



Typical Development of Feeding Skills (0 to 3 years old)

Newborn to 1 Month

- Takes 2-4 ounces of liquid per feeding; 6 or more feedings per day
- Uses a suckling or sucking pattern; loses some liquid
- Swallows with suckle-swallow pattern; tongue may protrude slightly through lips with extension/retraction movement (suckle reflex and tongue thrust reflex)
- Sequences two or more sucks before pausing to swallow

3 months-4 months

- Takes 4-7 ounces of liquid; 4-6 feedings per day
- Sequences 20 or more sucks; swallowing follows sucking with no discernable pauses when hungry; good coordination of suck/swallow/breathe sequence.
- 4 months: loss of sucking reflex; sucking becomes an intentional act; loss of tongue thrust reflex—increases ability to accept spoon-fed cereal or smooth puree.

Red flags:

- Occasional coughing or choking indicates poor coordination of sucking, swallowing, and breathing.
- Arching or stiffening of body during feeding
- Irritability or lack of alertness during feeding
- Prolonged feeding times (more than 30 minutes)
- Frequent spitting up
- Recurring pneumonia or respiratory infections
- Gurgly, hoarse, or breathy voice
- Less than normal weight gain or growth

5 to 6 months

- Cereals and pureed foods; liquids
- Takes 9 to 10 ounces of food or liquid per feeding; 4-6 feeding per day

- Uses primitive phasic bite-release pattern on soft cookie; biting rhythm is regular with no controlled, sustained bite; may revert to sucking cookie instead of biting
- May use intermittent up/down chewing movements



7 to 8 months

- Thicker pureed foods at 7 months; ground or junior foods and mashed table foods at 8 months
- Visually or tactilely recognizes spoon; jaw quiets and remains in stable, open position until spoon enters mouth; tongue relaxes to accept spoon.
- Long sequences of sucking, swallowing, and breathing. With cup drinking may have continuous sucks followed by uncoordinated swallowing (much liquid lost). Larger mouthfuls by cup may result in coughing or choking.
- Tongue moves up and down in a munching pattern; tongue shows more lateralization with a gross rolling movement or simple horizontal shift when food is placed on the side biting surfaces.

9 to 12 months

- Longer sequences of continuous sucks with cup drinking; still has difficulty coordinating sucking, swallowing, and breathing with cup drinking.
- Can hold a soft cookie between teeth without biting all the way through (graded bite); may alternate this holding pattern with phasic bite pattern.
- Vertical jaw movements in chewing with variations in up/down movement and speed. Uses diagonal rotary movements as the tongue moves from the center of the mouth to the side for chewing.
- Uses lateral tongue movements when food is placed on side of mouth; begins to transfer food from center of tongue to side.
- 10 months: lips move to remove food from spoon.
- Independent finger feeding

Red flags:

- Difficulty in accepting new textures
- Prolonged feeding times
- Excessive leakage of food or liquid from mouth
- Coughing, gagging, or throwing up during or after meals

- Stuffing mouth with food
- Pocketing food in the mouth for prolonged period of time

12 to 14 months

- liquids and ground, mashed, or coarsely chopped table foods (including easily chewed meats)
- uses a controlled bite on soft cookie; may not be able to sustain bite on hard cookie and may revert to phasic bite or sucking
- can transfer food laterally from center of mouth to biting surfaces
- lips are active during chewing; may lose food or saliva during chewing; uses upper teeth or gums to clean lower lip as it is drawn inward.
- swallows liquid from cup with sucking movement; may lose some liquid; swallowing following sucking with no pause. Some coughing may occur if liquid is flowing too quickly.

15 to 18 months

- 15 months: phasic bite reflex no longer present; uses a controlled, sustained bite; may pull head backward in slight extension to help with bite.
- 18 months: given liquids and coarsely chopped table foods (including most meats and raw vegetables)
- Can chew with lips closed (inconsistent)—lips are closed for chewing primarily when needed to prevent food from falling out
- Swallows solid food with easy lip closure and no loss of food or saliva
- Upper lip is closed on cup for better seal for drinking; swallowing follows sucking with no pause; well coordinated pattern.
- Diagonal rotary chewing movements
- Upper and lower lips active during chewing and cleaning

19 to 21 months

- Uses controlled, sustained bite; opens mouth wider than necessary to bite foods of various thicknesses.

24 months

- Swallows liquid from cup with easy lip closure; no loss of liquid
- Swallows solid foods (including combination of texture) with easy lip closure; no loss of food
- Can transfer food from either side of mouth to other side without pausing in center
- Can internally stabilize cup without biting on edge of cup
- Able to grade opening of jaw when biting foods of different thicknesses
- Chewing movements mixture of vertical and rotary movements

24 to 36 months

- Eats the same food as the rest of the family!
- *chewing with a grinding movement does not usually occur until approximately 48 months



Red flags for feeding and swallowing problems in young children include:

- arching or stiffening of the body during feeding
- irritability or lack of alertness during feeding
- failure to accept different textures of food
- prolonged feeding times (more than 30 minutes)
- excessive drooling or leaking food/liquid from mouth
- gurgly, hoarse, or breathy voice quality
- coughing, gagging, or throwing up during meals or after meals
- recurring pneumonia or respiratory infections
- difficulty coordinating breathing with eating or drinking
- frequent spitting up
- less than normal weight gain or growth
- pocketing food in the mouth for prolonged period of time

Risks of feeding or swallowing difficulties in children:

- dehydration or poor nutrition
- risk of aspiration (food or liquid entering the airway)
- pneumonia or repeated upper respiratory infections that can lead to chronic lung disease
- embarrassment or isolation in social situations involving eating

Some causes of feeding and swallowing problems in children:

- nervous system disorders
- gastrointestinal conditions
- prematurity/low birth weight
- heart disease
- cleft lip or palate
- conditions affecting the airway

References:

Feeding and Swallowing Disorders, American Speech-Language-Hearing Association, www.asha.org

Morris, Suzanne Evans and Marsha Dunn Klein; Pre-Feeding Skills, Second Edition; Therapy Skill Builders; 2000.

Resources:

Pre-Feeding Skills, Second Edition, by Suzanne Evans Morris and Marsha Dunn Klein, Therapy Skill Builders, 2000.

Feeding and Swallowing Disorders in Infancy: Assessment and Management, by Lynn S. Wolf and Robin P. Glass, Therapy Skill Builders, 1992.

Feeding and Nutrition for the Child with Special Needs, by Marsha Dunn Klein and Tracey A. Delaney, Therapy Skill Builders, 1994.