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# Mouth Moves: Helping Parents to Support Oral Motor Development in their Children for Pediatric Feeding Success

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# Disclosures

- Presenter Disclosure: Karen & Stephanie have received an honorarium for presenting this course.
- Non-financial: Karen & Stephanie have no relevant non-financial relationships to disclose.
- Content Disclosure: This learning event does not focus exclusively on any specific product or service.
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# Learning Outcomes

After this course, participants will be able to:

- Participants will be able to identify the principles that contribute to a responsive feeding approach and apply these concepts in the context of a therapeutic intervention.
- Participants will be able to identify how therapists can help parents read and respond to their child's nonverbal cues to support trust and respectful feeding intervention.

## Learning Outcomes Cont'd

- Participants will be able to list at least 3 techniques that might be used to actively coach parents as they support their children to develop oral-motor skills.
- Participants will list at least 3 interventions to help children develop the following skills:
  - a. Active use of lips for spoon feeding and cup drinking
  - b. Moving a bolus in the mouth
  - c. Biting foods
  - d. Chewing foods
  - e. Open cup drinking
  - f. Straw drinking

## Working Premises:

- Each feeding experience is an opportunity to **build trust** or **undermine trust** (Black & Aboud, 2011)
- Sensory comfort precedes skill development
- Feeding is a developmental skill (Sheppard, 2005)
- Experiences influence emergence of skills and development

How can we help parents support their child's oral-motor development?



## Parents:

- Are the ones to feed their child day-to-day
  - 8-12x/day for infants
  - 5-8x/day for toddlers
- Need options!

## Feeding & Bonding

“During the first year, infants and caregivers learn to recognize and interpret both verbal and nonverbal communication signals from one another. This reciprocal process forms a basis for the emotional bonding or attachment between infants and caregivers that is essential to healthy social-emotional functioning.”

(Black & Aboud, 2011)

# Building Trust

Child trusts  
parents will  
feed her



Parent trusts  
child will want  
to eat

Photo by [Dominika Roseclay](#) from [Pexels](#)

## Responsive Parenting → Responsive Feeding

### Prompt

- Respond promptly to cues of hunger and satiety

### Emotionally Supportive

- No Pressure
- Focus on learning and love
- Feed patiently and slowly

### Contingent

- Acknowledge the child's communication
- If child struggles, experiment w/ different combinations, tastes, textures

### Developmentally Appropriate

- Support self-feeding
- Model positive behaviors
- Expose to new foods, tastes, textures



(Black & Aboud, 2011)

## Responsive Feeding

*GUIDING  
PRINCIPLES FOR  
COMPLEMENTARY  
FEEDING OF THE  
BREASTFED CHILD,  
PAHO/WHO, 2003*



Feed infants **directly** and assist older children when they feed themselves, being sensitive to their hunger and satiety cues;



Feed **slowly and patiently**, and encourage children to eat, but do not force them;



If children refuse many foods, **experiment** with different food combinations, tastes, textures and methods of encouragement;



**Minimize distractions** during meals if the child loses interest easily;



Remember that feeding times are periods of **learning and love** - talk to children during feeding, with eye contact







# Feeding Skills



# Feeding Skills are Developmentally Acquired

- Feeding skills are developed through the process of motor learning
  - Children need practice to develop skill (Schmidt & Lee, 1999; Schmidt and Wrisberg, 2004; Sheppard, 2005)
  - Children engage in practice opportunities when they have sensory comfort

# Feeding Skills are Developmentally Acquired

Children gain skills through participating in “just right” opportunities

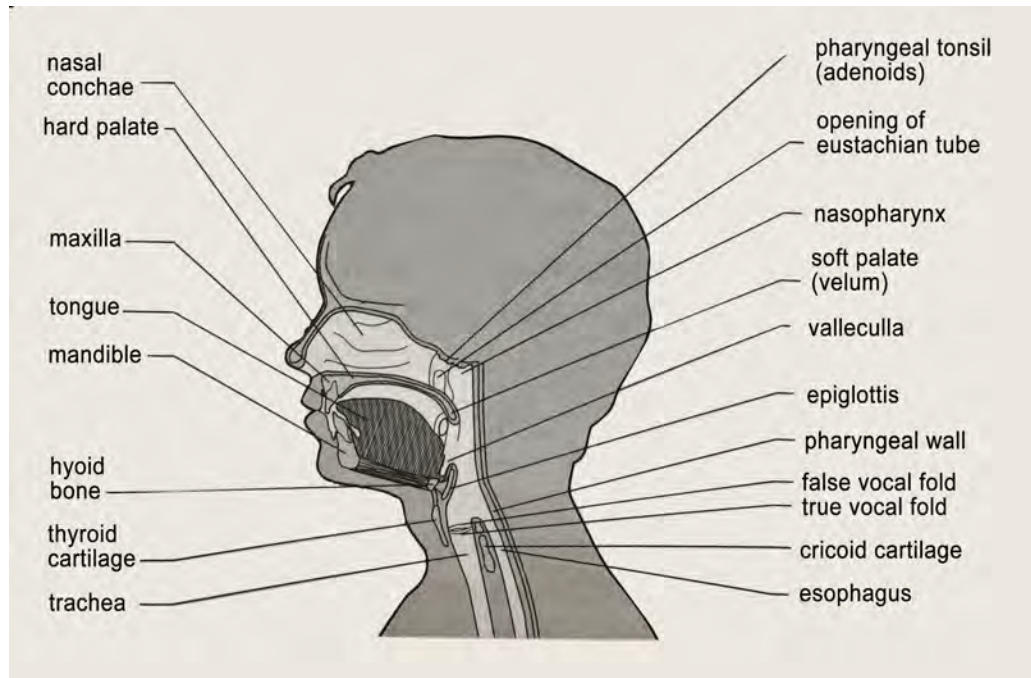
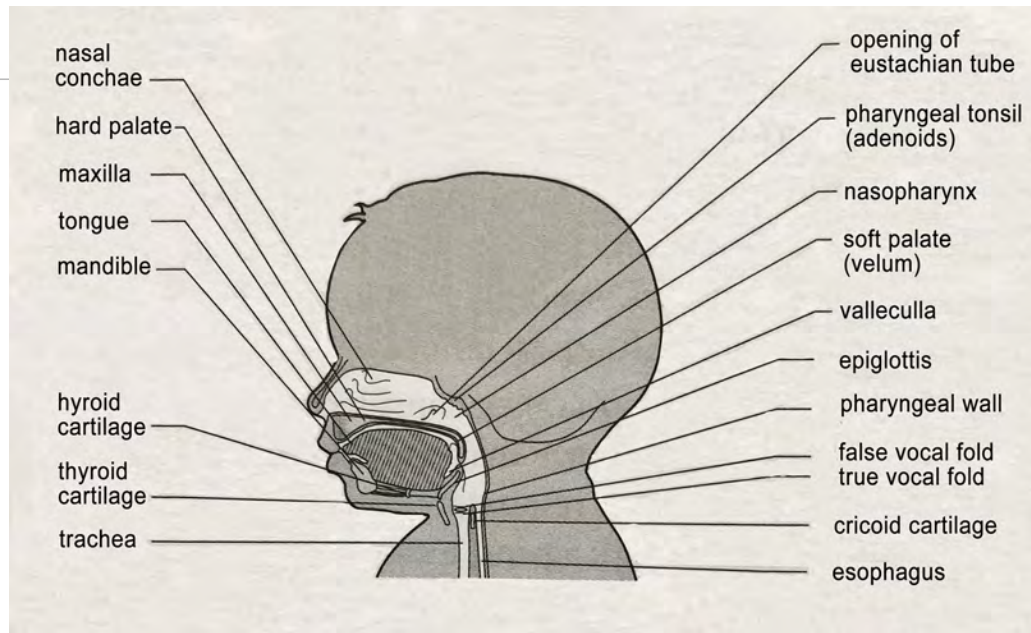
- Parents provide the just right opportunity
- Parents respond to child in developmentally appropriate ways

# Newborn



# Anatomy Changes

(Morris & Klein, 2000)



# Newborn Stage

- Non-Nutritive Sucking
  - State regulation
  - Calming
  - Exploration
  - Bursts and Pauses
- Nutritive Sucking
  - Suckling vs. Sucking
    - Mechanics
    - Differences
    - Bursts and Pauses







# Well-Supported Baby





# Newborn Stage: Mouthing

- Generalized and discriminative mouthing (0-4/5months)
  - Builds sensory awareness
  - Builds motor discrimination

(Morris & Klein, 2000)

continued



# Benefits of Mouthing

- Tongue begins to experience variation of movement (Morris & Klein, 2000)
- Gag reflex gradually moves to posterior 1/3 of tongue between 4-6 months



[Polina Tankilevitch](#) from [Pexels](#)

## Parents Can:

- Look for readiness:
  - State readiness
- Help their child through supportive positioning
  - Swaddle
  - Offer postural support
  - Organize to midline
  - Use sidelying
- Choose objects with varying textures

## Parents Can:

- With therapist guidance, consider other factors impacting oral-motor skills for breast and/or bottle feeding:

### Pediatric Feeding Disorder:

“Impaired oral intake that is not age-appropriate, and is associated with medical, nutritional, feeding skill, and/or psychosocial dysfunction.”

Godoy et al., 2019

# Introducing Solids

# When to Introduce: Signs of Readiness

- Postural control in sitting (or close)
- Interest in parents' foods
- Bringing foods/objects to mouth with increased coordination



# Presenting Solids

- Small tastes between 17 and 26 weeks
- Increase tastes when baby shows readiness

(Harris & Mason, 2017; Fewtrell et al., 2017)



# Introduction of Solids

Look for baby's cues and preferences

- Purees
- Soft solids
- Meltables



# Isabelle: 5 months



# Matty: 5 months AA





# Choosing a Highchair



# Introducing Puree



# Mechanics of Spoon Feeding

- Readiness/Permission
- Spoon position
- Upper lip function



Photo by [Helena Lopes](#) from [Pexels](#)

## Spoon Selection

- Short spoons: self-feeding
- Longer spoon: for adult to feed baby
- Consider depth of spoon



## Parents Can:

- Look for readiness:
  - State readiness
  - Child looks at spoon or parent
- Present food on flat spoon or teether in front of child
- Wait for child to lean in
- Allow child to clear the spoon (Don't clear the spoon off on child's upper lip or gums)
- Give opportunities for self-feeding



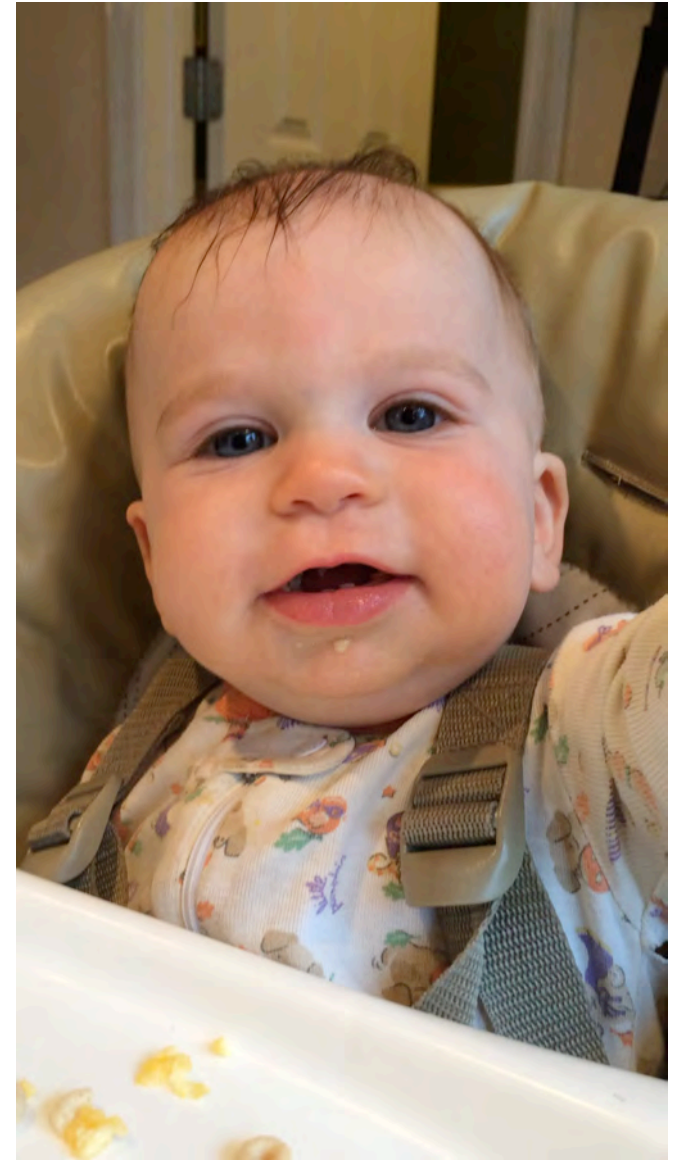
# Oral-Motor Progression: Chewing

- Tongue in midline → Tongue moving laterally
  - At around 7 months, tongue just beginning to move laterally during feeding
  - At 9 months, infant begins to transfer food from center of mouth to sides with tongue
  - At 12 months, infant can transfer food from center of mouth to sides with tongue

# Planes of Movement and the Jaw

Increased variation in jaw movement patterns:

Straight → Diagonal → Rotary



## Lily: 10 months



## Lily: 10 months







## Parents Can:

- Look for readiness:
  - State readiness
  - Child looks at food or parent
- Provide mealtime modeling (mealtime rehearsal)
- Modify food to support successful self-feeding
- Give child control/support autonomy
- Offer utensils
- Offer pieces of food on the biting surfaces

## Biting

- At 9 months can hold food between jaws, feeder can assist in breaking off a piece
- At 12 months uses controlled sustained bite on soft solid
- At 18 months uses controlled sustained bite on hard solid, may demonstrate head movement (overflow)
- At 18 months chews with the lips closed

(Morris & Klein, 2000)

# Biting and Soft Solids







## Parents Can:

- Look for readiness:
  - State readiness
- Recognize a child's preferences for taste and textures
- Offer child purees, soft solids, meltables or crumbs
- Offer both foods that are easy and challenging

# Cup Drinking

## Cup Drinking

- Child comes forward, toward cup
- Cup rests on bottom lip OR is anchored in corners of child's mouth
- Child's tongue is under cup → NOT in cup!
- Biting is normal for new cup drinkers



## When to Introduce

- Children who struggle with breastfeeding/bottle feeding
- Children who have had negative experiences with spoons
- Children with increased or decreased tone



Shira:  
7 months



## Cup Drinking in Older Infants

- Infants at 9 months
  - Will use long sequences of continuous sucks, occasional breakdown incoordination,
  - Greater ability to isolate jaw
  - Able to take consecutive sips (typically up to three before pausing to breathe)

(Morris & Klein 2000)

# Cup Considerations

- Types of cups
  - Small cups
  - Flex cups/nosy-cups
  - Clear cup





# Position of the Cup

- Ensure liquid is up to the lip of the cup
- Bring slowly towards the child's face
- Offer lower, to ensure chin tuck
- Rest cup on child's lower lip



# Isabelle Cut-Out Cup



# Cup Considerations

- Types of liquid
  - Water
  - Formula
  - Breastmilk
  - Puree

## Cup Drinking

- Stability before mobility!
- Anchor of cup
  - Lips dissociate and activate off of base of jaw
  - Tongue dissociates within the mouth
- Adult controls flow
- Adult looks for child to dissociate upper lip
- Single sips → multiple sips

## Parents Can:

- Allow a child to explore an empty cup
- Offer a cup with liquid or puree
- Help to position the cup and control the flow
- Help their child transition from spoon feeding to open cup drinking
- Model cup drinking and offer sips!

# Introduction to Straws

# Introducing Straws

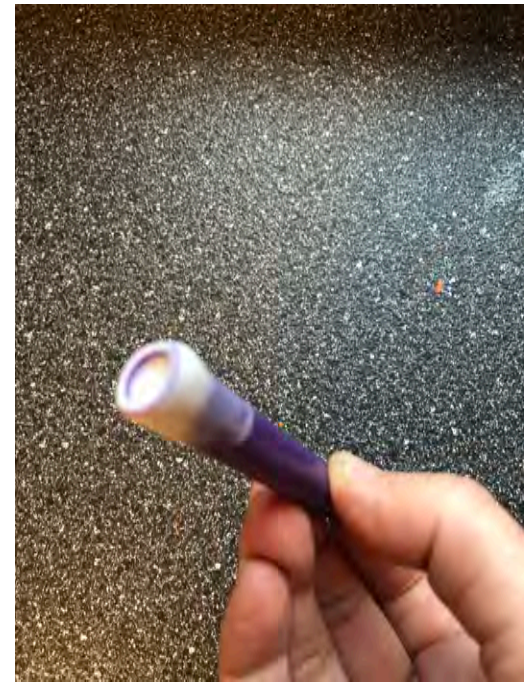
- Mealtimes modeling
- Multiple straws
- Honeybear, Take 'N' Toss, or DIY straw cup



# When to Introduce

- As early as 8 months of age
- Look for infant interest
- Infant will learn to close lips around straw
- Biting is normal (stability before mobility)

# Methods of Introduction: Straw as Spoon



# Learning Straw Drinking



## Parents Can:

- Practice responsive feeding
- Look for enjoyment and adjust the offer
- Look for and support oral-motor progression
- Encourage self-feeding



# Questions?



## Contact Us:

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