# PART 1:
# FEEDING FUNDAMENTALS: INFORMATION FOR SUPPORTING POSITIVE AND SAFE MEALTIMES

## Chapter 1: Feeding Basics for Every Child and Caregiver

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## INFORMATION FOR SUPPORTING POSITIVE AND SAFE MEALTIMES

### CHAPTER 1: FEEDING BASICS FOR EVERY CHILD & CAREGIVER

# SECTION 1.1: POSITIONING BASICS

## WHAT IS POSITIONING?

Positioning relates to the way we hold a child in our arms or our laps, and how we place a child in a chair, seat or on the floor for mealtimes.

The way we position a child will depend on:

1. age of the child
2. general developmental skills of the child, especially physical capabilities
3. individual needs of the child (e.g., higher elevation of body during feeding due to reflux, increased head/trunk support due to low tone, etc.)
4. caregiver's abilities
5. resources available in the environment

## WHAT IS THE IMPORTANCE OF POSITIONING?[7]

Ensuring a child is properly positioned during feedings is critical to keeping them safe. When children are positioned properly during meals, in particular those with disabilities or medical needs, feedings are safer, more efficient and more comfortable for both the child and the caregiver.

| BENEFITS OF GOOD POSITIONING | RISKS OF POOR POSITIONING |
|---|---|
| ↓ INCIDENCE OF ASPIRATION, ILLNESS, DEATH | ↑ INCIDENCE OF ASPIRATION, ILLNESS, DEATH |
| ↑ efficiency of feedings (e.g., faster) | ↓ efficiency of feedings (i.e., slower) |
| ↑ oral intake during feedings | ↓ oral intake during feedings |
| ↑ capacity for children to try different food textures | ↓ capacity for children to try different food textures |
| ↑ breathing capacity | ↓ breathing capacity |
| ↑ digestion of foods and liquids | ↓ digestion of foods and liquids |
| ↑ skills for using vision and hands for self-feeding | ↓ skills for using vision and hands for self-feeding |
| ↑ capacity for children to feed themselves | ↓ capacity for children to feed themselves |
| ↑ enjoyment during feedings (for children & caregivers) | ↓ enjoyment during feedings (for children and caregivers) |
| ↑ growth and nutrition | ↓ growth and nutrition |
| ↑ capacity to interact socially with others | ↓ capacity to interact socially with others |

# KEY ELEMENTS OF POSITIONING FOR ALL AGES

This section covers ideal positioning for children of all ages, including infants, toddlers, older children and children of all ages with disabilities. No matter a child's age, it is essential that a caregiver consider these six key elements when positioning any child for a meal.

| KEY ELEMENTS | PROPER POSITION |
|---|---|
| Hips → | Positioned at 90 degrees |
| Trunk → | Upright, not leaning forward, backward or sideways |
| Shoulders → | Level and facing forward |
| Head → | Chin slightly tucked toward chest; head upright and facing forward |
| Knees → | Positioned at 90 degrees |
| Feet → | Supported on the floor, chair footrests or other object; flat position |

# COMMON POSITIONS ACROSS THE AGES[7]

Ideal positions for feeding a child will change as he or she grows older and as a child's development progresses. For example: As a young baby becomes older, bigger, and stronger, she will typically need less external support from a caregiver to keep her body in proper positioning for mealtimes. Shared below are common, optimal feeding positions for young babies and children. *Refer to Chapter 2, Section 2.3 and Chapter 3, Section 3.3 for illustrations and photos of each position listed below).*

## BIRTH TO 3 MONTHS

Young babies 0-3 months old require complete support of the head, neck, trunk and pelvic area during all feedings. Total support is needed because young babies do not yet have enough strength to hold these areas in proper position on their own.

### *Common Feeding Positions:*

Held in a caregiver's arms for breastfeeding and/or bottle feeding.

**Bottle Feeding Positions:**

- Cradle
- Side-Lying
- Reclined on pillows on lap of caregiver
- Seated in lap of caregiver
- Seated in infant carrier or seat

## 4 – 8 MONTHS OLD

Babies 4-8 months old typically demonstrate a need for moderate support of the head, neck, and trunk during feedings. As they near 8 months old, they may require even less support, showing the ability to sit upright on their own or when in a supportive chair. This is because a baby at this age is developing more physical strength throughout her entire body. Of note, babies in this age range are introduced to solid foods. Appropriate positioning support is required for a baby to successfully and safely handle this new experience.

### *Common Feeding Positions:*

Held in a caregiver's arms for breastfeeding and/or bottle feeding. (Ideal between 4-6 months old)

Seated in a caregiver's lap, on the floor or in a supportive seat or chair. (Ideal between 6-8 months old when offering solid foods)

**Bottle Feeding Positions:**

- Reclined on pillows on lap of caregiver
- Seated in lap of caregiver

- Seated in a supportive chair or seat

**Solid Food Positions:**

- Seated in lap of caregiver
- Seated in a supportive chair or seat
- Seated on the floor with caregiver support

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## 9 – 15 MONTHS OLD

Children 9-15 months old typically demonstrate a need for minimal to moderate physical support during feedings. They continue to develop improved physical strength and control throughout the entire body, sitting upright on their own, crawling, standing, walking and transitioning between positions (e.g., moving from sitting to standing). Of note, children in this age range are typically weaned off of bottles and introduced to cups for drinking. Additionally, solid food becomes more heavily relied on. Because of these new experiences, appropriate positioning support that matches a child's individual needs must be identified to help him become a successful and safe eater.

### *Common Feeding Positions:*

Seated in a caregiver's lap, on the floor or in a supportive seat or chair.

**Feeding Positions:**

- Seated in lap of caregiver
- Seated in a supportive chair or seat
- Seated on the floor with caregiver support

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## 16 MONTHS AND OLDER

Children 16 months and older typically demonstrate a need for minimal physical support during mealtimes. They are able to sit upright on their own and they enjoy eating with and around other people. Because of her growing strength and skill, a child in this age range can often sit in a booster chair at a table or sit in a child-size chair at a table equally sized to fit her needs. Although children of this age require less support, it is still important that any chair, seat or table they use appropriately supports each of the six key elements previously discussed.

### *Common Feeding Positions:*

Seated in a caregiver's lap, on the floor or in a supportive seat or chair.

**Feeding Positions:**

- Seated in lap of caregiver
- Seated in a supportive highchair, booster chair or seat
- Seated on the floor with caregiver

- Seated at a child-size table and chair set
- Seated in an appropriately sized or modified wheelchair or adaptive stroller or chair

## POSITIONING TIPS FOR ALL AGES

| | |
|---|---|
| TIP 1: | Always consider the individuality of a child when choosing a feeding position and level of support. As children become older and stronger, most who are developing typically will require less support for maintaining a good position during feedings. However, every child is different and will not always follow this path, so care must be individualized. |
| TIP 2: | Always consider a child's developmental skill level when choosing a feeding position. Choose a position based on needs, skill-level and age. For example: A 3-year-old child who has very weak muscles (low tone) may require extra supports to hold his head upright in a chair for mealtimes, despite being "old enough" to sit in a chair. |
| TIP 3: | Always consider the comfort of the caregiver during a feeding. Observe how your body feels when feeding a child. Is your back hurting? Are you slouched in an uncomfortable position? Is a child too heavy? Can you maintain the position for the length of the meal? Find a position that not only meets the needs of the child, but that is also sustainable and healthy for you. |
| TIP 4: | Always remember that children grow. As a child gets bigger and as their skills develop, the position they eat in may need to change. It's normal and essential for positions to change over time to fit a child's growing needs. |
| TIP 5: | Always remember that finding the best position can sometimes take a lot of work. Even a child who is typically developing may require caregivers try different positions until they find the one that works just right. Take your time, watch and see how a child responds and make small changes as needed. |

## FINAL THOUGHTS

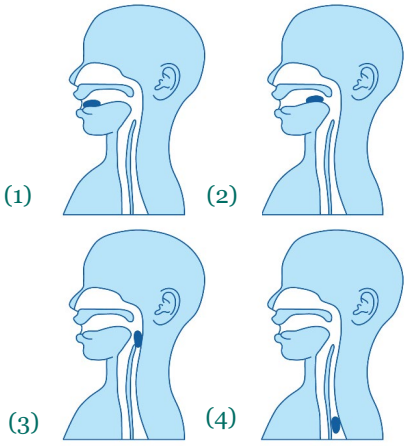
Finding the proper positioning for a child is not always an easy task. It can take time, effort, thought, practice and patience. When unsure about the best position for a child, seek out the support of others. Often, sharing challenges or questions with other caregivers and team members can lead to greater problem-solving and creative solutions as well as alleviate stress.

- *For more age-specific positioning information, refer to Chapters 2, 3, 4, and 5.*
- *For more information on positioning the child with a disability or medical needs, refer to Chapter 7.*
- *For more information on creative seating, refer to Chapter Appendix 9I.*
- *For more information on quick positioning challenges and solutions, refer to Chapter Appendix 9M.*

# SECTION 1.2: SWALLOWING BASICS

## WHAT IS SWALLOWING?

Swallowing is the movement of saliva, liquids and foods from the mouth into the stomach. Swallowing requires coordinated use of 26 muscles. The average person swallows 600-900 times per day, and it takes approximately 7 seconds to pass food from the mouth to the stomach. For something we do so often and so easily every day, it's a very complex process.




## HOW DO WE SWALLOW?

Swallowing can be separated into four phases:

(1) *Phase 1:* Oral Preparatory
(2) *Phase 2:* Oral Transit
(3) *Phase 3:* Pharyngeal
(4) *Phase 4:* Esophageal

(1) Oral Preparatory phase: Food and liquid in the mouth are prepared for swallowing. For liquids, this means sucking to pull liquids into the mouth while the tongue moves them to the back of the throat. For solid foods, this means the teeth, lips, cheeks, tongue and jaw work together to form a cohesive chunk of food to be swallowed.

(2) Oral Transit phase: Movement of the food or liquid from the tongue toward the back of the mouth and throat to start the swallow. The soft palate (top back portion of the roof of mouth) moves up and toward the back of the throat to block food and liquid from going in the nose. The airway to the lungs is open, allowing breathing to occur during this time.

(3) Pharyngeal phase (throat): Food enters the pharynx (throat). The airway to the lungs is closed off by a flap of tissue (epiglottis) that covers the opening of the trachea (windpipe that leads to the lungs). The vocal folds are also at the top of the airway. They close during this phase to add more protection so that food and liquid don't move into the lungs.

(4) Esophageal phase: The food and liquid moves from the top of the esophagus to the stomach. This phase happens on its own and is caused by muscle contractions. There is a circular muscle that relaxes so the food and liquid can go into the stomach. Once the food or liquid moves into the esophagus, the epiglottis opens to allow for breathing

## WHAT IS THE IMPORTANCE OF SWALLOWING?

Eating and mealtimes should be enjoyable and fun daily activities for children. However, when challenges with swallowing arise, eating can become uncomfortable, scary and even life-threatening. Proper swallowing helps with the digestion of food and liquid. It also prevents food and liquid from going into the lungs, which can lead to serious health issues.

Challenges or difficulties swallowing are linked with the following risks:

**RISKS**

↑ INCIDENCE OF ASPIRATION, ILLNESS, DEATH

↓ efficiency of feedings (i.e., slower)

↓ oral intake during feedings

↓ capacity for children to try different foods and liquids

↓ capacity for children to feed themselves

↓ growth and nutrition (i.e. Malnutrition and dehydration)

↓ enjoyment during feedings (for children and caregivers)

## WHAT IS ASPIRATION?[7]

Aspiration is when food or liquid pass into the lungs instead of moving into the stomach where they belong. When this occurs, depending on the child, how often they aspirate and how much they are aspirating, it can lead to illness, malnutrition, dehydration and even death.

*There are many reasons why children aspirate such as:*

- Gastroesophageal reflux disease or reflux (for example: food or liquid from stomach is vomited up and goes into the lungs)
- Abnormal anatomy (for example: cleft lip/palate)

- Impaired anatomy (for example: paralyzed vocal folds)
- Delayed growth (for example: baby born early — prematurity)
- Brain injury (for example: child with cerebral palsy)
- Muscle weakness or rigidity (for example: child with Down syndrome or cerebral palsy)
- Muscle discoordination (for example: child with cerebral palsy)
- Medical procedures (for example: tracheostomy, nasogastric feeding tube)

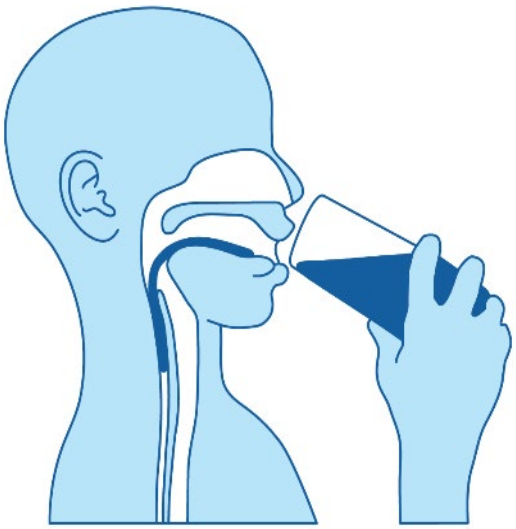


*Figure shows normal swallowing and no aspiration with liquid moving down the esophagus.*

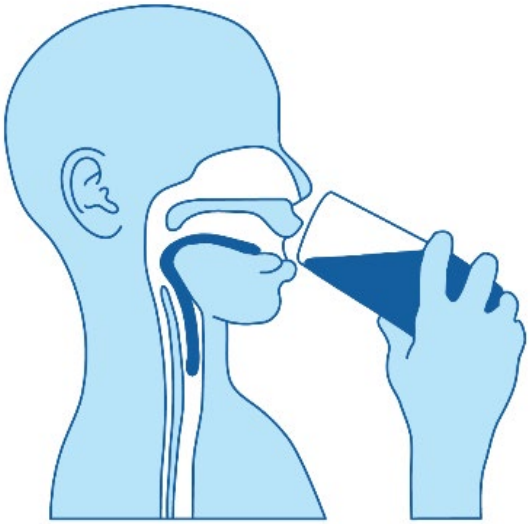


*Figure shows dysfunctional swallow and aspiration of liquid moving down the trachea toward the lungs.*

# KEY SIGNS FOR IDENTIFYING SWALLOWING CHALLENGES

| SIGNS AND SYMPTOMS OF SWALLOWING CHALLENGES | DESCRIPTIONS (WHAT IT LOOKS LIKE) |
|---|---|
| Coughing or Choking  | Child coughs or chokes during or after swallowing food or liquid |
| Gurgly “wet” Sounding Voice or Breathing  | Child’s voice or breathing sounds wet during or after swallowing food or liquid |
| Complaints of Discomfort  | Child experiences sensation of food being stuck in throat during, following and/or in-between meals; reports pain or discomfort with eating/drinking or food comes back up into mouth after swallowing |
| Watery Eyes  | Child’s eyes water during or after swallowing food or liquid |
| Change in Color  | Child’s face changes color (pale, red, or purple/blue) during or after swallowing food or liquid |
| Fever  | Child experiences fever following a meal |
| Facial Grimace  | Child displays uncomfortable faces during or following feedings |
| Change in Breathing  | Child’s breathing becomes unusually fast or slow, child stops breathing while feeding or child wheezes or gasps for air during or after swallowing food or liquid |
| Lung Infections  | Child experiences infections in the lungs or airway |

# SWALLOWING SAFETY TIPS FOR ALL AGES

| | |
|---|---|
| TIP 1: | Always consider the individual needs of a child when choosing a level of support. As children grow and develop, their swallowing skills can also change. They may require less or more support. Care must be individualized, and strategies must be regularly evaluated and changed as necessary. |
| TIP 2: | Good positioning is key. Finding a safe and comfortable position for a child is critical when it comes to swallowing safety, efficiency and maintaining the health of a child. |
| TIP 3: | Small and slow. Keep bite and sip sizes small and use a slower rate of feeding. The slower the rate of eating and drinking and the smaller the bites/sips, the easier and safer it will be for a child to swallow. |
| TIP 4: | Adjust texture or thickness of foods and liquids. Liquids may need to be thickened and specific food textures may need to be modified to make feedings safer and more comfortable for a child. |
| TIP 5: | Change how you feed a child. Feeding supplies may need to be changed (for example: use a different nipple, cup or chair) to make feedings safer and more comfortable for a child. |
| TIP 6: | Children learn best in the context of positive relationships. Offering positive interactions with a child during feedings is the best way to support this process. |
| TIP 7: | Always remember that finding what works best can sometimes take a lot of work. Caregivers may need to try many strategies to find what is safest and works best for a child. Take time, watch how a child responds and make small changes gradually. |

## FINAL THOUGHTS

Recognizing when a swallowing problem exists and ensuring proper swallowing guidelines are followed for children is a critical element of safe feeding practices. The health and well-being of every child depends on caregivers who are perceptive, supportive and quick to respond to a child's needs. When unsure about how a child is swallowing or when looking for ways to better support swallowing, seek out the support of others. Often, sharing challenges or questions with other caregivers and team members can lead to greater problem-solving and creative solutions as well as alleviate caregiver distress

*For more specific information on food textures and liquid consistencies to support safer swallowing, refer to Chapter 1, Section 9 and Appendix 9C.*

*For more specific information on modifying foods and liquids, refer to Appendix 9E.*

# SECTION 1.3: SENSORY SYSTEM BASICS

## WHAT IS THE SENSORY SYSTEM?[9]

The sensory system is a complex group of neurons (cells in the body), cell pathways and parts of the brain that work together to allow an individual to feel different sensations from the environment. There are eight senses that make up our sensory systems.

1. Seeing (Vision)
2. Hearing (Auditory)
3. Smelling (Olfactory)
4. Tasting (Gustatory)
5. Touching or Feeling (Tactile)
6. Joint and Muscle Awareness (Proprioceptive)
7. Balance and Movement (Vestibular)
8. Internal Body Awareness (Interoception)

*Every child has a sensory system that is unique to him. It is the job of the caregiver to discover a child's sensory preferences (what sensations his body likes most and least) and any sensory challenges in order to make mealtimes (and all daily activities) more comfortable and manageable.*

## TYPES OF SENSES[9,10,11]

There are eight different senses that make up the sensory system of every single person.

| SENSE | DESCRIPTION | EXAMPLE |
|---|---|---|
| Seeing (Vision)  | Information that comes to the body through the eyes *(*what one sees*)* | Bright lights, dim lights, colors, shapes, faces, fast- or slow- moving objects, distance to objects and faces (near or far), etc. |
| Hearing (Auditory)  | Information that comes to the body through the ears *(*what one hears*)* | Loud and soft noises, voices, music, high- and low-pitched sounds, etc. |
| Smelling (Olfactory)  | Information that comes to the body through the nose (what one smells) | Strong and light smells, unpleasant and pleasant smells, scents of people, places and foods/liquids, etc. |
| Tasting (Gustatory)  | Information that comes to the body through the tongue (what one tastes, eats or drinks*)* | Different flavors (sweet, sour, salty, bitter, etc.). |
| Touching (Tactile)  | Information that comes to the body through the skin and mouth (what one feels on the body) | Light touch, deep pressure touch, temperatures, pain, vibration, different textures (smooth, lumpy, crunchy, hard, etc.). |
| Balance and Movement (Vestibular)  | Information that comes to the body through different movements (what one feels when the body moves up, down, backward, forward, sideways, rotationally, etc.) | Rocking, swaying, swinging, turning, bouncing, spinning, standing up, sitting down, balancing, etc. |
| Joints and Muscle Awareness (Proprioception)  | Information that comes to the body through sensations felt in the joints and muscles (what one feels when their body is in different positions and in contact with objects such as people, chairs or the ground) | Sitting, walking, running, crawling, climbing, stomping feet, jumping, clapping hands, pushing and pulling heavy items, lifting and carrying items, etc. |
| Recognizing Sensations Inside the Body (Interoception)  | Information coming from within the body that relates to one's physical state or condition (what one senses from the organs) | Hunger, thirst, fullness, heart rate, breathing rate, temperature, bowel and bladder needs, etc. |

All of these are examples of different types of sensory information we receive through our sensory systems. The information a child receives from the environment influences all of her daily activities, including mealtimes. For example:

| MEALTIME SENSORY EXPERIENCES | SENSORY SYSTEM(S) INVOLVED |
|---|---|
| Bright lighting in a room. → | Seeing (Vision) |
| Food offered in a colored bowl. → | Seeing (Vision) |
| Loud noises from other children eating in a room. → | Hearing (Auditory) |
| How our bodies feel while seated in a chair or positioned for a meal. → | Touching/Feeling (Tactile)<br>Joint and Muscle Awareness (Proprioceptive)<br>Balance and Movement (Vestibular) |
| How our caregiver smiles while we eat together. → | Seeing (Vision) |
| Odor of food as it moves closer to our mouths. → | Smelling (Olfactory) |
| Flavors of food or liquids in our mouths. → | Tasting (Gustatory) |
| Textures of food in our mouths and on our hands when we feed ourselves. → | Touching/Feeling (Tactile) |
| How our stomachs feel empty at the start of a meal and full by the end. → | Internal Body Awareness (Interoception) |

**Eating is the most sensory rich activity a child will experience. This means that understanding how our sensory systems impact feeding development is very important.**

# WHAT IS THE IMPORTANCE OF THE SENSORY SYSTEM?

Every individual has a sensory system that is unique to them. The way a child's sensory system is made will impact the way he experiences the world, including feedings and mealtimes. For example, the different tastes and smells of a food can lead to a positive, enjoyable mealtime. However, if the tastes and smells are perceived as "bad," negative or unappetizing, this can lead to a stressful and unenjoyable feeding experience.

*Sensory systems have a powerful impact on the success of mealtimes for our children.*

| BENEFITS OF THE SENSORY SYSTEM | DESCRIPTIONS (WHAT THIS LOOKS LIKE) |
|---|---|
| Learning and Developing in Daily Activities  | ○ Teaches children about different kinds of sensory information that make up daily routines<br>○ Teaches children how to assess and respond to different sensory information<br>○ Teaches children about their own sensory systems (preferences, sensitivities, dislikes) |
| Developing A World View  | ○ Provides children the chance to experience different types of sensory information that will help them thrive<br>○ Prepares children for a variety of sensory information they may encounter later on in life |
| Health and Well-being  | ○ Allows children the chance to identify personal needs and to take care of themselves<br>○ Allows children more robust learning experiences<br>○ Supports children's total development |

*Children learn through their senses while they are growing in the womb and this learning continues the moment they are born.*

# SENSORY SENSITIVITIES: HYPERSENSITIVE AND HYPOSENSITIVE SENSORY SYSTEMS

A child may have a hypersensitive sensory system or a hyposensitive sensory system. We call these "sensory sensitivities." Children may also be overstimulated or understimulated in their environments and when they encounter certain sensory information. Because sensory sensitivities can make feedings much more challenging, it is important that caregivers are able to identify when a child may be showing areas of concern and that they know how to help.

## *COMMON SIGNS A CHILD MIGHT HAVE A SENSORY SENSITIVITY:*

- Coughing, choking, gagging, spitting, vomiting with foods or liquids (especially when introduced new flavors or textures)
- Difficulty transitioning to new food flavors and/or textures
- Flinching, facial grimacing or pulling away during feedings
- Avoiding certain food flavors, textures or liquid consistencies
- Oral aversions or "refusals" to eat or drink
- Unusually long meal times (more than 30-40 minutes per meal)
- Overstuffing mouth with food or giant gulps of liquids
- "Pocketing" or holding foods in mouth for longer than expected (and child unaware)
- Foods, liquids or saliva falling out of a child's mouth or on to face (and child unaware)
- Frequent crying, fussing or unhappiness at meal times
- Frequent falling asleep at meals
- Frequent need for physical contact (deep pressure touch)
- Frequent avoidance of physical contact (especially light touch)

*Hypersensitive (Increased Sensitivity): When a child shows a strong reaction to a specific sensation or sensory information. This reaction is stronger than we would expect.*

**Children with cerebral palsy often have hypersensitive sensory systems.**

*Common Examples of Hypersensitivity Reactions:*

1. Frequently startled by noises or touch
2. Jerking, pulling away or withdrawing from touch (especially light or gentle touch)
3. Increased tightness in the body when fed by a caregiver
4. Covering ears in a noisy room
5. Closing eyes or falling asleep in loud or visually "busy" spaces
6. Preferring less food on a plate or tray at a time
7. Gagging on new food flavors or textures
8. Grimacing, gagging, vomiting or pulling away from certain foods
9. Shaking, rocking or banging body in loud or visually "busy" spaces
10. Low pain tolerance — may be easily hurt or in pain

*Hyposensitive (Reduced Sensitivity): When a child shows a reduced reaction to a specific sensation or sensory information. This reaction is less than we would expect.*

**Children with Down syndrome often have hyposensitive sensory systems.**

*Common Examples of Hyposensitivity Reactions:*

1. Less responsiveness to loud noises or light touch
2. Excessive need for deep pressure touch such as seeking out hugs and squeezes from caregivers, wanting rough and tumble play, crashing into objects and people, etc.
3. Stuffing mouth full of food sometimes causing gagging, vomiting or choking
4. Not noticing or sensing food, liquid or excessive saliva on the face or left in mouth
5. Preferring harder, crunchier textures to soft, smooth and wet textures
6. Preferring flavorful foods
7. High pain tolerance — may hurt self and not show any sense of pain or discomfort

Different sensory information can cause a child to have more hypersensitive and hyposensitive reactions or less hypersensitive and hyposensitive reactions. Understanding what a child may be reacting to in an environment, especially during mealtimes, can help caregivers limit a child's overstimulation or understimulation and make daily routines easier. Below are examples of common elements in our environments that provide sensory information that can help or hinder a child's development.

| COMMON SENSORY INFORMATION | EXAMPLES |
|---|---|
| Lighting | Bright or dim, natural from outside, lamps, fluorescent lighting, etc. |
| Decorations in a Room | Painted walls, wallpaper, posters, pictures, windows, etc. |
| Noises | Music, voices, TV's, sounds from toys, street or city outside sounds, machine sounds, other children, etc. |
| Smells | Foods, liquids, perfume, soap, smoke, dirty diapers, trash, body odor, etc. |
| Touches | Holding, snuggling, diaper changing, dressing and undressing, face and hand wiping, crunchy food, etc. |
| Tastes | Food, liquid, spicy, sweet, sour, etc. |
| Movements | Rocking, swinging, crawling, walking, jumping, patting, bouncing, riding in a vehicle, being carried or held or picked up for diaper changes, etc. |

## WHY MIGHT A CHILD HAVE A SENSORY SENSITIVITY?

There are many reasons why a child may have a sensitive sensory system. As caregivers, sometimes we know these reasons and sometimes we do not. However, as caregivers, we can be aware of potential reasons and signs by learning about a child, and noticing how they are reacting during feedings as well as during other activities and routines throughout the day.

### *Common reasons a child might have a sensory sensitivity:*

- Medical conditions or frequent medical procedures or hospitalizations (autism, visual impairments, hearing impairments)
- Children born early (prematurity)
- Children born exposed to substances (drugs and/or alcohol)
- Structural differences (specific syndromes, cleft lip/palate)
- Neuromuscular disorders (cerebral palsy)
- Developmental disabilities (Down syndrome)
- Social-emotional or environmental factors (limited experience, stressful experiences, force feeding, no access to positive and optimal caregiving)
- Frequent nasal congestion (limits ability to smell and taste; can lead to food refusals or reduced intake)

**A child with cerebral palsy shows hypersensitivities to the touches he receives from his caregivers.**

## KEY ELEMENTS OF THE SENSORY SYSTEM[9]

| KEY ELEMENTS | SENSORY SYSTEM CONSIDERATIONS |
|---|---|
| Listening to a Child | ○ Notice what sensory preferences and needs a child displays during daily activities<br>○ Use a child's sensory preferences and needs to shape daily activities and make them more successful<br>○ Respect a child's signs when they are showing they are over or under stimulated by sensory information and provide necessary support, for example:<br>• Change elements in activities based on a child's responses to sensory information (for example: feed a child in a quieter room after noticing she becomes frustrated and covers her ears in a noisy room) |
| Preparing the Environment | ○ Make mealtime environments match the sensory needs of the child, for example:<br>• Minimize distractions by changing (dimming) lights and (reducing) sounds in a room<br>• Use soothing background music to support regulation (calming, body organization) and attention<br>• Use lids to cover foods or liquids with strong smells<br>• Offer utensils for children sensitive to touching foods with their hands<br>• Face children away from "busy" rooms with lots of movement, colors, people and other visual distractions |

| | |
|---|---|
| Preparing the Child | ○ Offer sensory based preparation activities that match a child's sensory needs before a meal, for example:<br>• Let a child know that a mealtime is coming ("Five more minutes and then it's time to eat.")<br>• "Wake-up" face and body activities (Refer to Appendix 9J)<br>• Toothbrushing<br>• Movement-based activities such as rocking, patting, bouncing or massage<br>• Food exploration, including serving self and others foods |
| Preparing the Caregiver | ○ Provide a comfortable position for the caregiver during feedings<br>○ Keep calm during feedings: Take deep breaths, play soothing music and talk quietly with the child<br>○ Understand that feeding a child with sensory sensitivities can be challenging and take time |
| Safe, Consistent and Comfortable | ○ Limit frequent changes to mealtime routines–keeping the same feeder, chair, room, bowl, spoon, etc.–if change is necessary, make one change at a time<br>○ Show and tell a child what food/liquid he is being offered<br>○ Offer food or liquid slowly and never forcefully<br>○ Offer food or liquid first that are familiar to a child – then offer new flavors or textures |

**A young baby has a rich sensory experience mouthing on a bumpy baby chew toy while playing on his back. Early sensory experiences such as this build robust sensory systems.**

# SENSORY TIPS FOR EVERY CHILD[9]

| | |
|---|---|
| TIP 1: | Listen to a child. A child will show you what his sensory preferences and needs are through his reactions and behaviors. Let a child show you what works best. |
| TIP 2: | Preparation is key. Preparing children before a meal is critical for a successful mealtime. Prepare the environment, the child's body and mind, and the caregiver. |
| TIP 3: | Preferences are different for everyone. Every child will have unique and different sensory preferences. These preferences can change often, too. |
| TIP 4: | Choose foods that are enjoyable. Offer items that a child can be successful eating and drinking and that will be enjoyable for her. Offer new items alongside these familiar items to increase a child's interest and comfort. |
| TIP 5: | Start with what is familiar. Children do best when consistent, familiar routines are used. Keep a schedule for meals, use the same feeder and feeding supplies, feed in the same chair and room and offer a child a familiar food/liquid first. Expand to new flavors and textures when a child is ready. |
| TIP 6: | Make changes one at a time. Children with sensitive sensory systems do well when changes are made one at a time versus all at once. Take your time when making changes to a mealtime, including offering a new flavor or texture. |
| TIP 7: | Offer lots of exploration time. Exploration of different non-food items and food items with different textures and flavors is a great way to support sensitive sensory systems. Let children explore items using all of their senses, but especially using their hands. |
| TIP 8: | Children learn best in the context of positive relationships. Offering positive interactions with a child during mealtimes (and beyond) is the best way to support this process. |

## FINAL THOUGHTS

All children have a sensory system that is special to them. These systems, whether highly sensitive or not, can impact mealtimes and feeding development. When caregivers discover how to best support a child's sensory preferences and needs, they allow children the chance to experience the world in a safer and more comfortable way. When met with sensory challenges, use this manual as a helpful resource along with seeking support from other caregivers.

*For more information on different sensory strategies, refer to Appendix 9K and Appendix 9M.*

# SECTION 1.4: BREASTFEEDING BASICS

## WHAT IS BREASTFEEDING?[12]

Breastfeeding, also known as nursing, is a primary way of feeding a baby. Breast milk is the most nourishing, ideal food for a baby, and breastfeeding is a powerful way to create the essential early connection between a mother and baby. When well-supported by a community, practically all mothers can breastfeed. Exclusive breastfeeding (providing only breast milk to a child – no formula, supplementation, water, food or other drinks) is strongly recommended for children 6 months and younger. After this time, children can begin trying age-appropriate complementary foods while continuing to receive breast milk.

**When does breastfeeding begin?**

**Mothers should begin breastfeeding their babies as soon as possible within the first hour of life.**


*"Breastfeeding is one of the most effective ways to ensure child health and survival." – World Health Organization, 2018*

# WHAT IS THE IMPORTANCE OF BREASTFEEDING?[13]

| BENEFITS OF BREASTFEEDING AND BREAST MILK | |
|---|---|
| FOR BABY | FOR MOTHER |
| Provides complete, optimal nutrition | Helps extend time between pregnancies |
| Promotes important brain development | Helps speed up recovery from childbirth |
| Provides protection from diseases and illnesses | Reduces risk of cancer and other illnesses |
| Helps speed up recovery from illnesses | Reduces costs compared to formula feeding |
| Reduces risk of death | Increases convenience and saves time (pick up baby and go, no bottle preparation, etc.) |
| Supports total growth, nutrition and well-being | Reduces hygienic demands (no bottle washing) |
| Supports a strong, early relationship with mother | Offers fulfillment for mother and supports early relationship with baby |

Breastfeeding and breast milk offer numerous long-lasting benefits for both babies and mothers. Breast milk contains complete nutrition that aids overall child development, protection from illnesses (for baby and mother), reduced risk of death (for baby and mother), no added cost for families and the promotion of secure and satisfying early relationships that allow babies to thrive — breastfeeding and breast milk are truly remarkable.

*Babies who receive only breastmilk are less likely to have asthma and allergies, and they have fewer instances of diarrhea, respiratory illnesses and ear infections.*

## REASONS WHY A CHILD MAY NOT BE BREASTFED OR RECEIVE BREAST MILK

There are many reasons why a child may not have the opportunity to be breastfed or receive breast milk. Sometimes we know these reasons and sometimes we do not. As caregivers, we can be aware of potential reasons and offer support to children and mothers alike. Also, if a child has one of the following reasons, it does not mean that they are unable to breastfeed. Children with health conditions actually benefit most from breast milk and breastfeeding. What it does mean is that they are at risk for having challenges with breastfeeding or they may lack the opportunity altogether.

*Common reasons a baby might need special support to breastfeed or a child might not receive breastmilk:*

1. Medical conditions of the baby such as prematurity, illness, inability to be with mother after birth, etc.
2. Medical conditions of the mother such as unable to be with child after birth, illness, disease, etc.
3. Structural differences such as specific syndromes or cleft lip or palate
4. Neuromuscular disorders (cerebral palsy)
5. Developmental disabilities (Down syndrome)
6. Social-emotional or environmental factors (baby does not have a mother, personal preference of the mother)
7. Educational and community support factors (mother does not know how to breastfeed, lack of support for mother from family or community)

**This baby was abandoned at birth and placed in the care of a special institution that takes care of babies without families. Because her mother was gone, she was not able to breastfeed or receive breastmilk.**

**This young baby was born with a cleft lip and palate, which made breastfeeding more challenging.**

**This tiny newborn was born several weeks early. He needed special care at the hospital, which took him away from his mother. Breastfeeding was hard because he was so small and weak.**

## BREASTFEEDING AND BREAST MILK PRECAUTIONS[14,15]

Although breastfeeding and breast milk offer a multitude of benefits for a mom and her baby, there are a few reasons why a mother should not offer breastfeeding and/or breast milk to her baby.

### *Common reasons a mother SHOULD NOT breastfeed or offer breast milk:*

- Mother is infected with HIV (human immunodeficiency virus) and she (1) cannot exclusively breastfeed for 6 months and (2) she is unable to or does not take antiretroviral drugs during the period of breastfeeding
- Mother is infected with T-cell lymphotropic virus type 1 or 2 (a virus spread by sexual contact, blood transfusions or sharing needles that can cause cancer)
- Mother has suspected or confirmed Ebola virus
- Mother uses street drugs such as cocaine, PCP, etc.
- Baby is diagnosed with galactosemia (a rare disorder that makes digestion of breast milk and regular formula dangerous)

**New research shows that exclusive breastfeeding combined with the use of antiretroviral treatment can significantly reduce the risk of transmitting HIV to babies when mothers breastfeed.**

### *Common reasons a mother should TEMPORARILY NOT breastfeed BUT CAN offer breast milk:*

- Mother has active tuberculosis and is not receiving treatment
- Mother has active varicella infection (chickenpox) that she developed during the five days before delivery up until the two days following delivery

### *Common reasons a mother should TEMPORARILY NOT breastfeed OR offer breast milk:*

- Mother is infected with brucellosis (an infection caused by bacteria from infected animals or animal products) and she is not receiving treatment
- Mother has active HSV infection (herpes simplex virus) with lesions on the breast
- Mother is taking radiopharmaceuticals (medicines with radioactive traits used to diagnose or treat disease)

**Mothers with tuberculosis can breastfeed when they have received treatment for at least 2 weeks and they are no longer considered contagious.**

- Mother is taking certain medications that can harm the baby (alkaloids, antineoplastics, some anticonvulsants and certain levels of cyclosporine, amiodarone and lithium)

*Mothers can offer breast milk without breastfeeding by using hand expression or a breast milk pump to remove milk from breasts and then offer to baby in a bottle.*

## COMMON BREASTFEEDING POSITIONS[16,17]

There are many different positions for breastfeeding a baby. The most common are shown in this manual. Each mother and child will find which position(s) works best for them. Each position offers different benefits; however, one benefit remains the same for all positionings: closeness for a mother and baby. When a mother is just beginning to breastfeed and learn about her baby, she may need extra support for the first few weeks. Although some babies quickly learn to latch to the breast and feed well from the start, many babies can be uncoordinated and extra support can be valuable.

*If the current position does not feel right for a mother or for the baby, it's all right to try a different position. Sometimes mothers must try multiple positions until they find the "just right fit."*

## HOW TO CHOOSE A POSITION

Finding a good breastfeeding position for mother and baby will:

1. Assist baby with getting a good latch, which helps baby receive the most milk
2. Prevent sore nipples and breasts or nipple injuries (mastitis)
3. Support adequate weight gain of baby
4. Be comfortable for both mother and baby
5. Support longer durations of breastfeeding by the mother

**A good latch is when a baby is well connected to the breast so that she can feed easily and be well nourished. A good latch can reduce the likelihood of soreness and discomfort for the mother when breast feeding.**

## CRADLE HOLD

### HOW TO:

- Mother sits in a comfortable position.
- Baby lies facing mother on his side. (Use pillows, cushions or blankets if more comfortable for baby and mother.)
- Baby's body and side of head rest on mother's forearm.
- Baby's stomach should be facing mother's stomach.
- Baby's ear, shoulder and hip should be in a straight line with his head raised higher than his hips.

**BEST FOR:** All babies 0-12 months old

*Mother supports baby using the same side arm and nursing breast.*

## CROSS-CRADLE HOLD

*Mother supports baby using the opposite arm and nursing breast.*

### HOW TO:

- Mother sits in a comfortable position.
- Baby lies facing mother on her side. (Use pillows, cushions or blankets if more comfortable for mother and baby.)
- Baby's body and side rest on mother's forearm that is opposite of the nursing breast.
- Mother's arm supports baby's shoulders and neck allowing her to tilt her head for opening her mouth and latching.
- Baby's stomach should be facing mother's stomach.
- Baby's ear, shoulder and hip should be in a straight line with her head raised higher than her hips.

**BEST FOR:** All babies 0-12 months old

## FOOTBALL HOLD

*Baby is on the side of mother and her legs are under her mother's arm.*

### HOW TO:

- Mother sits in a comfortable position.
- Baby lies on his back, tucked between his mother's arm and chest. (Use pillows, cushions or blankets on mother's side or lap if more comfortable for mother and baby.)
- Baby's body is supported by mother's forearm.
- Mother's hand supports baby's shoulders and neck.

BEST FOR: All babies 0-12 months old. Mother's with larger breasts and/or discomfort after surgical birth.

## SIDE-LYING POSITION

*Baby and mother are both supported by a bed, couch, mattress, floor, etc.*

### HOW TO:

- Mother lies on her side in a comfortable position.
- Baby lies on her side next to mother, stomach to stomach. (Use pillows, cushions or blankets if more comfortable for mother and baby).
- Mother supports baby's back using her arm that is closest to the floor, bed, blanket, etc.
- Can use rolled towel or blanket behind baby to support her back.

BEST FOR: Most babies 0-12 months old. Recommended when baby is already nursing well sitting up.

*Baby is supported by mother's body, leaving his body and head free to move.*

## SEMI-RECLINING POSITION

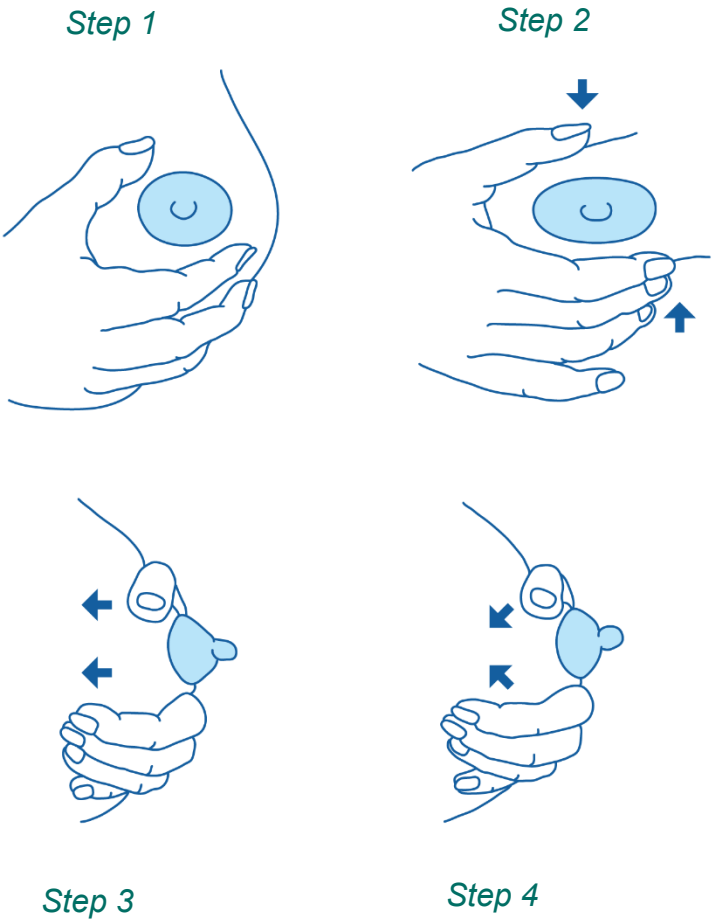
### HOW TO:

- Mother sits/lies in a comfortable position.
  - Mother leans back (semi-reclined) seated in a chair, a bed or on the floor using pillows, cushions and blankets. (If in a chair, a footrest is helpful to use.)
- Baby lies on top of mother (usually on his stomach).

BEST FOR: Most babies 0-12 months old. Mother's with fast flowing milk. Babies who need a slower flow of milk.

## HOW TO GET A GOOD LATCH

When a baby is well-positioned, he will likely be well-latched. When a baby is well-latched, he will take in more nutrition leading to greater weight gain and growth.




Below are four steps for getting your baby to latch using the "nipple sandwich" technique:

*Step 1:* Mother places hand in "C" position around her breast, keeping her fingers and thumb away from the nipple.

*Step 2:* Mother gently squeezes her breast using her fingers and thumb, creating a narrower breast for baby to latch on. The nipple changes shape (from circular to oblong).

*Step 3:* Mother pushes her breast inward toward her chest/ribs, helping the nipple project forward for baby to latch on.

*Step 4:* Mother pushes her thumb inward even more, helping the nipple point slightly upward toward the inside-top of baby's mouth, which assists with latch. Then, mother encourages and supports baby with opening her mouth widely to latch by supporting the back of her head and gently pulling baby toward her breast.

### *Additional Latch Tips:*

1. Baby's body should be at the same height or lower than mother's nipple.
2. Prior to latching, baby's head should slightly extend backward (while supported by mother's hand), allowing the baby's mouth to open wide for latching.
3. Bring the baby to breast — avoid bringing the breast to baby.
4. Touch baby's top lip to the nipple to encourage an open mouth and latch.
5. Run nipple along baby's upper lip from corner to corner to encourage an open mouth and latch.
6. Position baby asymmetrically on the nipple by aiming baby's nose to the nipple. (Baby's mouth will appear off-center" – with the nipple.)
7. When latching, baby's tongue and bottom lip should connect with mother's breast first and then the top lip touches the breast.

# KEY ELEMENTS OF BREASTFEEDING

| KEY ELEMENTS | SUCCESSFUL BREASTFEEDING SIGNS |
|---|---|
| Feeding position matches baby's needs | ○ Safe and supportive position that allows for good latch<br>○ Baby is comfortable<br>○ Position allows appropriate milk flow for baby<br>○ Position takes into consideration baby's size, skills and needs<br>○ Position allows for feeding to take 30 minutes or less |
| Feeding position matches mother's needs | ○ Safe and supportive position that allows for good latch (and no pain for mother)<br>○ Mother is comfortable<br>○ Position can be maintained (comfortably) by mother for entire feeding<br>○ Position takes into consideration mother's size and needs |
| Feeding cues are understood and respected | ○ Mother anticipates baby's hunger before baby starts to cry<br>○ Mother watches for baby's signs that he is hungry (Refer to Appendix 9L-1)<br>○ Mother watches for baby's signs that he is full (Refer to Appendix 9L-2)<br>○ Baby and mother enjoy feedings together |
| Mom and baby find a good latch | ○ Baby able to latch in a timely manner<br>○ Baby able to nurse easily and efficiently<br>○ Baby feeds efficiently for 30 minutes or less<br>○ Baby gains weight and grows, showing she is getting enough milk<br>○ Mother is not in pain during, after or in between feedings |
| Social interaction is provided often | ○ Mother smiles, talks, sings and gazes at baby during feedings<br>○ Baby enjoys feedings and actively participates<br>○ Mother enjoys feedings<br>○ Baby grows and thrives<br>○ Mother and baby grow closer and more well-connected |

*Signs of Trouble: Mothers and caregivers should watch for common signs that breastfeeding may not be going well such as nipple pain with feedings, breast engorgement, poor baby weight gain, infrequent wet or soiled diapers, frequent fussiness at the breast or difficulty getting baby to latch.*

## BREASTFEEDING TIPS

| | |
|---|---|
| TIP 1: | Consider the individual needs of a mother and baby when choosing a feeding position. Every mother and child are different. Each pair are different shapes and sizes and have unique skills and needs. Each of these differences inform which position will work best. |
| TIP 2: | Consider the comfort of the mother. How does the mother's body feel when she breastfeeds her child? Does her back hurt? Does her arm become tired holding baby? Can she maintain the position for the length of the feeding? Find a position that not only meets the needs of the baby but is also sustainable and healthy for the mother. Healthy and happy mothers are vital for growing healthy and happy children. |
| TIP 3: | As children grow, positions may change. As a child gets bigger and as their skills develop, the position they breastfeed in may need to change with them. It's normal and essential for positions to change over time to fit a child's growing needs. |
| TIP 4: | Finding the best position can take work. Sometimes mothers will need to try several positions until they find the one that works just right. Take your time, watch and see how a baby responds and make small changes as needed. |
| TIP 5: | Healthy mothers = healthy babies. It's important for mothers to take good care of themselves. This means eating healthy foods, drinking plenty of liquids, getting plenty of rest and avoiding high stress, smoking, drugs and alcohol, and certain medications. |
| TIP 6: | Seek out support as soon as possible. Although breastfeeding seems simple, it can take time and practice. It's common and acceptable for women to seek help, especially new mothers or mothers of babies with disabilities or medical needs. When mothers are struggling with breastfeeding, it's important they seek support as soon as possible from skilled family or community members. |

## FINAL THOUGHTS

Breastfeeding is a beautiful act of love that a mother offers to her child. And with this great act, come many incredible benefits for both baby and mom. Some mothers will not need any additional support when breastfeeding their child. However, many mothers do greatly benefit from the assistance, support and care of family and community members. Use this manual as a helpful resource for yourself if you are a mother, or when supporting mothers in your community. Additionally, when met with questions about breastfeeding or challenges, seek out the support of others. Often, sharing challenges or questions with other mothers, caregivers and team members can lead to greater problem-solving and creative solutions as well as alleviate caregiver distress.

*For more information on Breastfeeding, refer to Appendix 9J-1, Appendix 9I-1 and Appendix 9N.*

# SECTION 1.5: BOTTLE FEEDING BASICS

## WHAT IS BOTTLE FEEDING?

Ideally, all babies would be breastfed. However, this is not always possible. Bottle feeding offers another way to provide babies with necessary nutrition. There are many different types of bottles and nipples that can be used for feeding depending on a baby's needs. Additionally, breast milk and formula can both be offered in a bottle.

## WHAT IS THE IMPORTANCE OF BOTTLE FEEDING

*Bottle feeding is important because:*

1. It is often the first experience a baby has with feeding.
2. It assists with the development of other important skills for feeding and talking such as chewing foods, eating or drinking off of utensils and cups.
3. It offers babies the frequent experience of closeness and interaction with a responsive and attuned caregiver.

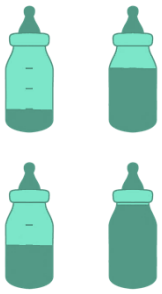
## WHAT ARE THE BENEFITS OF BOTTLE FEEDING?

Bottle feeding has many benefits for both babies and their caregivers. When good bottle feeding is provided to babies, feedings are safer, more efficient and more enjoyable.

*Good bottle feeding:*

1. Helps babies feel warm and full
2. Offers comfort and warmth from a caring adult
3. Teaches children they can depend on others to take care of them and meet their needs

| BENEFITS OF GOOD BOTTLE FEEDING | RISKS OF POOR BOTTLE FEEDING |
|---|---|
| ↓ OCCURRENCE OF ASPIRATION, ILLNESS, DEATH | ↑ OCCURRENCE OF ASPIRATION, ILLNESS, DEATH |
| ↑ efficiency of feedings (faster) | ↓ efficiency of feedings (slower) |
| ↑ oral intake during feedings | ↓ oral intake during feedings → food refusals |
| ↑ enjoyment during feedings (for children and caregivers), and positive feelings toward eating develop | ↓ enjoyment during feedings (for children and caregivers), and negative feelings toward eating develop |
| ↑ capacity for children to transition to greater challenges (solid foods, cup drinking, utensil use) | ↓ capacity for children to transition to greater challenges (solid foods, cup drinking, utensil use) |



## TYPES OF BOTTLES AND NIPPLES[18]

There are many different types of bottles and nipples, including various shapes, sizes, styles and materials. It's important that the nipple shape, size and flow speed match a baby's mouth, sucking skills and developmental and physiological needs. So, as caregivers, it's helpful to understand the differences in order to make the best choice for each baby.

**BOTTLE SHAPES: STANDARD ("STRAIGHT") OR BENT ("ANGLED")**



Standard "straight" bottles are most common and typically the easiest to find. Bent "angled" bottles are helpful for keeping a baby's chin tucked while bottle feeding. They are also designed to reduce gas and fussiness by limiting a baby's opportunity for swallowing air when fed.

## BOTTLE SIZES: SMALL AND LARGE

Smaller bottles (120 ml or less) are useful when the baby you're feeding is small and he isn't yet taking large volumes. Larger bottles are helpful because they hold greater volumes of liquid for the growing baby. Pro-Tip: Smaller bottles are easier for a baby to hold when they are learning how to feed themselves. Smaller bottle = lighter weight.

## BOTTLE MATERIALS: PLASTIC AND GLASS

Plastic baby bottles are most common and typically the easiest to find. They also won't break if dropped and they are lightweight, which can be nice for a caregiver. Glass bottles are sturdier; however, they can break if dropped and they are much heavier to hold for caregivers and babies.

## BOTTLE NIPPLE SHAPES

Nipples come in a variety of shapes. Standard nipples are typically tall or "long" and round on the top. Orthodontic nipples are made to fit the inside of a baby's mouth. They are typically wide at the base and tip and narrow in the middle. Other nipples are shaped to look like a woman's nipple. Nipples are made in different shapes because every baby's mouth is shaped differently. For example: Some babies need a shorter nipple to fit inside their small mouth.

**From Left: Straight nipple, natural nipple, and two varying standard nipple sizes.**

## BOTTLE NIPPLE SIZES

The nipple size determines the actual flow of the liquid from the nipple. The size given to a nipple denotes the size of the hole. Typically, the smaller the size (number), the slower the flow of liquid from the nipple. The larger the size (number), the faster the flow of liquid from the nipple. It's important to understand the flow of the nipple because choosing the wrong size may lead to a baby who feeds in an unsafe or uncomfortable manner (too slowly, too quickly or swallows too much air).

Below are typical nipple sizes (or levels) in order from smallest hole (slowest rate) to largest hold (fastest rate).

*Level #: Nipple levels can usually be found printed on the bottom or side of the nipple. Look closely as they are sometimes very small and hard to see!*

| NIPPLE SIZE/LEVEL | TYPICAL AGES |
|---|---|
| Ultra-Preemie Size | Premature babies → 3 months old |
| Preemie Size | Premature babies → 3 months old |
| Size/Level 1 | 0 → 6 months old |
| Size/Level 2 | > 6 → months old |
| Size/Level 3 | > 6 → months old |
| Size/Level 4 | > 6 → months old |

*<u>Remember:</u> Nipple sizes/levels and associated ages are a general guideline and do not necessarily need to be strictly followed for every baby. Not every baby will use every size of nipple. Some babies will use the same size nipple for the entire time they are bottle fed. It is most important to choose a nipple size based on what the baby's needs are and what flow rate they are best able to safely manage.*

*<u>Remember:</u> Nipples should never be cut to change the flow rate. This can be dangerous for a baby.*

**A caregiver feeds a young baby using a Dr. Brown's standard shaped plastic bottle and standard nipple.**

## BOTTLE NIPPLE MATERIALS

Bottle nipples are typically made of silicone or latex. Many babies will often have a preference or a need for a specific material. For example: A baby with a weak suck may be more successful when sucking from a softer latex nipple. Note: Be mindful of latex allergies. Below are the primary differences between silicone and latex nipples.

| *Silicone* | *Latex* |
|---|---|
| More Durable | Softer |
| Easier to clean | Can hold odor of formula or milk |
| Can last up to 1 year | Wears out faster |

## WHEN TO CLEAN AND REPLACE BOTTLES AND NIPPLES

*Always boil* in hot, soapy water or in a dishwasher if available

*Always sterilize* bottle and bottle parts in boiling water for five minutes

*Always wash* bottles and nipples after every single feeding

*Regularly check* nipples wear and tear

*Always replace* any bottles and nipples that show signs of excessive wear or

# KEY ELEMENTS OF BOTTLE FEEDING

| KEY ELEMENTS | SUCCESSFUL BOTTLE FEEDING SIGNS |
|---|---|
| Feeding position matches a baby's needs | ○ Safe, supportive, and follows key elements of positioning (Refer to Chapter 1, Section 1)<br>○ Baby and caregiver are comfortable<br>○ Baby is engaged for feeding (not falling asleep)<br>○ Baby is calm for feeding (not fussy)<br>○ Feeding takes 30 minutes or less |
| Bottle, nipple and flow rate match a baby's needs | ○ Rate is not too fast or too slow for baby<br>○ No leaking liquid from mouth, frequent coughing, choking or gagging<br>○ Baby is alert and engaged for feeding (not falling asleep)<br>○ Baby comfortably sucks, swallows and breathes while feeding – no gasping for breath<br>○ Baby is calm for the feeding (not fussy)<br>○ Feeding takes 30 minutes or less |
| Feeding cues are understood and respected | ○ Caregivers anticipate baby's hunger before baby starts to cry<br>○ Caregivers anticipate baby's fullness promptly and do not overfeed or force feed<br>○ Baby enjoys feedings and actively participates |
| Breaks are provided as needed | ○ Caregivers offer breaks for burping, diaper changes or positioning changes<br>○ Caregivers offer smaller, more frequent feedings, if needed<br>○ Caregivers are attentive to baby's signs of fatigue (Refer to Appendix 9L-2)<br>○ Baby feeds efficiently for 30 minutes or less |
| Social interaction is provided often | ○ Caregivers smile, talk, sing and gaze at baby during feedings<br>○ Baby enjoys feedings and actively participates<br>○ Baby grows and thrives |

# BOTTLE FEEDING TIPS FOR BABIES

| | |
|---|---|
| TIP 1: | Each baby needs individual consideration when deciding on a bottle, nipple and flow rate. Not every baby will do well with the same bottle, nipple and flow rate. Choose what will work best to match a baby's individual needs. |
| TIP 2: | A baby's developmental skill level will impact the bottle, nipple and flow rate they need. Choose based on a baby's needs, skill-level and age. For example: A 4-month-old baby who is very weak may do best using a slower flow nipple, despite her growing age. |
| TIP 3: | Pay attention to what the baby is telling you. Make changes to a bottle, nipple or flow rate when the baby is showing you that a change needs to be made. |
| TIP 4: | Always check the flow rate of the bottle before beginning a feeding. An ideal flow rate from a nipple is when a few drops of liquid drip out after turning the bottle upside down. The dripping should stop shortly afterward. If liquid is too fast for a baby, try a nipple with a smaller hole. If liquid is flowing too slowly for a baby and they are sucking too hard, try a nipple level with a larger hole. |
| TIP 5: | Finding the best bottle, nipple, and/or flow can sometimes take a lot of work (but it is worth it). Even a baby who is typically developing may require caregivers try different options until they find the one that works just right. Take your time, make one change at a time so that a baby is not overwhelmed, watch and see how a baby responds, and make small adjustments as needed. |
| TIP 6: | Good positioning will lead to good bottle feeding. Finding a safe and comfortable position for a baby during bottle feedings is critical. Provide a position that offers adequate physical support and make necessary adjustments. |
| TIP 7: | Always make a connection. Offer positive interactions with a baby while bottle feeding each and every day. Many babies will actually feed better when gently spoken and sang to, smiled at and engaged with during a feeding. |

## FINAL THOUGHTS

The primary goal of bottle feeding is to provide positive feeding experiences for both a baby and caregiver that also supports the nutritional intake and growth of the baby. Not all bottles, nipples and flow rates will work with every baby. Finding a bottle, nipple and flow rate that are a good match for a baby is essential. When experiencing challenges, seek support of others. Sharing past experiences, challenges and questions can lead to greater problem-solving and creative solutions and alleviate caregiver and child distress.

*For more information on positioning, refer to Chapter 1, Section 1 and Chapter 2, Section 3.*

*For more information about bottle feeding challenges, refer to Chapters 2 and 7 and Appendix 9M.*

# SECTION 1.6: SPOON FEEDING BASICS

## WHAT IS SPOON FEEDING?

Spoon feeding is typically the first feeding step that a child experiences after breast or bottle feeding. Spoon feeding is usually introduced around 6 months old. This starting age is important because it's when a child has stronger muscles in her head, neck and trunk and she has learned to control her body for sitting and eating solid foods. At this age, children are also learning to bring objects to their mouths ("mouthing"), and they are exploring the world by mouthing everything. It's an exciting and important stage in a child's development.

## WHAT IS THE IMPORTANCE OF SPOON FEEDING?

*Spoon feeding is important because:*

1. It is a primary step toward developing oral motor skills.
2. It provides the chance to explore new textures.
3. It develops a child's sense of taste.
4. It assists with developing skills for cup drinking and chewing.
5. It is a fun and new experience and way for a child and caregivers to interact

| BENEFITS OF SPOON FEEDING | DESCRIPTIONS (WHAT THIS LOOKS LIKE) |
|---|---|
| Oral Motor Skills  | ○ Teaches children how to open and close their mouths<br>○ Teaches children how to remove food from a spoon using their lips<br>○ Teaches children how to move food around in the mouth using their tongues |
| Sensory Development  | ○ Introduces new and different food flavors, textures, temperatures and thicknesses for developing taste |

Relationships and Language

- Provides children the chance to engage in meaningful interactions with caregivers
- Prepares children for social routines for mealtimes (hand washing, sitting to eat, taking turns, using language, following directions, etc.)

## TYPICAL SPOON FEEDING TIMELINE: DEVELOPMENTAL STEPS FOR SPOON FEEDING[9]

There is a typical time frame (age range) for when a child learns to eat from a spoon. However, it is imperative to also consider a child's developmental skill level when deciding when to introduce spoons. Although a child may be a certain age, it is more important that he has the necessary skills in order to become successful eating from a spoon.

*A child will show you when he is ready to eat from a spoon and which spoon works best.*

Below are the typical developmental skills that support the process of learning to eat from a spoon and the developmental age at which they are often seen.

| DEVELOPMENTAL AGE | DEVELOPMENTAL SKILL |
|---|---|
| 2 Months | Child can bring hands to mouth when on tummy |
| 3 Months | Child can bring hands to mouth when on back |
| 4 Months | Child can bring hands to mouth when holding objects |
| 9 Months | Child can hold and bang a spoon |
| 12-14 Months | Child can bring a spoon with food to mouth – will turn spoon over when moving to mouth |
| 15-18 Months | Child can scoop food onto a spoon and bring to mouth – some spilling |
| 24 Months | Child can feed himself from spoon with his palm of hand facing up |
| 31-32 Months | Child can feed himself well with minimal spilling |
| 30-36 Months | Child can use a fork to poke foods |

*Learning to eat from a spoon takes practice and time. On average, children will master using a spoon by 2-3 years old. This means they will need extra support from caregivers for quite some time. Be patient.*

## TYPES OF SPOONS[9]

There are many different types of spoons of various shapes, sizes, styles and materials. Whatever the type of spoon chosen, it must match a child's mouth size and shape and her developmental needs. It's helpful for both caregivers and the child to understand the differences in order to make the best choice for every child.

### SPOON SHAPES: WIDE AND NARROW; DEEP AND SHALLOW BOWLS

Spoons come in a variety of shapes, in particular, the bowl of the spoon can vary greatly. Spoons can have a wide or narrow bowl and the bowl can be shallow or deep. Deeper bowls require more effort and skill removing food from the spoon. Shallow bowls require less effort and skill and can be helpful when working with new feeders or children with poor oral motor skills. For example: A young child with a small mouth will have difficulty eating from an adult sized (wide and deep) bowl of a spoon. She will do better with a narrow and shallow bowl that fits her smaller mouth.

**Top Photo (Left to Right): Narrow and Wide Spoons**

**Side Photos (Left to Right): Deep Bowl and Shallow Bowl of Spoons**

**When choosing a spoon, the shape of the bowl must match (fit) the size and shape of the child's mouth.**

**Select a handle that suits the primary feeder best.**

## SPOON SIZES: LONG AND SHORT HANDLES

Choosing a spoon with an appropriately sized handle depends on if the child is self-feeding or being fed by a caregiver. Smaller, child-sized handles can become tiring for caregivers to use, while longer handles can make aiming for the mouth more challenging for children feeding themselves. If both the caregiver and child are doing the feeding during a meal, try using two different sized spoons.

## SPOON MATERIALS: METAL AND PLASTIC; HEAVY AND LIGHT

Spoons can be made of different materials (metal, plastic, coated). Children will often have a preference or need for a specific material. Although metal spoons are more durable, for children with sensitive mouths, the cold and hard feeling can be off-putting. Metal spoons are also heavier to hold and they can damage a child's gums or teeth if they bite down on them. Plastic spoons can be more comfortable for children and lighter when held, but they aren't as durable. They can also be dangerous for children with strong bite reflexes. Spoons with a coated bowl are helpful for children who are prone to biting or who are hypersensitive.

*Caregivers must choose a spoon that is safe, allows for easy self-feeding and fits the child's unique sensory and physical needs.*

## WHEN TO CLEAN AND REPLACE SPOONS

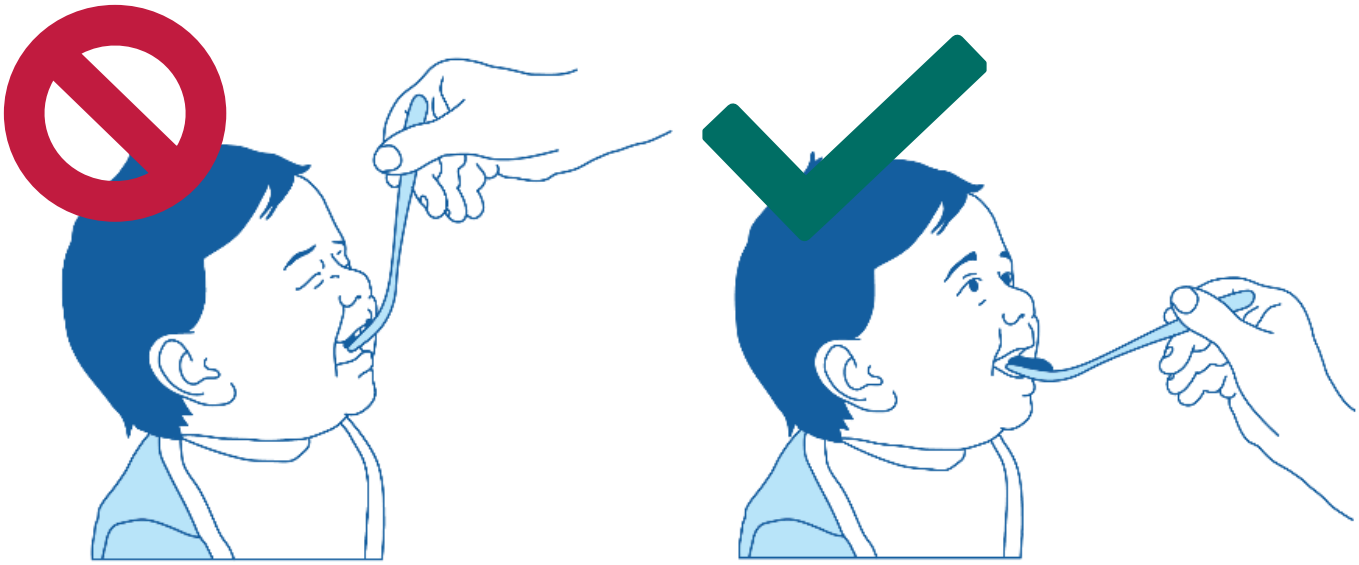
Before using new spoons, always wash them in hot, soapy water or in a dishwasher. Spoons should also always be washed after every single feeding. Always replace any spoons that show signs of excessive wear or that may be harmful to a child.

**Young children enjoy feeding themselves using spoons that fit their smaller sized hands and mouths. When given the right spoons, feeding yourself becomes easier.**

## GENERAL INSTRUCTIONS FOR SPOON FEEDING[19]

- *Step 1:* Introduce spoons when a child shows they are physically ready (sitting up and holding head and neck upright, of an appropriate age and is showing interest in spoons and solid foods).
- *Step 2:* Offer tastes of food on a pacifier or finger if introducing a spoon is challenging or upsetting to a child.
- *Step 3:* Hold the spoon 25 to 30cm (10-12 inches) from the child's face. Let him see the spoon and wait for him to open his mouth to show he is ready.
- *Step 4:* Place the spoon on the child's bottom lip and let him suck or remove the food off of the spoon.
- *Step 5:* Place the spoon in the middle of the child's tongue.
- *Step 6:* Let the child try to remove the food from the spoon using his lips. Or pull the spoon directly out of the child's mouth.

- *If a child is not interested or is distracted, do not force or slip the spoon into his mouth. This can lead to food refusals.*
- *Do not place food at the top of the child's mouth and scrape off onto the top lip or gums. This is not where food naturally goes. It does not allow the child to be an active eater, using his lips and tongue and cheeks to remove the food themselves.*
- *Do not place a spoon deep in a child's mouth. This can lead to gagging and vomiting.*
- *Do not scrape food off of a child's lips or face. This can lead to spoon feeding refusals because it doesn't feel good.*



*Improper (left) and proper (right) spoon feeding technique*

**REMEMBER**

- **It's ok if a child starts reaching for the spoon. Let him try to guide the spoon to his mouth.**
- **It's ok if a child gets messy during a mealtime! Clean up the mess afterward.**

# KEY ELEMENTS OF SPOON FEEDING

| KEY ELEMENTS | SIGNS OF SUCCESSFUL SPOON FEEDING |
|---|---|
| Appropriate Position (matches child's needs) | ○ Safe, supportive and follows key elements of positioning including being fed in a seated, upright position<br>○ Child and caregiver are comfortable<br>○ Child is engaged and interested (awake, reaching for spoon, opening mouth for spoon, etc.)<br>○ Child is calm for feeding (not fussy) |
| Appropriate Spoon (matches child's needs) | ○ Bowl of spoon fits comfortably and easily in child's mouth<br>○ Child comfortably and easily removes food from bowl – large amounts of food aren't left on spoon after bites<br>○ Child is not overly sensitive to spoon material and is not flinching, gagging, pulling away, etc.<br>○ Handle and weight of spoon are comfortable for caregiver and allow child to hold, scoop, lift and bring toward mouth when she begins feeding herself |
| Appropriate Pacing | ○ Caregiver offers child ample time to take bites off of spoon before removing from her mouth<br>○ Caregiver offers child ample time to swallow bites before introducing another<br>○ Feeding takes 30 minutes or less |
| Appropriate Foods | ○ Child is offered foods thinned with liquids when first learning to eat from a spoon<br>○ Child is gradually offered different food textures as she becomes more skilled eating from a spoon<br>○ Child is offered foods that stick to a spoon as she begins practicing feeding herself |
| Appropriate Bite Sizes | ○ Child is offered small bites when she first begins eating from a spoon (1/2 teaspoon per bite)<br>○ Child is gradually offered larger bites as she becomes more skilled eating from a spoon |

# SPOON FEEDING TIPS FOR EVERY CHILD

| | |
|---|---|
| TIP 1: | Not every child will do well with the same spoon. Consider children's individual needs. Finding the best spoon can sometimes take a lot of work. Even a child who is typically developing, may need to try several spoons until they find the one that works just right. Take your time, observe how a child does and make small changes as needed. |
| TIP 2: | Always consider a child's developmental skill level when choosing a spoon. Do not only consider a child's age when thinking about introducing spoons. Children need to be able to sit upright and have good head and neck control. |
| TIP 3: | Eating from a spoon takes time and practice. Learning to eat food from a spoon is a process, whether a child has a disability or medical needs or not. The only way to learn is through lots of daily, frequent (and often messy) practice. |
| TIP 4: | Good positioning is key. Finding a safe and comfortable position for a child who is spoon feeding is critical. A stable position will also make self-feeding much easier. |
| TIP 5: | Start small and slow. Keep bite sizes on the small side and use a slower rate of feeding during meals — especially when first introducing spoons to a child. The slower the rate and the smaller the bites, the easier and safer it will be for a child to eat and swallow. Remember, when a child first learns to eat from a spoon, bottle or breastfeeding will continue to be their primary source of nutrition. |
| TIP 6: | Children learn best in the context of positive relationships. Offering positive interactions with a child while spoon feeding is the best way to support this new learning process. |
| TIP 7: | Messy is OK. Spoon feeding can be messy. But getting messy is healthy because it teaches children how foods feel, widens their interests in trying foods and prepares them for feeding themselves. |

## FINAL THOUGHTS

Spoon feeding is a child's first opportunity to explore solid foods. Eating is a rich sensory experience, and the first tastes, smells and touches of foods can be fun and thrilling for a child. Knowing when a child is ready to try spoon feeding and finding a spoon that is a good match are essential to making mealtimes successful and enjoyable. Remember, when met with spoon feeding challenges, seek out the support of others. Often, sharing past experiences, challenges and questions with other caregivers and team members can lead to greater problem-solving and creative solutions, alleviating any caregiver and child distress.

*For more information on spoon feeding readiness, introducing spoons, and encouraging spoon feeding, refer to Chapters 2 and 3 and Appendices 9H and 9L-3.*

# SECTION 1.7: CUP DRINKING BASICS

## WHAT IS CUP DRINKING?

Cup drinking is usually the next feeding step that children experience during their first year of life after the introduction of the spoon. Most children can be introduced to a cup between 6-9 months old. This starting age is important because it's when a child is learning to crawl. This activity builds trunk (body), shoulder and neck strength that also supports the jaw for drinking from a cup. By this age, children have had practice eating from a spoon, which is excellent preparation for cup drinking. It's also a great example of how all parts of the body and development are connected.

## WHAT IS THE IMPORTANCE OF CUP DRINKING?

*Cup drinking is important because:*

1. It is critical in a child's development of oral motor skills.
2. It assists with development of skills for chewing and using hands and fingers for self-feeding.
3. It is a fun, new experience and way for children and caregivers to interact.

| BENEFITS OF CUP DRINKING | DESCRIPTIONS (WHAT THIS LOOKS LIKE) |
|---|---|
| Oral Motor Skills  | ○ Teaches children how to stabilize (steady) the lips and jaw for supporting a cup<br>○ Shows children how to pull back the tongue for liquids<br>○ Teaches children how to open the mouth for different amounts of liquids<br>○ Shows children how to control faster flowing liquids using the lips, cheeks, tongue and jaw |
| Sensory Development  | ○ Offers children practice managing different sip sizes<br>○ Provides children the chance to try different liquid flavors, temperatures and thicknesses |
| Relationships and Language  | ○ Offers children the chance to engage in meaningful interactions with caregivers<br>○ Prepares children for social routines for mealtimes such as: hand washing, sitting to eat or drink, taking turns, using language and following directions |

# TYPICAL CUP DRINKING TIMELINE: DEVELOPMENTAL STEPS FOR CUP DRINKING[9]

There is a typical time frame (age range) for when a child learns to drink from a cup. However, it is imperative for caregivers to consider the child's age, and his developmental skill level when deciding when to introduce cups. Although a child may be a certain age, it is more important that he has the necessary skills in order to become successful drinking from a cup.

*Introducing cups is a process that takes practice and time. On average, children will master (open) cup drinking by around 3-4 years old. This means that they will need extra support from caregivers for quite some time. Be patient.*

Below are the typical developmental skills that support the process of learning to drink from a cup and the developmental age at which they are often seen:

| DEVELOPMENTAL AGE | DEVELOPMENTAL SKILL |
|---|---|
| 6 Months | Child can take sips from a cup when held by a caregiver |
| 12 Months | Child can hold cup and take sips with some spilling |
| 20-22 Months | Child can hold small cup in one hand while drinking |
| 30 Months | Child can pour liquid from a container |

**A young boy drinks from an open cup all by himself.**

## TYPES OF CUPS[9]

There are many different types of cups, including various shapes, sizes, styles and materials. The type of cup must match a child's mouth, oral motor skills and developmental and physical needs. It's helpful to understand the differences in order to make the best choice for every child. Ultimately, a child will let caregivers know which cup they prefer and works best.

### CUP TYPES: OPEN, SIPPY, STRAW

Cups come in a variety of types including open cups, sippy cups and cups with straws.

*Open cups* do not have a lid. They offer the greatest oral motor learning experience for a child. They require a child to use every part of their mouth, which in turn makes their mouth muscles grow stronger.

*Sippy cups* have a lid with a spout that keeps liquids from spilling. They offer convenience, as they can be moved around easily and create less of a mess. However, sippy cups do not offer the same skill development as open cups.

*Straw cups* have a straw and they can vary when it comes to having a lid. They are a good option for encouraging oral motor development and when combined with a lid, they can be very handy.

**When choosing the type of cup, it's best to offer a variety of options for a child to practice with over time.**

*From Left: Handle Cup, Smooth Cup, Nosey "cut-out" Cup*

## CUP SHAPES: HANDLES, SMOOTH, CUT-OUT

Cups come in many different shapes. Cups can be smooth without handles, they can have one or two handles or they can have cut-outs that make drinking easier and safer for certain children.

*Smooth cups* without handles are very common and easy to find. They work well for children who have typical fine motor/hand skills.

*Cups with handles* are helpful for children who may need something to grip when drinking from a cup.

*Cut-out cups* work well for children who need to keep their heads and chins forward and down instead of tilting up and back to drink. They are helpful for caregivers who assist children with drinking. They allow you to see the liquid pour out, which helps control the sip size and rate of drinking for a child.

*When choosing a cup, the shape must fit the size and shape of the child's hands and match their physical needs.*

## CUP SIZES: BIG AND SMALL

Cups come in a variety of sizes. Choosing a cup size depends on if the child is independently drinking or if they are being fed liquids by a caregiver.

Smaller, child-sized cups can become tiring for caregivers to use, while larger cups can make holding, lifting and aiming for the mouth more challenging for children drinking on their own.

*Select a cup size that suits the primary feeder best.*

## CUP MATERIALS: GLASS, CERAMIC, PLASTIC, PAPER; HEAVY AND LIGHT

Cups are made of many different materials such as: glass, ceramics or plastic. Children will often have a preference or need for a specific material.

*Glass and ceramic cups* are more durable, but for children who have sensitive mouths, the cold and harder textures can be off-putting. These types of cups are heavier and harder to hold, they can damage a child's gums or teeth and be dangerous for children with strong bite reflexes.

*Plastic and paper cups* can be more comfortable for children and lighter and easier to hold, but they are not as durable and provide less stability for new cup drinkers who need to bite the lip of a cup for added support.

*Caregivers must choose a cup that is safe, allows for easy self-feeding, and fits the child's unique sensory and physical needs.*

**A young girl takes a sip from an open, plastic cup.**

### WHEN TO CLEAN AND REPLACE CUPS

Before using new cups, always wash them in hot, soapy water or in a dishwasher. Cups should also always be washed after every single feeding. Cups should be regularly checked for wear and tear. Always replace any cups that show signs of excessive wear or that may be harmful to a child.

*Avoid using glass or metal cups with young children first learning to use cups. These cups can damage teeth and gums, break in a child's mouth causing injuries and heighten a child's sensitivities making drinking a negative experience. Offer a softer, safer type of cup made of plastic.*

## GENERAL INSTRUCTIONS FOR CUP DRINKING[19]

1. *Step 1:* Introduce cups when a child shows they are physically ready (sitting up and holding head and neck upright) of an appropriate age, and they are showing interest in cup drinking).
2. *Step 2:* Offer small tastes of familiar soft foods or thickened liquids off of the lip of a cup if cup drinking is challenging or upsetting to a child. Small amounts are less overwhelming.
3. *Step 3:* Hold the cup far enough away from the child's face so he can see the cup and contents. Let him see the cup and wait for him to open his mouth to show he is ready.
4. *Step 4:* Place the cup on the child's bottom lip, tilt slightly and pour small sips at a time into his mouth.
5. *Step 5:* Let the child try to remove the liquid from the cup using his lips, jaw and tongue.

- *If a child is not interested or is distracted, do not force or sneak the cup into his mouth. This can lead to refusals.*
- *Do not pour liquids directly onto the tongue of a child's open mouth. This is not how we drink.*
- *Do not tip a cup too high or pour too quickly. This will make more liquids pour out too fast for a child to manage.*
- *Do not scrape liquids off of a child's lips or face. This can lead to refusals because it doesn't feel good.*

*<u>Remember:</u> It's OK if a child starts reaching for the cup. Let him try to guide the cup to his mouth.*

*It's OK if a child gets messy during a mealtime. This is all part of the process to help them learn.*

**A little girl learns how to drink from a special "nosey" cut-out cup.**

# KEY ELEMENTS OF CUP DRINKING (AGES 6-9+ MONTHS)

| KEY ELEMENTS | SIGNS OF SUCCESSFUL CUP DRINKING |
|---|---|
| Appropriate Position (matches child's needs) | ○ Safe, supportive and follows key elements of positioning including being fed in a seated, upright position<br>○ Child and caregiver are comfortable<br>○ Child is engaged and interested (awake, reaching for cup, opening mouth for cup, etc.)<br>○ Child is calm for feeding (not fussy) |
| Appropriate Cup (matches child's needs) | ○ Lip of cup fits comfortably and easily in child's mouth<br>○ Child comfortably and easily swallows liquids from cup – large amounts of liquid aren't spilled<br>○ Child is not overly sensitive to cup material and is not flinching, gagging, pulling away, excessive biting, etc.<br>○ Shape, size and weight of cup are comfortable for caregiver and allow child to hold, lift and bring toward mouth when self-feeding |
| Appropriate Pacing | ○ Caregiver offers child ample time to take single sips from cup before removing from her mouth<br>○ Caregiver offers child ample time to swallow sips before introducing another<br>○ Caregiver offers child one sip at a time from a cup<br>○ Feeding takes 30 minutes or less |
| Appropriate Liquids | ○ Child is offered thicker (slower flowing) liquids when first learning to drink from a cup such as yogurt drinks or milk (if appropriate)<br>○ Child is gradually offered thin liquids as she becomes more skilled drinking from a cup<br>○ Child is offered thicker (slower) liquids as she begins practicing drinking independently<br>○ Child is offered thickened (slower) liquids if she shows signs of difficulty with thin (faster) liquids such as: coughing or choking. |
| Appropriate Sip Sizes | ○ Child is offered small, single sips when she first begins drinking from a cup<br>○ Child is gradually offered larger sips as she becomes more skilled drinking from a cup |

## CUP DRINKING TIPS FOR EVERY CHILD

| | |
|---|---|
| TIP 1: | Not every child will do well with the same cup. Consider children's individual needs and abilities. Finding the best cup can sometimes take a lot of work. Even a child who is typically developing, may need to try several cups until they find the one that works just right. Take your time, observe how a child does and make small changes as needed. |
| TIP 2: | Always consider a child's developmental skill level when choosing a cup. Do not only consider their age when thinking about introducing cups. Children need to be able to sit upright and have good head and neck control. |
| TIP 3: | Drinking from a cup takes time and practice. Learning to drink from a cup is a process, whether a child has a disability or medical needs or not. The only way to learn is through lots of daily, frequent practice. |
| TIP 4: | Good positioning is key. Finding a safe and comfortable position for a child who is cup drinking is critical. A stable position will make independent drinking that much easier, too. |
| TIP 5: | Start small and slow. Keep sip sizes on the small side and start with a slower rate of sips — especially with new drinkers. The slower the rate and the smaller the sips, the easier and safer it will be for a child to manage and swallow. Remember, when a child first learns to drink from a cup, bottle or breastfeeding continue to be their primary routes of liquid nutrition. |
| TIP 6: | Children learn best in the context of positive relationships. Offering positive interactions with a child while cup drinking is the best way to support this new learning process. |
| TIP 7: | Messy is OK. Cup drinking can be messy. But getting messy is healthy because it teaches children how liquids feel, widens their interests in trying more to drink and it prepares them for drinking independently. |

## FINAL THOUGHTS

Cup drinking is an exciting experience for a child, but sometimes it can be challenging. Knowing when a child is ready to try cup drinking and finding a cup that is a good match are essential to making mealtimes successful and enjoyable. When met with cup drinking challenges, seek out the support of others. Often, sharing past experiences, challenges and questions with other caregivers and team members can lead to greater problem-solving and creative solutions and alleviate caregiver and child distress.

*For more information on cup drinking readiness, introduction of cups, and encouraging cup drinking, refer to Chapters 2 and 3.*

# SECTION 1.8: SELF-FEEDING BASICS

## WHAT IS SELF-FEEDING?

Self-feeding is when children feed themselves using their own fingers, utensils and cups. It is the process of setting up, arranging and bringing food and liquid from a plate, bowl or cup to their mouth. Self-feeding using the fingers typically begins around 6-7 months old when children start eating solid foods and show a growing interest in trying foods using their hands. By 12-14 months old, children take on more of an active role using spoons and cups on their own to feed themselves. Regardless of the method for self-feeding, when offered these experiences at the right time in life, children can learn these vital lifelong skills.

## WHAT IS THE IMPORTANCE OF SELF-FEEDING?

Learning to self-feed is an exciting and motivating time in a child's life. It's also an important skill that positively impacts many aspects of a child's development.

*Self-feeding is important because:*

1. Children experience new sensations including different textures and temperatures.
2. It helps develop important skills such as using the fingers and hands for complex movements.
3. It builds feelings of independence and confidence for children.
4. It helps children understand their own feelings of hunger and fullness.
5. It is a fun and rewarding experience for children and caregivers.

| BENEFITS OF SELF-FEEDING | DESCRIPTIONS (WHAT THIS LOOKS LIKE) |
|---|---|
| Fine Motor Skills  | ○ Teaches children how to use their fingers and hands for grasping and releasing foods, utensils and cups<br>○ Teaches children how to pick up and hold various sized foods and objects<br>○ Helps children learn how to bring foods, utensils and cups to the mouth |
| Sensory Development  | ○ Provides the chance to experience and explore different food textures, temperatures and thicknesses<br>○ Prepares children for becoming more comfortable trying new foods after touching them first |

| | |
|---|---|
| Relationships and Language  | ○ Offers the chance to engage in meaningful interactions with caregivers<br>○ Prepares children for social routines for mealtimes such as: hand washing, sitting to eat, serving themselves and others, pouring and scooping, using language and following directions |
| Independence and Confidence  | ○ Offers children the chance to do tasks on their own which helps brain development<br>○ Offers a fun and rewarding experience for children that helps them feel good and enjoy mealtimes |
| Learning About Self  | ○ Allows children the chance to listen to their bodies and recognize when they are hungry and full<br>○ Teaches children concepts such as how to take small bites and sips, slow down when eating and drinking, chew food well, etc. |

**A group of young children happily feed themselves their afternoon lunch.**

*<u>Remember:</u> self-feeding does not make more work. When children learn to feed themselves, it actually leads to less intensive work for caregivers.*

## TYPICAL SELF-FEEDING TIMELINE: DEVELOPMENTAL STEPS FOR SELF-FEEDING[9]

Starting around 6-7 months old is the typical timeframe (age range) when a child learns to feed herself using hands, utensils and cups. However, it is still imperative for caregivers to consider not only the child's age, but also her developmental skill level when deciding when to encourage self-feeding.

Although a child may be a certain age, it is more important that she has the necessary skills to become a successful self-feeder.

Below are the typical developmental skills that support the process of learning to eat using hands, utensils and cups and the developmental age at which they are often seen.

| DEVELOPMENTAL AGE | DEVELOPMENTAL SKILL |
|---|---|
| 2-3 Months | Child can bring hands to mouth when on tummy and back |
| 3-4 Months | Child recognizes breast and/or bottle |
| 4 Months | Child can bring hands to mouth when holding objects |
| 5 Months | Child can independently hold bottle with one or both hands |
| 5-6 Months | Child can mouth solid foods such as baby cookie/cracker/biscuit, etc. |
| 6-7 Months | Child can feed self cookies/crackers/biscuits and drink from a cup held by caregiver |
| 9 Months | Child can independently feed self using fingers and hold a spoon |
| 12 Months | Child can hold and drink from cup with minimal spilling |
| 12-14 Months | Child can bring loaded spoon to mouth |
| 15-18 Months | Child can scoop food with spoon and bring to mouth |
| 20-22 Months | Child can drink from a cup while holding it in one hand |
| 24 Months | Child can bring spoon to mouth with a more mature grasp (palm up) |
| 30 Months | Child can pour liquids from one container to another |
| 31-32 Months | Child can independently feed self with minimal spilling |
| 30-36 Months | Child can stab or pick up food using a fork |

*Offering a child many opportunities each day to explore a variety of foods, cups and utensils will speed along the process of learning how to feed themselves.*

## TYPES OF SELF-FEEDING

There are many ways a child learns to feed themselves. Initially, they learn how to use their fingers and hands for eating. Soon after, they begin learning the process of feeding themselves using various utensils and cups. As a caregiver supporting self-feeding skills of children, it is critical to offer every child many opportunities to practice these skills and during appropriate windows of time.

### FINGER FEEDING

Finger feeding is the first way a child learns to feed himself. Children grasp and pick up foods with their hands and bring them to their mouths to eat and enjoy. It's a very rewarding activity! Finger feeding also allows children the opportunity to explore foods and get familiar with different sensations on their hands. This is a very important part of learning to eat. Children are much more likely to eat a food that they are able to first touch. Therefore, encouraging finger feeding; however messy it may be, is a critical part of learning to eat.

Finger feeding should be introduced around 6-7 months and when a child is showing the necessary skills to be successful and safe such as:

1. Showing good head and neck strength.
2. Sitting upright with little to no support.
3. Showing interest in foods.
4. Reaching and grasping for items.

### UTENSILS, BOWLS AND PLATES:

There are many different types of utensils of various shapes, sizes, styles and materials. There are also many ways utensils can be adapted to fit the disability or medical needs of a child. Whatever the type of utensil chosen, it must match a child's mouth and her developmental and physical needs. Also, remember that learning to use these items will take time, so caregivers will need to provide a child with lots of support and frequent opportunities.

Spoons are often the first utensil for a child to use, as they are easiest to scoop food onto and move to the mouth. For young children who do not have good control of their hands and arms, spoons can be the best tool to teach self-feeding.

**A little girl proudly holds her spoon as she feeds herself successfully with it for the very first time.**

*Bowls and plates* come in a variety of types. Bowls and plates that stick to tables (suction cups on bottom) can be helpful for children who have a hard time holding one in place for scooping.

*Placemats* that stick to a surface can also be helpful for keeping bowls and plates in place on tables and floors.

*Other common feeding items:*

*Forks and chopsticks* can be offered to children for self-feeding; however, these utensils are often more difficult to use, especially for children with motor challenges.

*Sporks* are utensils that look like a spoon and a fork. This can be a great "in-between" tool for a child who is able to use a spoon and ready to learn how to use a fork.

Self-feeding using utensils, bowls and plates should be introduced around 8-9 months and when a child is showing the necessary skills to be successful and safe such as:

- Showing good head and neck strength.
- Sitting upright with little to no support.
- Showing interest in utensils, bowls and plates.
- Reaching and grasping for items.

**Little boys eat a special yogurt by drinking it from their bowls.**

## CUPS:

There are many different types of cups, including various shapes, sizes, styles and materials. As with utensils, the type of cup must match a child's mouth, oral motor skills, developmental and physical needs.

Cups with lids and spouts can be helpful "first cups." However, open cups without lids offer the greatest benefits, and children often feel very motivated and proud to use them.

Self-feeding using cups should be introduced around 6-9 months and when a child is showing the necessary skills to be successful and safe such as:

- Showing good head and neck strength.
- Sitting upright with little to no support.
- Showing interest in cups.
- Reaching and grasping for items.

**A child drinks from a special "nosey" cut-out cup, which makes learning to drink easier for her.**

For more information on different cups and spoons, refer to Chapter 1, Section 7

**Children feed themselves food using special maroon spoons.**

**A little girl takes a break from feeding herself a meal.**

**Young children drink from plastic sippy cups with the tops removed.**

# WHY DON'T SOME CHILDREN FEED THEMSELVES?

1. *Physical:* A child's body and their capacity to use it appropriately and efficiently for feeding themselves.
2. *Emotional:* A child's personal experiences that shape or motivate their interest in feeding themselves.
3. *Environmental:* A child's environment and how it helps or hinders opportunities for learning to self-feed.

| REASONS | EXAMPLES |
|---|---|
| Physical | ○ Unable to sit on own with stability to eat, drink and feed self<br>○ Unable to physically bring cup or food to mouth<br>○ Sensory avoiding issues such as a dislike of touching foods for feeding self or a need to smell foods when brought to mouth.<br>○ Mouth pain, problems with mouth/teeth or any part of the swallowing mechanism<br>○ Medical conditions that make learning to self-feed hard such as CP, Down syndrome, ASD, FASD, brain injury, etc.<br>○ Frequent choking when eating, drinking or being fed by another person which makes feedings scary |
| Emotional | ○ Not being adequately fed when hungry and unable to recognize on own when in need of food or drink<br>○ Being force fed by caregivers leading to eating refusals, including self-feeding<br>○ Unpleasant mealtime experiences leading to eating refusals, including self-feeding refusals<br>○ Unfamiliar with mealtime experiences (how to use utensils, cups, foods, liquids, task of self-feeding) |
| Environmental | ○ Not offered opportunities to try to feed self (finger feeding or using cups, bowls and utensils)<br>○ Caregivers and parents in certain cultures continue to feed older children as an expression of love and affection<br>○ No access to appropriate utensils and cups for self-feeding<br>○ Limited time at meals to allow children opportunities to self-feed<br>○ Limited caregivers (staffing issues) that prevent children from having opportunities to feed selves |

# KEY ELEMENTS OF SELF-FEEDING

| KEY ELEMENTS | SIGNS OF SUCCESSFUL SELF-FEEDING |
|---|---|
| Appropriate Position (matches child's needs) | ○ Safe, supportive and follows key elements of positioning including being fed in a seated, upright position with whole body support<br>○ Child and caregiver are comfortable<br>○ Child is engaged and interested (awake, reaching for cup or spoon, opening mouth for food or liquid, etc.)<br>○ Child is calm for feeding, not fussy |
| Appropriate Utensil and Cup (matches child's needs) | ○ Finger foods appropriately match child's fine motor skills<br>○ Utensils, bowls and cups match child's size, skills and physical needs<br>○ Child comfortably and easily removes food or liquids using hands, utensils, bowls and cups<br>○ Child is not overly sensitive to feeding materials and is not flinching, gagging, pulling away, etc.<br>○ Handle and weight of utensil/bowl/cup allows child to hold, scoop, lift and bring toward mouth when she feeds herself |
| Appropriate Opportunity | ○ Child has ample time and opportunity to explore foods, utensils, bowls and cups<br>○ Child has ample time and opportunity to feed self<br>○ Feeding takes 30 minutes or less |
| Appropriate Foods and Liquids | ○ Child is offered appropriate foods that support easy finger feeding, spoon feeding and cup drinking<br>○ Child is gradually offered different foods and liquids as she becomes more skilled at feeding herself |
| Appropriate Models and Support | ○ Caregivers eat and drink alongside child to show her how to use her hands, utensils, bowls and cups<br>○ Child eats and drinks alongside peers to show her how to use her hands, utensils, bowls and cups<br>○ Caregivers offer appropriate support for self-feeding during meals as needed by the child |

# SELF-FEEDING TIPS FOR EVERY CHILD

| | |
|---|---|
| TIP 1: | Always consider a child's individual needs and development level when introducing self-feeding. Not every child will be interested or start trying to feed themselves at the same time. |
| TIP 2: | Feeding yourself takes time and practice. Learning to feed yourself is a process, whether a child has a disability or medical needs or not. The only way to learn is through lots of daily, frequent practice and thoughtful support from caregivers. |
| TIP 3: | Finding the best method can sometimes take a lot of work. Even a child who is typically developing, may need to try several spoons, cups, positions or food sizes until they find what works just right. Take your time, observe how a child does and make small changes as needed. |
| TIP 4: | Good positioning is key. Finding a safe and comfortable position for a child who is learning to feed themselves is critical. A stable position will make self-feeding much easier and more successful. |
| TIP 5: | Start small and slow. Try offering a child the chance to feed themselves for a small portion of a meal, and then help them with the rest. Make it a team effort. Take turns feeding the child (you offer a bite and then the child takes a turn). Slow but steady practice is a nice way to introduce this new experience. |
| TIP 6: | Children learn best in the context of positive relationships. Offering positive interactions with a child while they learn to feed themselves is the best way to support this new learning process. |
| TIP 7: | Messy is OK. Learning to feed yourself can be messy. However, getting messy is healthy because it teaches children how foods feel, widens their interests in trying foods/liquids and gives them the practice they need to become better self-feeders. |
| TIP 8: | All children deserve the chance to learn this important life skill. Learning to feed yourself is an important skill that can make a big difference for a child. Children with and without disabilities should be given the opportunity to participate in this powerful activity. |

## FINAL THOUGHTS

Learning how to self-feed is a challenging, but incredibly rewarding experience for a child. When caregivers offer children the opportunity to grow these skills, children learn more than just how to eat and drink. They develop a valuable skill for life. Use this manual as a helpful resource. Remember: When met with challenges, seek out the support of others. Often, sharing past experiences, challenges and questions with other caregivers and team members can lead to greater problem-solving and creative solutions and alleviate caregiver and child distress.

*For more information on encouraging self-feeding, refer to Chapters 2, 3 and 4.*

*For more information on creative ways to help children with self-feeding, refer to Chapter 9I.*

# SECTION 1.9: FOOD TEXTURE AND LIQUID CONSISTENCY BASICS

## WHAT ARE COMMON FOOD TEXTURES AND LIQUID CONSISTENCIES?

Foods and liquids come in a variety of different textures and consistencies. As young babies, we are given only liquids. As we grow and develop our feeding skills, we experience different solid food textures such as blended cereals, vegetables, mashed fruits and soft table foods. Finally, as our skills fully mature, we can eat all types of foods, including tougher meats and breads. For children who may experience challenges with eating and drinking, finding the right food texture and liquid consistency that is easiest and safest can be hard. Because of this, it's helpful for caregivers to understand different textures and consistencies and which may be best suited for a child based on his skills and needs.

## TYPES OF TEXTURES AND CONSISTENCIES[20]

There are many different types of food textures and liquid consistencies. Foods and liquids are either naturally these textures and consistencies or they can be altered to become a more well-suited texture or consistency for a particular child. Food and liquid can be altered by using tools such as utensils, blenders or thickening agents.

| SOLID FOOD TEXTURES | DESCRIPTION | EXAMPLE FOODS |
|---|---|---|
| Pureed/Extremely Thick | ○ Usually eaten with a utensil<br>○ Cannot drink from a cup or straw<br>○ Does not require chewing<br>○ Smooth, no lumps<br>○ Does not pour<br>○ Falls off spoon in single spoonful and holds shape on plate/tray/table | Blended vegetables, fruits and meats, thick cereals |
| Minced and Moist | ○ Can eat with utensil, chopsticks or sometimes hands<br>○ Can be shaped and scooped on plate/tray/table<br>○ Small lumps visible<br>○ Lumps are easy to squish with tongue<br>○ Moist and soft<br>○ Minimal chewing is required<br>○ Does not require biting | Finely minced meats, finely minced or mashed fruits, vegetables and fish, thick cereals with small lumps |

| | | |
|---|---|---|
| Soft and Bite Sized | ○ Can eat with utensil, chopsticks or hands<br>○ Soft, tender and moist bite-sized pieces<br>○ Can be cut without a knife<br>○ Can be mashed or broken down with utensil<br>○ Chewing is required<br>○ Does not require biting | Cooked-tender meats, flaky fish, mashed fruits, steamed or boiled vegetables, soft cheese and eggs, soaked breads that are “moist” to touch |
| Regular | ○ Normal, everyday foods of varying textures (soft, hard, crunchy, fibrous, chewy, dry, stringy, crispy, crumbly, etc.)<br>○ Includes mixed or dual consistencies (foods + liquids → soups and stews)<br>○ Age-appropriate<br>○ Developmentally appropriate based on skill-level of child<br>○ Chewing and biting may be required based on food texture | All meats, vegetables, fruits, cheese, eggs, breads |

| LIQUID CONSISTENCIES | DESCRIPTION | EXAMPLE LIQUIDS |
|---|---|---|
| Thin | ○ Fastest flowing liquid<br>○ Flows like water<br>○ Can drink from any nipple, cup, syringe or straw | Water |
| Slightly Thick | ○ Slightly slower flowing than water<br>○ Slightly thicker than water<br>○ Can drink from any nipple, cup, syringe or straw | Breastmilk, formula |
| Mildly Thick | ○ Slower flowing than slightly thick liquids<br>○ Thicker than slightly thick liquids<br>○ Flows off of spoon quickly, but slower than thin liquids<br>○ Can drink from spoons, most open cups and some closed cups and straws<br>○ More effort required to drink from straw | Fruit nectars |
| Moderately Thick | ○ Slower flowing than mildly thick liquids<br>○ Thicker than mildly thick liquids<br>○ Flows off of spoon slowly in dollops<br>○ Can drink from spoons and open cups<br>○ Smooth texture without lumps<br>○ No chewing or processing required | Runny pureed fruits and rice cereals, sauces, gravies, honey |
| Extremely Thick/Pureed | ○ Slowest flowing liquid<br>○ Thickest liquid<br>○ Usually eaten with a utensil<br>○ Cannot drink from cup or straw | Blended vegetables, fruits and meats, thick cereals |

| | | |
|---|---|---|
| | ○ Does not require chewing<br>○ Smooth, no lumps<br>○ Does not pour<br>○ Falls off spoon in single spoonful and holds shape on plate/tray/table | |

| TRANSITIONAL FOODS | DESCRIPTION | EXAMPLE FOODS |
|---|---|---|
|  <br>Texture Changing | ○ Foods that change texture (transition) when eating<br>○ Change due to added moisture (saliva), temperature or pressure<br>○ Minimal chewing needed and do not require biting<br>○ Good for teaching new skills such as chewing | Ice chips, ice cream/sherbet, wafers, waffle cones, some biscuits/cookies/crackers, mashed potato crisps, etc. |

## WHY MIGHT A CHILD NEED A DIFFERENT TEXTURE OR CONSISTENCY?

There are many reasons why a child may need to be offered a certain food texture or liquid consistency. As caregivers, sometimes we know these reasons and sometimes we unfortunately do not. However, as caregivers, we can discover potential reasons and signs by learning about a child, and noticing how they are doing before, during, after and in-between feedings.

### *Common reasons a child might need a different food texture or liquid consistency:*

- Medical conditions involving reflux, the lungs or heart
- Children born early (prematurity)
- Children born exposed to substances (drugs and/or alcohol)
- Structural differences such as cleft lip or palate
- Neuromuscular disorders such as cerebral palsy
- Developmental disabilities such as Down syndrome
- Social-emotional or environmental factors (limited experience, no caregiver, stressful experiences)

**A boy is served a tray full of many different food textures.**

## COMMON SIGNS A CHILD MIGHT NEED A DIFFERENT FOOD TEXTURE OR LIQUID CONSISTENCY:

- Coughing
- Congestion
- Noisy or "wet" sounding voice or breathing
- Upper respiratory infections
- Difficulty breathing while eating
- Crying or unhappy at meal times
- Oral aversions or "refusals" to eat or drink
- Choking on food or liquid
- Unusually long meal times (more than 30-40 minutes per meal)
- Difficulty chewing
- Avoiding certain food textures or liquid consistencies
- Vomiting
- Concerns with weight and nutrition

**LEFT: Children with Down syndrome sometimes need different textures or consistencies due to low muscle tone in the mouth and throat.**

**RIGHT: Children with cerebral palsy sometimes need different food textures or liquid consistencies due to tight muscle tone in the body and difficulty controlling muscles for eating and swallowing.**

# WHAT IS THE IMPORTANCE OF CHOOSING THE RIGHT TEXTURE AND CONSISTENCY?

Choosing the right texture and consistency for a child helps make mealtimes safe and comfortable. Offering a texture and consistency that fits a child's skill level is critical in supporting successful feeding. Additionally, for children with difficulties eating and drinking, modifying food textures and liquid consistencies is a strategy that can be used to increase child safety and well-being. More specifically, certain textures and consistencies can protect a child's airway and make feedings less tiring and stressful. This improves a child's ease with feeding and aids in her overall health and nutrition.

*When children can eat and drink safely and comfortably, they tend to eat and drink more. They also grow healthy and strong.*

*Choosing an appropriate texture and consistency is important because:*

1. It is a primary step in a child's development of oral motor skills.
2. It allows a child to experience new textures and sensations in a safe way.
3. It offers a safer feeding experience for a child.
4. It offers a more comfortable and enjoyable feeding experience for a child.

| BENEFITS OF APPROPRIATE TEXTURES AND CONSISTENCIES | DESCRIPTIONS (WHAT THIS LOOKS LIKE) |
|---|---|
| Oral Motor Skills  | ○ Teaches children how to use their mouths in different ways based on the textures and consistencies<br>○ Teaches children how to eat and drink more challenging foods and liquids |
| Sensory Development  | ○ Provides children the chance to try new, different food textures and liquid consistencies<br>○ Prepares children for a variety of foods and liquids adults eat and drink |
| Health and Well-being  | ○ Creates a safer eating and drinking experience<br>○ Offers a more comfortable and enjoyable eating and drinking experience<br>○ Reduces the occurrence of illness, meal refusals, malnourishment, dehydration and death |

# TYPICAL DEVELOPMENTAL FOOD EXPECTATIONS TIMELINE: SOLID FOOD TEXTURES

There is an important and typical time frame (age range) for when a child learns to eat each food texture. However, it is necessary for caregivers to consider not only the child's age, but also his developmental skill level and overall readiness when deciding when to introduce each texture. Although a child may be a certain age, it is more important that he has the necessary skills and he is safe to transition to a new food texture.

Below are the typical developmental skills that support the process of learning to eat each food texture and the developmental age at which they are often seen.

| AGE | DEVELOPMENTAL SKILL | FOOD TEXTURES |
|---|---|---|
| 0 – 5/6 Months | ○ Sucking | ○ Liquids via breast and/or bottle |
| 5-6 Months | ○ Sucking<br>○ Tongue thrust lessens<br>○ Mouth opens for spoon<br>○ Food moves from front of tongue to back | ○ Smooth pureed foods |
| 7-9 Months | ○ Up and down munching pattern for chewing develops<br>○ Tongue thrust lessens even more<br>○ Movement of tongue from side to side develops | ○ Thicker, smooth pureed foods<br>○ Foods that dissolve with saliva such as teething biscuits, buttery crackers, etc.<br>○ Soft table foods such as bananas, avocado, well-cooked carrots and squash, etc. |
| 12-14 Months | ○ Munching pattern continues to develop<br>○ More mature chewing **(**rotary chew) emerges | ○ Same as above |
| 14-18 Months | ○ Rotary chew continues to develop<br>○ Lip movement and closure increases | ○ Soft meats and mixed textures such as cereal with milk, soup, rice and beans, etc. |
| 18-24+ Months | ○ Rotary chew is fully developed<br>○ Lip closure is adequate for chewing and swallowing<br>○ Jaw stability improves and allows biting through foods of different thicknesses | ○ Meats<br>○ Raw fruits and vegetables<br>○ Mixed textures |

## TYPES OF SOLID FOOD TEXTURES

There are many different types of solid food textures. A child who is developing typically will eventually try all textures as she grows older and as her skills develop. However, for a child who has challenges eating, she may need certain textures (and avoid eating others) to ensure her health and comfort when feeding. Whatever the type of texture offered, it should be age-appropriate and it must match a child's skills and physical needs. So, it's helpful to understand the differences in order to make the best choice for every child. Ultimately, a child will let caregivers know which food textures she is able to manage and when she is ready to try something new.

### PUREED

Pureed foods are blended foods that are smooth (no lumps) and not sticky. With the right blender or tools, most foods can be made into purees.

**BEST FOR:** Most children 6 months and older

*ESPECIALLY GOOD FOR:*

- new eaters
- younger children 6-9 months old
- children with limited chewing skills
- children with limited tongue movement or control
- children with missing teeth/dental issues
- children who tire easily with munching and chewing
- children who experience pain or discomfort with chewing and/or swallowing

**A puree is too thick if it sticks to a utensil or does not fall off of a utensil when tilted.**

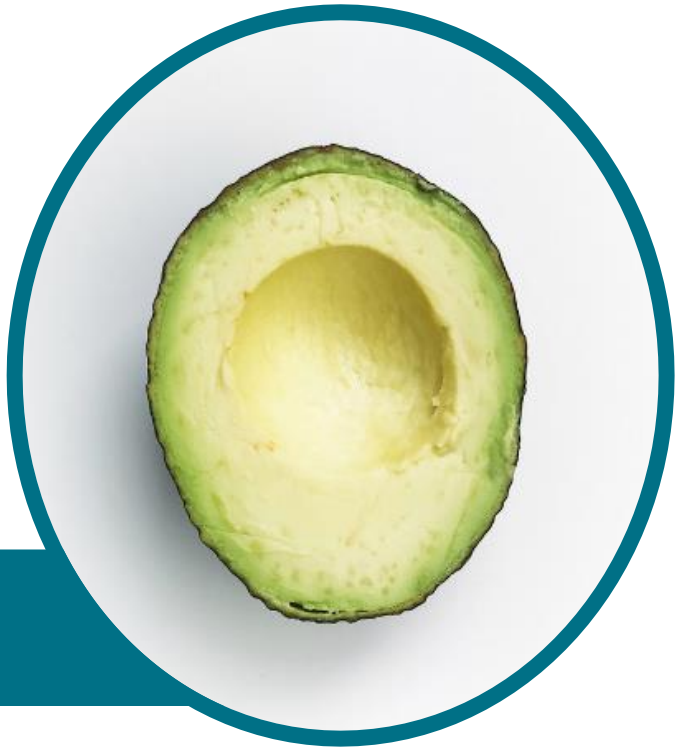
### MINCED AND MOIST

Minced and moist foods are soft, wet and have visible lumps. They can be eaten using the fingers or utensils, and the lumps are easily squished using fingers or utensils. When swallowed, these foods turn into a puree. Many minced and moist foods can easily be mashed with a utensil (for example: avocado, baked sweet potato flesh, banana). Minced meats and fish can be served with thick non-pouring gravies or sauces. Breads must be "soaked" in liquids and not served dry. Cereals should be served very thick, smooth and extra liquids should be drained. Rice should not be sticky, glutinous or grainy.

**BEST FOR:** Most children 7 months and older

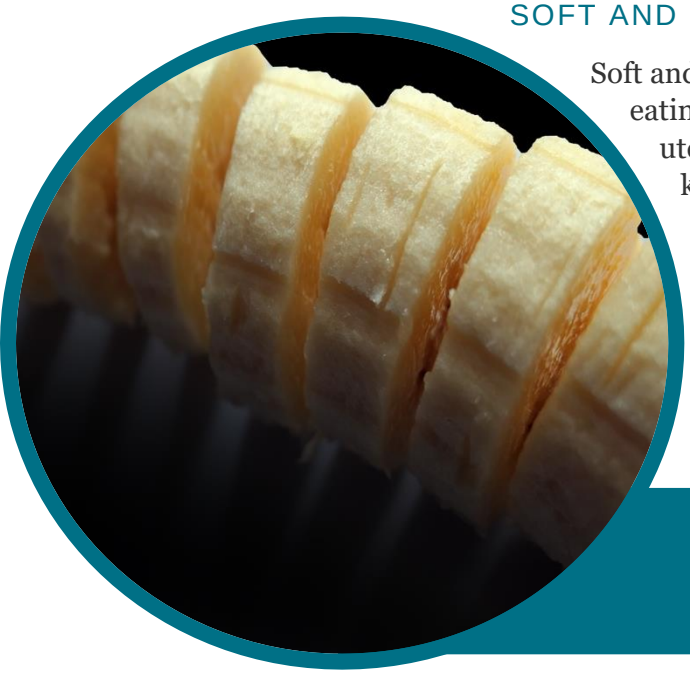
*ESPECIALLY GOOD FOR:*

- new eaters
- younger children 7-12 months old
- children with some munching skills
- children with some tongue movement or control
- children with missing teeth or dental issues
- children who tire easily with munching and chewing
- children who experience pain or discomfort with chewing or swallowing



**If a food cannot be finely minced, it should be pureed.**

## SOFT AND BITE-SIZED



Soft and bite-sized foods are tender, moist and small in size to make eating safer and easier. They can be eaten using the fingers or utensils, and they can easily be cut through without the use of a knife. Meats should be served tender and no bigger than 8 millimeters (width of fingernail), and fish should be soft and flaky. Breads must be "soaked" in liquids and not served dry. Cereals should be served smooth with soft lumps and extra liquids should be drained. Rice should not be sticky, glutinous or grainy.

**If a food cannot be soft and bite-sized, it should be served minced and moist.**

BEST FOR: Most children 9 months and older

*ESPECIALLY GOOD FOR:*

- children with adequate chewing skills
- children with adequate tongue movement and control
- children who tire easily with munching and chewing may still do well with these foods or when given in smaller amounts paired with minced and moist and/or pureed foods
- older children learning how to feed themselves using utensils

*Soft and bite-sized foods require that a child is able to chew foods. If a child is not yet chewing but given these foods, they are more likely to choke. Caregivers must always be cautious when trying new foods and be present with children when they are eating.*

### REGULAR

Regular foods are normal "table foods" that suit a child's age and her skill level. They can be eaten using the fingers or utensils, and they may require biting and chewing. Regular food textures can be: smooth, lumpy, sticky, crispy, crumbly, crunchy, hard, tough, fibrous and chewy. Breads may be served dry and rice can be sticky, glutinous or grainy.

BEST FOR: Most children between 18-24 months and older

**Because regular foods require more oral motor skills, they also require a child have good endurance to last the length of the meal and not tire easily.**

*ESPECIALLY GOOD FOR:*

- children with adequate chewing skills
- children with adequate tongue movement and control
- children who do not tire easily with chewing
- older children learning how to feed themselves using utensils

## TYPES OF LIQUID CONSISTENCIES

There are several different liquid consistencies. Most children who are developing typically will only need thin liquids. However, for a child who has challenges with swallowing, he may need certain liquid consistencies (and avoid others) to ensure his health and comfort when feeding. Whatever the type of consistency offered, it should be age-appropriate, and it must match a child's skills and physical needs. So, it's helpful to understand the differences in order to make the best choice for every child. Ultimately, a child will let caregivers know which consistency he is able to manage and when he is ready to try something new.

## THIN

Thin liquids are the fastest flowing liquids. They flow the fastest because they are the least dense. Thin liquids can be taken from any nipple, teat, cup, syringe or straw.

**BEST FOR:** Most children 0 months and older

### *ESPECIALLY GOOD FOR:*

- children with adequate swallowing skills
- children with adequate oral motor skills
- children with healthy bodies free from respiratory illness and fevers

## SLIGHTLY THICK

Slightly thick liquids flow a little slower than water because they are more dense. They are similar in thickness to commercial baby formulas. They can be taken from a nipple, cup, syringe or straw. Slightly thick liquids can be helpful for babies who frequently spit up.

**BEST FOR:** Most children 0 months and older

### *ESPECIALLY GOOD FOR:*

- children with adequate swallowing skills
- children with adequate oral-motor skills
- children with gastroesophageal reflux disease (GER, GERD) or reflux

**Slightly thick liquids can be helpful for babies who frequently spit up.**

## MILDLY THICK

Mildly thick liquids flow quickly off of a spoon, however, more slowly than thin and slightly thick liquids. They can be taken from spoons, some nipples and straws, most cups and syringes. Some liquids are naturally mildly thick such as fruit nectars. For liquids that are not naturally mildly thick, thickening agents can be used.

BEST FOR: Most children 0 months and older (*babies younger than 6 months should only be given breast milk or formula.)

### *ESPECIALLY GOOD FOR:*

- children with adequate swallowing skills
- children with adequate oral-motor skills
- children with slightly reduced oral motor skills
- children who have difficulty with thin liquids (impaired swallowing skills)

## MODERATELY THICK

Moderately thick liquids flow easily, but slowly off of a spoon. They are smooth without bumps and can be taken from spoons and some cups. These liquids require no chewing, less effort and they allow a child more time to prepare for a swallow. There are liquids that are naturally moderately thick such as runny pureed foods, certain sauces and gravies. For liquids that are not naturally moderately thick, thickening agents can be used.

BEST FOR: Most children 0 months and older (*babies younger than 6 months should only be given breast milk or formula that is thickened)

### *ESPECIALLY GOOD FOR:*

- children with significantly reduced oral motor skills
- children who have difficulty with thin, slightly and
- children who do best with a slow, controlled liquid

## EXTREMELY THICK OR PUREED

Extremely thick liquids are similar to pureed foods. They are blended until smooth (no lumps) and not sticky. With the right blender or tools, most foods and liquids can be made into extremely thick liquids. Extremely thick liquids cannot be taken using a cup or straw – a spoon or sometimes a fork must be used. These liquids require no chewing, less effort and they allow a child more time to swallow. There are items that are naturally extremely thick such as pureed baby foods. For liquids that are not naturally extremely thick, thickening agents can be used.

**BEST FOR:** Most children 6 months and older

### *ESPECIALLY GOOD FOR:*

- younger children 6-9 months old
- children with limited oral-motor skills
- children with missing teeth or dental issues
- children with frequent respiratory illnesses and fevers
- children who have difficulty with thin, mildly and moderately thick liquids (impaired swallowing)
- children who do best with a slow, controlled liquid
- children who tire easily with munching and chewing
- children who experience pain or discomfort with chewing and/or swallowing

**If a child is showing signs such as frequent coughing or choking with moderately thick liquids, this may mean they have a swallowing problem. Try offering extremely thick liquids.**

*For more information on thickening foods and liquids, refer to Appendices 9C, 9D, and 9E.*

*For more information on how to advance a child's diet, refer to Appendix 9F.*

# KEY ELEMENTS OF FOOD TEXTURE AND LIQUID CONSISTENCIES

| KEY ELEMENTS | TEXTURE AND CONSISTENCY CONSIDERATIONS |
|---|---|
| Age-Appropriate | ○ Foods and liquids match child's age level<br>○ Foods and liquids aren't too challenging for age<br>○ Foods and liquids aren't too easy for age<br>○ Foods and liquids change as the child grows and develops |
| Developmentally Appropriate | ○ Foods and liquids match child's developmental skill level<br>○ Foods and liquids match child's physical abilities (positioning, body strength and control, use of hands, etc.)<br>○ Foods and liquids match child's other abilities (alertness, interest and "readiness" for feeding, visual skills, etc.)<br>○ Foods and liquids change as child grows and develops |
| Match Oral-Motor and Swallowing Skills | ○ Foods and liquids match child's tongue movement and control skills<br>○ Foods and liquids match child's lip, cheek and jaw skills<br>○ Foods and liquids match child's swallowing skills<br>○ Foods and liquids match child's dentition (teeth, missing teeth) |
| Efficient | ○ Foods and liquids match child's endurance (energy) level<br>○ Feeding takes 30 minutes or less |
| Safe and Comfortable | ○ Foods and liquids support safe feedings for child<br>○ Foods and liquids support comfortable feedings for child<br>○ Foods and liquids support health of the child<br>○ Foods and liquids support happiness and well-being of the child |

## FOOD TEXTURE AND LIQUID CONSISTENCY TIPS FOR EVERY CHILD

| | |
|---|---|
| TIP 1: | Always consider the individual needs of a child when choosing a texture or consistency. Not every child will do well with all foods and liquids at their current ages. Children have many different strengths and special challenges that must be considered. |
| TIP 2: | Always consider a child's skill level when choosing a texture or consistency. Do not only consider a child's age when thinking about what to offer. |
| TIP 3: | Finding the best texture or consistency can take a lot of work. Caregivers may need to try a texture/consistency several times or different textures/consistencies until they find what works just right for a child. Take your time, observe how a child responds and make small changes as needed. |
| TIP 4: | Good positioning is key. Finding a safe and comfortable position for every child is critical. A stable position will always make eating and drinking easier and safer. |
| TIP 5: | Start small and slow. Offer several "trials" of a new texture or consistency in small amounts when first starting out with a child. Starting slowly lets caregivers learn how a child is managing a texture or consistency. The slower the rate and the smaller the bites/sips, the easier and safer it will be for a child. |
| TIP 6: | Children learn best in the context of positive relationships. Offering positive interactions with a child during mealtimes is the best way to support this process. |
| TIP 7: | Messy is okay! Learning to eat and drink new textures and consistencies can be messy. However, getting messy is healthy because it teaches children how foods and liquids feel, and widens their interests in trying different items. |

## FINAL THOUGHTS

Most children advance through all food textures and drink thin liquids easily without challenges. However, when a child displays trouble eating and swallowing, knowing how to change the foods and liquids offered to make mealtimes safer and easier is beneficial and empowering. The slower the rate and the smaller the bites or sips, the easier and safer it will be for a child.

# SECTION 1.10: INTERACTION BASICS

## WHAT IS INTERACTION?

Interaction is another way of saying "relationships." In this manual, we use the terms interchangeably. The relationships children have with their caregivers, including the day-to-day moments they share during feedings, are interactions. Positive, intentional interactions are necessary for children to grow healthy and thrive. A child's development will become more robust as he is offered consistent and nurturing interactions with his caregivers.

*Enjoyable connections with others that happen often strengthen a child's development.*

## WHY IS INTERACTION IMPORTANT FOR FEEDING?

Early skills such as feeding must be learned. They are created by the relationships and events that a child experiences with her caregivers[21]. Regulation, or a child's ability to become and stay calm, is essential for development, especially for feeding. For a child to be able to eat well, she must first be calm. Once calm, children are better able to interact with others, eat and feed themselves with greater chance for success. While children are developing, they need extra support from caregivers to become and stay calm. Reliable, safe and positive relationships with caregivers are the first way that a child begins learning how to become calm.

**Regulation, or a child's ability to become and stay calm, is essential for development, especially for eating and self-feeding.**

# KEY ELEMENTS OF INTERACTION: OPTIMAL CAREGIVER QUALITIES[22]

In this section we will explain key elements that make an effective, optimal caregiver. Optimal caregiving is different from custodial caregiving. Custodial caregiving is when a person takes care of the basic standard needs of a child (e.g., provides food, water and may assist with other daily activities such as bathing, diapering and toileting). Optimal caregiving is when a person takes care of a child's daily needs, but they also provide positive, loving interactions. These positive and meaningful interactions boost the quality of life of the child, leading to improved health outcomes. It is essential that caregivers consider these elements when supporting all children, and that they learn how to provide optimal care.

*Being attuned means: Being highly aware of a child's needs.*

| PRESENT, ATTENTIVE, RESPONSIVE AND ATTUNED CAREGIVING | |
|---|---|
| | OPTIMAL CAREGIVER QUALITIES |
| Present | Be fully present during interactions with a child — physically and mentally. Caregivers pay close attention to what is happening in the moment (i.e., not thinking about work that needs to be done) to best understand what a child needs and how to support those needs. *"I see you and you see me.".* |
| Attentive | Be observant of the physical and emotional needs of a child. Caregivers are attentive to a child's needs to help him feel understood. Children will continue to express their needs and feelings, knowing that their caregivers are intently listening and watching. "*You understand me, and that makes me feel good."* |
| Responsive | Be consistent and quick to respond to a child's needs. Caregivers respond in a timely manner and children learn to trust that caregivers will keep them safe. When consistent care (i.e., same caregiver, schedule, bottle/cup/spoon, room for feedings, feeding position, etc.) is offered responsively, children develop strong relationships that are essential for life. *"I feel safe with you. You are always here for me."* |
| Attuned | Be deeply connected to a child and learn her individual wants and needs. Caregivers are attuned to a child's needs in order to respond consistently and respectfully to each child. This creates a feeling of dependability for a child. *"I can count on you because you always take good care of me."* |

## INTERACTION TIPS FOR EVERY CHILD

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|---|---|
| TIP 1: | Healthy relationships help development of the brain. Positive interactions between children and caregivers support the growth and development of a child's brain. Strong brains grow from quality time with caregivers. |
| TIP 2: | Healthy relationships help heal brains. Positive relationships are the primary way caregivers can reduce the impacts of challenges and stresses children experience. Caregivers can offer positive interactions by being present, attentive, responsive and attuned. |
| TIP 3: | Healthy relationships help children thrive. Children who are nurtured by caregivers through positive interactions are actually healthier and more well-nourished (body and mind). |
| TIP 4: | Optimal caregiving doesn't take extra time. Caregivers can offer positive interactions throughout daily activities and routines that they are already doing by using simple strategies. |
| TIP 5: | Children learn best in the context of positive relationships. Offering positive interactions with a child during mealtimes (and beyond) is the best way to support the learning process. |

## FINAL THOUGHTS

Positive relationships are the foundation for raising healthy children. When children receive optimal caregiving from the start, they reap substantial benefits for the rest of their lives. When children do not have anyone to consistently depend on, and when they do not experience positive relationships, their growth and development can be severely stunted. This includes developing smaller less powerful brains and bodies, learning how to connect and relate with others as well as becoming successful adults in our communities. Because of this, caregivers play a vital role in developing not only physically strong children, but emotionally strong children. Every activity and routine throughout the day is an opportunity to positively impact a child's life.

*For more information on interaction and specific ways to support interaction during every activity and routine, refer to Chapters 8 and Appendix 9K*