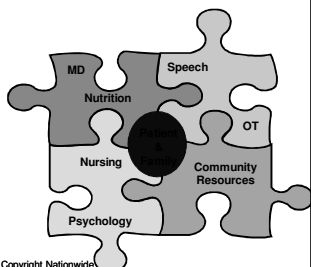


# The Psychology of Feeding

Nationwide Children's Hospital  
Columbus, Ohio



Kim Brown Ph. D  
Christina Doelling MS  
CCC-SLP  
Jean Hruschak MS  
CCC-SLP



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# Developmental Progression Feeding Skills

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## Oral Reflexes

- Suckling – 13 to 24 weeks gestational age through 32 weeks gestation
- Sucking – 6-9 months of age
- Gag – 26 to 27 weeks gestation and persists throughout life
- Phasic bite – 28 weeks; integrates around 9-12 months

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## Oral Reflexes - continued

- Transverse Tongue Reflex – emerges at 28 weeks gestation and persists through life
- Tongue Protrusion – evident at term; integrates at 4-6 months of age
- Root Reflex – emerges at 32 weeks gestation; integrates at 3-6 months of age

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## Feeding Skills

- 0 to 1 month – 6-8 feedings of breast milk/formula
- 2-4 months – 4-7 feedings of breast milk/formula
- 4 to 6 months – 4-6 feedings of breast milk/formula; introduce baby cereal at 6 months

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## Approximate Developmental Age & Type of Food

- 0-13 months Breast/bottle
- 5-6 months Thin baby food cereals
- 6-7 months Thin baby food purees (Stage 1)
- 7-8 months Thicker baby food cereals and thicker baby food smooth purees (Stage 2)



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### Approximate Developmental Age & Type of Food

- 8-9 months Soft mashed table foods and table food smooth purees
- 9 months Meltable Solids (i.e. Towne House crackers, Biter biscuits, graham crackers)
- 10 months Soft Solids (i.e. bananas, Gerber Graduate fruits, avocado)



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### Approximate Developmental Age & Type of Food

- 11 months Soft Single Texture Solids (i.e. muffins, soft pastas, thin deli meat)
- 12 months Soft Mixed Texture Solids (Gerber Stage 3) (i.e. macaroni and cheese, French fries, lasagna)



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### Approximate Developmental Age & Type of Food

- 12-14 months Soft Table Foods



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## The Rules of Mealtime

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### Nutrition



- Offer foods from all basic food groups
- Dairy, fruits, vegetables, meats/protein, and starch/carbohydrates
- Offer drinks (preferably milk) after solids
- Offer age appropriate portion sizes
- Make sure textures are developmentally appropriate



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### Schedule

- Meals and snacks happen at roughly the same time every day
- No food or drink (except water) between meals and snacks.
- "No grazing"



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## Structure

- Everyone sits together at the table
- Appropriate seating
- Time limits
- Limit distractions



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## Choices

- Choices help children feel like they have control.
- Allow children to assist in menu planning, cooking, and preparing the table as able.
- Allow children to choose one food at each meal that they will eat.
- Allow the child to select a plate, cup and spoon.

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## Behavior Rules

- Put a "No thank you" helping (1 tsp- 1 tbsp) of a new food on his/her plate, even if they are not going to eat it.
- "Taste with our tongue, not with our eyes."
- Ignore minor whining and complaining.
- Stay seated until the family is finished eating.

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## Make meals fun!

- We want meals to be a positive and fun experience.
- Provide lots of praise for all appropriate eating.
- Encourage your child to smell, taste and describe the foods s/he is eating.
- Schedule game time after the meal if s/he cleaned the plate, tasted all of the foods, etc.

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## Prevention

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The most important thing that we need to do for our tube fed children is to make sure that there continues to be a connection between the child's mouth being used and the child's stomach getting full.

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Failure to offer oral feeding experiences during the “critical period” between 6-10 months of age can result in:

- Child mistrusting of own oral abilities
- Child misses out on a step in the hierarchy of learning oral motor skills
- Abnormal or no family mealtimes are established

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## Feeding rules with feeding tube

- Child should be provided with developmentally appropriate non-nutritive oral stimulation
- Oral stimulation should be provide throughout day but definitely during tube feeding times to make the association of oral stimulation and feeling full
- Tube feeding pump should be out of sight in the idea of “out of sight/out of mind”
  - If the child is on bolus feedings the bolus bag and supplies should remain out of the child's view and may require an additional person to perform the actual feeding.

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- Provide interactions with food as medically appropriate



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## Infants on tube feedings

- Adult feeder can hold the infant in a secure face-to-face manner to promote a “normal feeding” situation
  - Emphasis should be placed on maintaining skin-to-skin contact, smiling, making prolonged and steady eye contact, and making soothing sounds
- Present pacifier with each tube feeding. If child is safe present tastes or dip pacifier in taste of breast milk/formula
- If child is not safe for tastes present smells of breast milk/formula



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## Older infants on tube feedings

- Should be done in an infant seat/high chair on a scheduled time

## Toddlers on tube feedings

- Feedings should all be given in a consistent location preferably sitting upright in a high chair as child is physically able

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## For older children (18-24 months)

- Child should be seated at the family table in appropriate seating for the child's age/development (i.e. high chair, wheelchair)

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- The goal is to keep oral experiences positive and naturally reinforcing for the infant/child in an effort to prevent oral aversion.
- The feeding environment should mimic that of children who do not need tube feeding.

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- Children should be required to sit at the table during mealtimes and have face-to-face interactions with family members.
  - Teaches the child that meals are scheduled
  - Feeding occurs at the table
  - Serve as modeling for the child

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- Even if the child is not actively eating by mouth, reinforcement can occur for behaviors that are related to structured mealtimes,
  - sitting in the chair/booster seat/high chair
  - having foods on the plate
  - touching/smelling foods
  - experience mealtimes as a pleasurable activity



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## Bolus feedings

- Boluses at scheduled family mealtimes
- Bolus is the meal
- Emphasis is placed on the child's participation in mealtime not the tube feeding

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## Hunger and Satiety

### Appetite Manipulation

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## Regulatory systems

- Hunger is a regulatory system, as is our sleep-wake cycles.
- They are physiological clocks that need environmental regulation.
- If we do not impose restrictions on when we sleep and eat, all of our functioning would become out-of-sync and chaotic.

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## Hunger–Satiety Cycles

- Our Hunger-Satiety cycle runs about every 4 hours.
- This gives our stomach time to fill up with food, process it for our bodies, and empty it out.
- We recognize our hunger and satiety cues by pains in our stomach – growling for hunger, low throb for fullness.
- Scheduling meals helps establish hunger.

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## Grazing and Hunger

- Adults eat small frequent meals throughout the day to lose weight.
- It takes the edge off our hunger so we never feel really hungry or full.
- Affects children in the same way.
- Milk alone can curb hunger and keep a child from eating their meal.
- Kids can hold out for preferred foods.

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## Hunger and Tube Feedings

- What happens to this cycle when continuous tube feedings are introduced?
- Food is run continuously into the stomach leaving no opportunities to experience hunger or thirst.
- Do they constantly feel full?
- Not hungry, even when off tube feedings.

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## Adjusting Tube Feedings

- Child must be at acceptable weight.
- Ideally, switch from overnight to bolus feedings.
- Keep feeding tube behind child.
- Offer bolus feedings after meals to associate fullness with eating by mouth.
- Can begin to adjust bolus feedings based on amount eaten by mouth.

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## Offering Food and Oral Stimulation

- Exploring food, tasting it, making food pleasurable is most important.
- Non-Nutritive oral stimulation as prescribed by a trained feeding therapist.
- Allow finger feeding, scooping with utensils, food play during meals. Let them be messy!
- Stay positive and praise all attempts.
- Make sure foods are safe for current oral motor skills.

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## Adjustments with picky eaters

- Cannot cut tube feeding altogether and expect child to begin eating new and larger volumes of food without intervention.
- Run the risk of poor energy, weight loss, increased sleepiness, dehydration and vomiting.
- Typically need medical supervision via hospital admission to do this.

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## Building a Food Repertoire

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## Insure a high degree of success

- Select foods that offer a "just right" challenge
- Make sure to select foods that child has the oral skills to manage

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## Change.....

- Location
- Change by color
- Change by shape
- Change texture
- Intensify the taste


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## Location

- Take food out of the original container
  - Put baby food jar in the bowl
  - Have child help take out of container to bowl
  - Have child take out of container to bowl
  - Remember not to overwhelm the child by expecting too much too soon



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## Change by Color

- Pick preferred food and "bridge" to non preferred food by choosing a food similar in color
  - Go from bananas to applesauce 
  - Go from carrot to sweet potatoes
- Make sure you are only changing color- could also be changing texture and food group
  - Strawberry yogurt to strawberry applesauce
    - Change in texture, food group and potentially color

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## Change by Shape

- Pick preferred food and "bridge" to a new food by changing shape
  - Chicken nuggets from Wendy's versus my freezer or smaller versus larger sizes  
  - Applesauce from grinding apple bits
  - Cheese cut into strips similar to string cheese

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## Change by Texture

- Add small bit of smashed meltable/graham cracker to puree
- May need to transition slowly
  - Put large amount of puree on spoon with “tiny amount” of textured puree on tip of spoon
  - Decrease amount of puree and increase amount of textured puree
    - This may take only a few bites
    - or maybe a few days



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- Can gradually increase amount smashed meltable/graham cracker in with puree until puree is more of a “lumpy puree”

- To transition from “lumpy puree” to ground presentations
  - Change texture by putting through grinder
  - Present in similar way as described with puree

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## Intensify

- Add small amount of salt or pepper to pureed vegetables
- Add small amount of sugar to fruits
- Add gravy powders to meats
- Add small amounts of spices to foods
  - tarragon, garlic, dill, Italian herbs



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## Add a new developmental food

- Begin working on tolerating a Hard Munchable such as a biter biscuit
  - Encourages side to side tongue movement,
  - Moves the gag reflex back
  - Improves jaw strengthening.
  - You can use the hard munchable as a spoon in puree presentations



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## Rule of 10

- Try a new food 10 times before you can say you don't like it.
  - This means actually ingesting it not just interacting with it



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## Summary

- Follow developmental progression
- Mealtime Structure and Rules
- Prevent problems before they start
- Carefully transition tube-feeding to oral feeds
- Step wise transition from baby food to table food purees

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## IFEC

- Interdisciplinary Feeding Evaluation Clinic
- Nationwide Children's Hospital- Dublin campus
- Every Thursday morning
- [http://www.nationwidechildrens.org/gd/applications/controller.cfm?page=237&pname=sprofile&service\\_id=174&gsection=pfv](http://www.nationwidechildrens.org/gd/applications/controller.cfm?page=237&pname=sprofile&service_id=174&gsection=pfv)
- Contact Christina Doelling for more information at (614) 722-3979 or [christina.doelling@nationwidechildrens.org](mailto:christina.doelling@nationwidechildrens.org)

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