texture)
- Work on dipping (i.e., plain noodles to spaghetti and macaroni and cheese)
- Pick a target (i.e., likes sweet and ok with soft texture - green bean OR prefers crunchy - raw carrot)
- If older child, discuss similarities and differences
- Try to present the food in an appealing and non-threatening way (small nibbles, shredded, chopped)
- Do you need to mask the flavor? Try dipping in a preferred sauce (Ranch, ketchup, mustard)
- Remember you may need exposure/work on the target for several weeks

**How do I change…?**

- Fruit to veggies:
  - Identify flavor profile they like (sweet, tart, strong), texture (canned, crunchy)
  - Pick a target (i.e., likes sweet and ok with soft texture - green bean OR prefers crunchy - raw carrot)
  - If older child, discuss similarities and differences
  - Try to present the food in an appealing and non-threatening way (small nibbles, shredded, chopped)
  - Do you need to mask the flavor? Try dipping in a preferred sauce (Ranch, ketchup, mustard)
  - Remember you may need expose/work on the target for several weeks
• Waffles to other breakfast foods:
  – identify what they like about the waffles (are they rigid about the brand)
  – May need to work on changing the brand first
  – Pick a target (pancakes)
  – Try toasting a freezer pancake
  – Allow bites of waffle in between
  – OK with toasted pancake, then decrease the amount of toasting until it can be warmed in the microwave
  – Work towards French toast, English muffins, muffins etc.

• Give choices to the child and/or parent
• Be sure to let the child know what’s coming up next
• Set the child up for success
  • Sensory activities
  • Oral motor exercises
  • Reasonable expectations
• Don’t pretend you have all the answers
  • “I don’t know but I can find out”
  • “Great question, can I do some research and get back to you”

• There is nothing you can buy to make feeding therapy work
  • Tools are just that, tools
  • No different than buying artic cards to fix artic, it’s not that easy
• Sometimes families don’t like what you tell them
  • We are the “experts” and sometimes need to give the reality check
  • Often see this with kids with significant gross motor delays
• Keep the FUN in FUNctional
  • Feeding therapy (or any therapy for that matter) does not have to be boring
  • If you’re not having fun chances are your patient isn’t either
• Don’t be afraid to suggest a treatment break
  • If you are burned out chances are the family is too

You can’t spell success without “u”...

• Never (ever) assume anything
• Ask before you start
  – Goal
  – Food allergies
  – Food preferences or forbidden foods
• Don’t overwhelm the child and family with changes
• If what you’re doing is not working, modify your plan
• Some items will be more challenging than others; think outside of the box. Also ask yourself, is what your asking of the child worth the stress?
• Don’t ask the family to make changes at every meal

• Always consider the whole child
  – Does the goal fit the developmental abilities of the child?
  – Are the sensory issues adequately managed?
  – Does the child have any diagnosed or undiagnosed issues that could negatively impact progress in therapy?
• The parents/caregivers are an integral part of this process
  – Does the family have time to work on the homework plan?
  – Are there parent/child dynamics that may warrant counseling?
  – Are the caregiver/parent’s expectations reasonable?
  – Are the caregivers on the same page regarding therapy?
• Kids are not stupid
  – If your treatment plan is trickery, it will fail
  – Include them in every step of the process when appropriate so they have some ownership

Questions
  Specific patients, comments, concerns....
The outcome of therapy should enhance the child and family’s life and provide them with skills that help them continue this process after discharge.

And always remember...