



PART 3 | CHAPTER 7

COMMON FEEDING CHALLENGES AND SOLUTIONS ACROSS THE AGES

Section 7.1: General Considerations for Feeding Challenges

Section 7.2: Final Thoughts for Supporting Feeding Challenges



SECTION 7.1: GENERAL CONSIDERATIONS FOR FEEDING CHALLENGES

SUPPORTING FEEDING CHALLENGES

Children with feeding challenges often have difficulties because of certain conditions or disabilities. Feeding challenges can arise at the start of a child's life or they can develop over time. Whatever the reason, what's most important is that caregivers know how to deliver care that supports a child's ability to feed safely and comfortably so they can grow and thrive. This section will discuss the most common feeding challenges seen in babies and older children. It will also share what these challenges may look like and what caregivers can do to make mealtimes successful.

EXAMPLES OF COMMON CONDITIONS AND DISABILITIES OF CHILDREN WITH FEEDING CHALLENGES:



COMMON CONDITIONS AND ILLNESSES

- | | |
|------------------------------------|---------------------------------|
| + Autism | + Cardiac conditions |
| + Cerebral palsy | + Cleft lip and/or cleft palate |
| + Deaf or hard of hearing | + Down syndrome |
| + Fetal alcohol spectrum disorders | + Gastrointestinal disorders |
| + Prematurity | + Sensory sensitivities |
| + Substance (drug) exposure | + Vision impairments |



COMMON YOUNG CHILD FEEDING CHALLENGES:

- Challenge ① The sleepy, hard to wake baby
- Challenge ② The fussy baby who is hard to calm
- Challenge ③ The baby who tires easily
- Challenge ④ The baby who has difficulty sucking
- Challenge ⑤ The baby who coughs, chokes or gags
- Challenge ⑥ The baby who frequently spits up
- Challenge ⑦ Special population: The baby who has cleft lip and/or palate
- Challenge ⑧ Special population: The baby who is born early
- Challenge ⑨ Special population: The baby who is born substance exposed

COMMON OLDER CHILD FEEDING CHALLENGES:

- Challenge ⑩ The child who has problems with muscle tone
- Challenge ⑪ The child who has difficulties with structures of the mouth
- Challenge ⑫ The child who has a sensitive sensory system
- Challenge ⑬ The child who has trouble biting and/or chewing
- Challenge ⑭ The child who has problems swallowing



CHALLENGE NO. 1: THE SLEEPY, HARD TO WAKE BABY

HOW TO IDENTIFY: These babies fall asleep during feedings and they can be difficult to keep awake while feeding. Often these babies do not let caregivers know when they are hungry or even if they are hungry. Babies with fragile systems, especially those born early or exposed to substances, have extremely sensitive bodies. Often, they will fall asleep as a way to protect themselves when challenged by stressful environments and situations. May include babies with Down syndrome, heart problems (cardiac conditions), babies who are medically fragile, born early or babies exposed to substances in the womb.



COMMON FEEDING PROBLEMS:

- + Weight loss and poor appetite
- + May not eat much at one time (reduced intake)
- + Difficulty sucking
- + Difficulty swallowing with frequent choking and/or gasping
- + Tire quickly and hard to wake or keep awake
- + Easily overwhelmed and falls asleep when trying to feed
- + Irritable and fussy
- + Poor growth and slow weight gain

HOW TO SUPPORT

Feeding and Timing



- Feed more frequently based on baby's hunger cues (Appendix 9L-1, 9L-2).
- Feed baby around the clock possibly every two to three hours.
- Limit feedings to 30 minutes or less.

Equipment



- Choose nipple/bottle that allow baby to eat slowly such as a slower flow nipple (Chapter 1, Section 5; Appendix 9G).

Positioning



- Feed baby in upright position at greater than 45-degrees.
- Follow key elements of positioning for babies. (Chapter 1, Section 1; Chapter 2, Section 3)
- Feed with baby's hands toward chest, hips and knees bent.

Other Ways to Help



- Use gentle waking activities before or during feedings. (Appendix 9K).
- Feed in a brighter room with more light and sound or feed in a quieter, darker room (let baby show you which works best).
- Walk around while feeding baby to help him stay awake.
- Un-swaddle or unclothe baby to wake him and/or keep him awake.



CHALLENGE NO. 2: THE FUSSY BABY

HOW TO IDENTIFY: These babies often fuss when they are being fed and when they are not being fed. They may appear hungry and then fuss when offered the bottle. Babies with fragile systems, especially medically complex babies or those born early or exposed to substances such as drugs or alcohol, will fuss as a way to communicate their discomfort and stress. It can be confusing for caregivers and very hard to understand why they are upset. Additionally, these are the babies that can be incredibly difficult to soothe or they don't stay calm for very long. May include babies with cardiac problems (heart conditions), babies exposed to substances in the womb, babies born early, medically fragile, babies with vision or hearing impairments or with neurodevelopmental delays.



COMMON FEEDING PROBLEMS:

- + Difficulty sucking
- + Irritable and colicky
- + Refusing the bottle
- + Increased movement (wriggling, writhing, etc.)
- + Hard to soothe and stay calm
- + Poor growth and slow weight gain
- + Poor appetite and weight loss



Feeding a baby who is lying down or asleep is dangerous. Only feed babies in an upright position and when they are awake.



HOW TO SUPPORT

Feeding and Timing



- o Offer feedings regularly and frequently possibly every two or three hours.
- o Offer smaller more frequent feedings as necessary.
- o Limit all feedings to 30 minutes or less.

Equipment




- o Use a softer nipple that is not fast flowing, often a zero or one will be listed on the nipple (Chapter 1, Section 5; Appendix 9G).
- o Offer a pacifier before and after feedings for soothing (Appendix 9G).
- o Use a baby carrier to help calm baby between feedings.

Positioning



- o Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3).
- o Swaddle or hold baby snugly in your arms (Chapter 2, Section 3).
- o Swaddle baby with hands and arms out so she can reach her mouth for comfort and self-soothing (Chapter 2, Section 3).

	<ul style="list-style-type: none"> ○ Feed in elevated cradle, side-lying or semi-reclined positions (Chapter 1, Section 1; Chapter 2, Section 3).
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Offer a pacifier regularly for soothing (Appendix 9G). ○ Offer a pacifier or baby's finger for sucking before feedings (Appendix 9G). ○ Soothe and feed baby in a quiet, darker place (Chapter 1, Section 3; Appendix 9K). ○ Use rhythmic, repetitive movements and sounds to calm baby Appendix 9K).



Never force a bottle into a baby's mouth when she is distressed. Calm a baby first and then offer a bottle. If bottles are forced, babies can become more upset and even refuse feedings.



Remember: Watch for baby “stress cues” such as crying, back arching, a wrinkled forehead, wide open eyes, raised eyebrows, fast, loud breathing, turning his head or eyes to look away, etc., and help calm a baby using a strategy from Appendix 9L-2 and 9K.

Babies feed best when they are calm.





CHALLENGE NO. 3: THE BABY WHO TIRES EASILY

HOW TO IDENTIFY: These babies will often feed for only a few minutes before getting tired. They frequently fall asleep during feedings and can have trouble finishing feedings. Feeding is hard work, especially for babies with fragile systems. Babies with heart or lung issues or those born early, tend to tire faster than expected and have difficulty building endurance for feeding as well as difficulty with many other activities (sitting, crawling). May include babies with cardiac (heart) or respiratory (lung) conditions, Down syndrome or babies who are medically fragile, born early or exposed to a substance in the womb.

A young baby is fed slowly by her caregiver, giving her short breaks to catch her breath while feeding.







COMMON FEEDING PROBLEMS:

- + Weight loss and poor appetite
- + Cannot eat very much at one time
- + Difficulty sucking (weak suck, leaking liquids)
- + Difficulty swallowing, with frequent choking and/or gasping
- + Difficulty coordinating sucking, swallowing and breathing
- + Rapid breathing during feedings
- + Tires quickly and falls asleep during feedings
- + Poor growth and slow weight gain



HOW TO SUPPORT

<p>Feeding and Timing</p> 	<ul style="list-style-type: none"> ○ Offer small feedings more frequently (60 ml or 2 fl. oz.) every two hours). ○ Pace meals to slowly build endurance for taking more in a feeding (Appendix 9J). ○ Limit all feedings to 30 minutes or less.
<p>Equipment</p> 	<ul style="list-style-type: none"> ○ Use a softer nipple that is easier for a tired baby to suck. ○ Choose a nipple and bottle that allow a baby to eat at a pace that matches her abilities. Too fast a flow can overwhelm a baby and be tiring. Too slow a flow can frustrate a baby and be tiring (Chapter 1, Section 5; Appendix 9G).
<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3) ○ Feed in elevated cradle, side-lying or semi-reclined positions (Chapter 1, Section 1; Chapter 2, Section 3). ○ Swaddle baby or hold baby snugly in your arms (Chapter 2, Section 3). ○ Swaddle baby with hands and arms out so he can reach his mouth for comfort and self-soothing (Chapter 2, Section 3).
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Offer pacifier before feedings to help baby take nipple well (Appendix 9G). ○ Encourage sucking using press-down technique Bottle Feeding Press-Down Technique (Appendix 9J). ○ Support sucking by using Jaw and Chin Support Technique (Appendix 9J). ○ Support sucking by using Lip and Cheek Support Technique (Appendix 9J). ○ Hold nipple steady without wriggling in baby's mouth as wriggling can distract baby or interrupt their flow.



Remember: *If providing support to a baby's cheeks and jaw results in coughing or choking, this type of support should be immediately stopped.*



Remember: Babies who tire easily become children who may also get tired easily during meals. The older child needs just as much support as a baby, such as offering smaller meals more often, pacing how fast they eat and offering options for softer foods that require less chewing.



CHALLENGE NO. 4: THE BABY WHO HAS TROUBLE SUCKING

HOW TO IDENTIFY: These babies cannot suck strongly or efficiently, or they may have a very disorganized sucking pattern. They may have trouble compressing nipples to get milk flowing using their lips and cheeks. Faster flowing liquids can be very hard or even dangerous for them to drink. They often have messy feedings and can become tired easily since sucking can take so much effort. These babies can also struggle with finding a good sucking rhythm, which can lead to even more tiring and stressful feedings. Babies with low muscle tone or weak hearts and lungs tend to have this particular challenge. May include babies with Down syndrome; babies with low muscle tone or floppy muscles (cerebral palsy); babies exposed to substances such as drugs or alcohol in the womb; or babies born early, medically fragile or with neurodevelopmental delays.



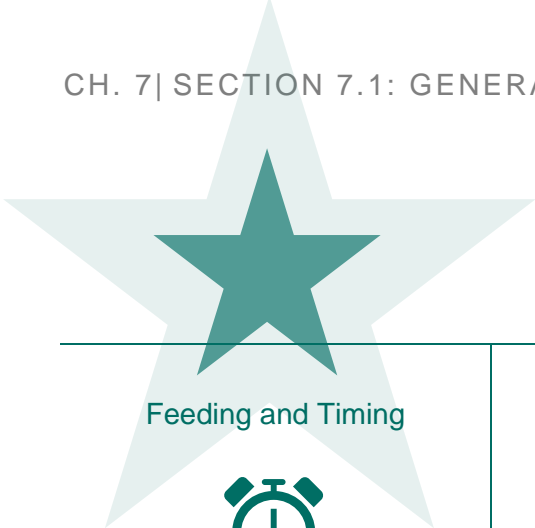
COMMON FEEDING PROBLEMS:

- + Difficulty latching onto nipple
- + Weak suck
- + Difficulty coordinating sucking, swallowing and breathing
- + Increased instances of choking, coughing, gagging or gasping
- + Excessive drooling and/or loss of liquid from mouth
- + Tire easily, hard to finish bottle
- + Fall asleep during feedings
- + Often cannot hold head up
- + Poor growth and slow weight gain







A young baby is swaddled and given a pacifier to keep him calm and organized before his feeding.





HOW TO SUPPORT

<p>Feeding and Timing</p> 	<ul style="list-style-type: none"> ○ Offer feedings frequently possibly every 2-3 hours. ○ Offer smaller feedings more frequently (such as 60 ml or 2 fl. oz. every 2 hours) if baby tires easily. ○ Pace meals to help baby find a sucking rhythm (Appendix 9J). ○ Limit all feedings to 30 minutes or less.
<p>Equipment</p> 	<ul style="list-style-type: none"> ○ Use a softer nipple that is easier for a weak baby to suck. ○ Choose a nipple/bottle that offers a flow to match baby's abilities (Chapter 1, Section 5; Appendix 9G). ○ If baby is leaking milk, offer a slower flow nipple with a zero or one (Chapter 1, Section 5; Appendix 9G).
<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3). ○ Feed baby in elevated side-lying or cradle positions (Chapter 1, Section 1; Chapter 2, Section 3). ○ Swaddle for support with hands toward her chest and hips bent (Chapter 2, Section 3).
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Offer pacifier or baby's fingers before feedings to help baby take nipple (Appendix 9G). ○ Offer pacifier for sucking practice between feedings (Appendix 9G). ○ Sooth and feed baby in a quiet, darker place (Chapter 1, Section 3; Appendix 9K). ○ Use rhythmic, repetitive movements and sounds to help baby become calm (Appendix 9K). ○ Encourage sucking using Bottle Feeding Press-Down and Lip Stimulation/Stroking Techniques (Appendix 9J). ○ Support sucking by using Jaw and Chin Support Technique (Appendix 9J). ○ Support sucking by using Lip and Cheek Support Technique (Appendix 9J).



CHALLENGE NO. 5: THE BABY WHO COUGHS, CHOKES OR GAGS

HOW TO IDENTIFY: These babies may cough, choke or frequently gag and spit up while taking liquids from a bottle during a feeding, directly after a feeding or during both. These babies may look like they are struggling to eat and breathe, gasping for breaths while feeding. May include babies with heart (cardiac) conditions, Down syndrome, babies with muscle tone issues such as cerebral palsy, babies with cleft lip and/or palate, babies exposed to substances such as drugs or alcohol in the womb or babies born early or with neurodevelopmental delays.







COMMON FEEDING PROBLEMS:

- + Difficulty coordinating suck-swallow-breath for feedings
- + Difficulty swallowing liquids or own saliva
- + Excessive drooling and/or loss of liquid from mouth
- + Tires easily and difficulty finishing a bottle
- + Frequent coughing, choking and/or gagging, and possible refusal of bottle
- + Fussiness or irritability before and during feedings
- + Poor growth and slow weight gain



Remember: Babies who cough, choke or gag with feedings may be aspirating (when liquid goes into lungs instead of into their stomachs). This can make babies very sick with upper respiratory infections and/or pneumonia, which can lead to poor weight gain and even death.

HOW TO SUPPORT

 <p>Feeding and Timing</p>	<ul style="list-style-type: none"> ○ Feed baby around the clock possibly every 2-3 hours. ○ Offer smaller feedings more frequently of 60 ml or 2 fl. oz. every 2 hours if baby tires easily. ○ Pace meals to help baby find a sucking rhythm and reduce coughing (Appendix 9J). ○ Limit all feedings to 30 minutes or less.
 <p>Equipment</p>	<ul style="list-style-type: none"> ○ Choose a nipple/ bottle that offers a flow to match baby's abilities (Chapter 1, Section 5; Appendix 9G). ○ Slower flows are usually easier and safer for these babies (Chapter 1, Section 5; Appendix 9G). ○ Try other strategies first. If all other strategies fail, consider carefully trying to thicken liquids to slow flow (and use with a faster flow nipple). <u>Do not cut nipples to speed the flow</u> (Chapter 1, Section 9; Appendices 9C and 9E).
 <p>Positioning</p>	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3). ○ Feed baby in elevated side-lying position (Chapter 1, Section 1; Chapter 2, Section 3). ○ Swaddle for support with hands toward his chest and hips bent (Chapter 2, Section 3).
 <p>Other Ways to Help</p>	<ul style="list-style-type: none"> ○ Offer pacifier for sucking practice between feedings (Appendix 9G). ○ Offer short breaks for burping and positive interaction if baby has trouble slowing down feeds.



Remember: Some babies aspirate and do not cough, choke or gag. This is called “silent aspiration.” Caregivers must look for other signs a baby may be aspirating during and around feedings such as a wet or gurgly voice or breathing, chronic wet or gurgly voice or breathing, watery eyes, change in skin color, frequent sickness and poor weight gain and growth.



For more information about swallowing and safety precautions, refer to Chapter 1, Section 2.
For more information about thickening liquids, refer to Chapter 1, Section 9 and Appendix 9E.



CHALLENGE NO. 6: THE BABY WHO FREQUENTLY SPITS UP

HOW TO IDENTIFY: Gastroesophageal reflux (GER) happens when food from the stomach comes back up into the throat causing pain and discomfort. Gastroesophageal reflux disease (GERD) is a more serious and long-lasting form of GER and may prevent a baby from feeding well and gaining weight. These babies tend to spit up often (sometimes after every feeding), they appear uncomfortable and seem hungry but frustrated when feeding. Often, over time, these babies may refuse to eat because it is such an uncomfortable and stressful experience. May include babies with low muscle tone (cerebral palsy), babies exposed to substances such as drugs or alcohol in the womb or babies born early or with neurodevelopmental delays.



Any baby can have reflux — and many babies show very few clear signs that they are struggling and in pain.



COMMON FEEDING PROBLEMS:

- + Uncontrollable vomiting
- + Spitting up very frequently (after every meal, in between feedings)
- + Frequent spitting up can lead to eventual refusal of the bottle
- + Fussiness or irritability before and during feedings (baby acts hungry, but refuses bottle when offered)
- + Poor growth and slow weight gain



***Remember:** Not all babies who spit up have GER or GERD. There are “happy spitters” and “unhappy spitters.” “Happy spitters” are babies who spit up often, but it doesn’t bother them or impact feedings. They continue to eat and do not appear in pain or upset. “Unhappy spitters” are babies who likely have GER or GERD. These babies act like they want to eat but appear afraid or upset when offered a bottle. It’s important to immediately identify a baby with GER/GERD so appropriate action can be taken (medications, positioning, special formulas, etc.) that will make feedings more comfortable and positive.*

HOW TO SUPPORT

Feeding and Timing



- Offer smaller feedings more frequently such as 60 ml or 2 fl. oz. every two hours especially if larger volumes lead to increased spitting up.
- Pace meals to reduce occurrence of spitting up (Appendix 9J).
- Limit all feedings to 30 minutes or less.

Equipment



- Choose a nipple/bottle that offers a flow to match baby's abilities. Slower flows are usually easier for these babies (Chapter 1, Section 5; Appendix 9G).
- Try other strategies first. If all other strategies fail, consider carefully trying to thicken liquids to slow flow (and use with a faster flow nipple). Do not cut nipples to speed the flow (Chapter 1, Section 9; Appendices 9C and 9E).

Positioning



- Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3).
- Feed baby in upright position — at least 30-45-degree angle. Do not feed baby lying down on his back or without any elevation.
- Feed baby using an elevated left side-lying position (Chapter 1, Section 1; Chapter 2, Section 3).
- Keep baby upright for at least 15-45 minutes after all feedings to keep liquids in his stomach (holding baby or using carefully constructed wedge or rolled up blanket or towel that offers adequate elevation).

Other Ways to Help



- Offer pacifier before and after feedings to help baby manage reflux secretions, reduce spit-ups and be more comfortable (Appendix 9G).
- Offer short breaks for burping and positive interaction if baby has trouble slowing down feeds.
- Move baby as little as possible (and not on stomach) after feedings to avoid spit-ups and increase comfort.

A caregiver carefully feeds a premature baby in an elevated position to help him more comfortably take his bottle. Because he was born early, he has a sensitive system and is more likely to spit up after feedings.





CHALLENGE NO. 7: SPECIAL POPULATION: THE BABY WITH CLEFT LIP AND/OR PALATE

HOW TO IDENTIFY: These babies are born with birth defects that can affect their lips, noses and/or roofs of their mouths. Some cleft palates can be very difficult to see because of where they are located in a baby's mouth. Because of these clefts (slits, openings), babies tend to have problems forming a tight seal around a nipple (cleft lip) and creating the necessary suction needed for efficiently sucking liquid from bottles (cleft palate).



COMMON FEEDING PROBLEMS:

- + Swallowing too much air → gassy, burping often
- + Not closing lips around nipple
- + Food and liquid come out of mouth messy feedings
- + Feeding refusals
- + Difficulty latching to nipple and sucking
- + Choking, coughing and possible aspiration
- + Vomiting and spitting up
- + Liquid coming out of mouth and/or nose → messy feedings
- + Frequent ear infections, ear drainage and/or difficulty hearing
- + Poor weight gain and growth



A young baby with cleft lip is fed by his caregiver using a specialty feeder that helps him form a better seal on the nipple for feedings.

HOW TO SUPPORT

Feeding and Timing



- Feed baby using rate that does not allow liquid to leak out of mouth or nose.
- Feed baby frequently (every 2 to 3 hours).
- Offer smaller feedings more frequently, such as 60 ml or 2 fl. oz. every two hours if larger volumes lead to increased spitting up or leakage from mouth and/or nose.
- Pace meals to reduce occurrence of leakage or aspiration (Appendix 9J).
- Limit all feedings to 30 minutes or less.

Equipment



- Use a nipple that offers a flow to match baby's abilities. Slower flows can often be easier, try nipples with lower numbers on them such as a zero or one (Chapter 1, Section 5; Appendix 9G).
- Use a wider based nipple (Chapter 1, Section 5; Appendix 9G).
- Use a nipple/bottle baby can "bite on" to get milk out (Chapter 1, Section 5; Appendix 9G).
- Use a specialty bottle for cleft lip/ palate (Appendix 9G).

Positioning



- Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3).
- Feed in an elevated side-lying position (Chapter 1, Section 1; Chapter 2, Section 3).
- Feed in a more upright position — at least 45-degree angle. Do not feed baby lying down on her back or without any elevation (Refer to illustration below).
- Keep baby upright for at least 15-45 minutes after all feedings to keep liquids in her stomach (holding baby or using carefully constructed wedge or rolled up blanket or towel that offers adequate elevation).

Other Ways to Help



- Move baby as little as possible (and off of stomach) after feedings to reduce spit-ups and increase comfort.
- Burp baby frequently.
- Direct nipple downward toward intact side of baby's mouth.

This image shows how to hold a baby with cleft lip or palate. The 45-degree angle helps keep liquids in a baby's mouth and stomach and reduces the chance of liquids flowing back up through the nose.



CHALLENGE NO. 8: SPECIAL POPULATION: THE BABY WHO IS BORN EARLY

HOW TO IDENTIFY: Babies who are born premature or early are born before 37 weeks gestation. Depending on how early the baby is born and how much she weighs, feeding difficulties are common and will vary in their complexity. When babies are born early, their bodies aren't fully developed. This means that feeding skills are also usually not fully developed, and they will need additional time and support in order to be safe and successful feeders.



COMMON FEEDING PROBLEMS:

- + Gagging when taking the bottle
- + Difficulty latching to the nipple
- + Difficulty sucking (i.e., weak suck)
- + Difficulty coordinating sucking, swallowing and breathing
- + Difficulty swallowing, with increased instances of coughing, choking or gasping
- + Difficulty breathing
- + Frequent vomiting and spitting up
- + Falling asleep during feedings
- + Easily overwhelmed from environment
- + Sensitive around mouth or face due to frequent medical procedures
- + Fussy and irritable
- + Poor weight gain and growth

HOW TO SUPPORT

Feeding and Timing



- Offer smaller feedings more frequently, such as 60 ml or 2 fl. oz. every 1-3 hours.
- Wake baby at night for feedings.
- Pace feedings to allow regular rest breaks (limiting entire feeding to 30 minutes total) (Appendix 9J).
- Limit all feedings to 30 minutes or less.

Equipment



- Use a nipple/bottle that offers flow to match baby's abilities. Slower flows can often be easier (Chapter 1, Section 5; Appendix 9G).
- Use a smaller, softer nipple and shorter bottle (120 ml or 4 fl. oz. bottle) (Chapter 1, Section 5; Appendix 9G).
- Use a nipple/bottle baby can "bite on" to get milk out (Chapter 1, Section 5; Appendix 9G).
- Use a specialty feeder bottle such as Premie nipple and bottle (Appendix 9G).

Positioning



- Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3).
- Hold baby very upright, almost at a 90-degree angle.
- Swaddle baby with hands near his face and hips bent (Chapter 2, Section 3).
- Keep liquid in bottle in a neutral position to allow neutral flow and do not point straight bottle down.
- Hold bottle like a pencil and place your finger under bony part of baby's chin.

Other Ways to Help



- Feed in a calm place with low light and sound and limited visual stimulation (Chapter 1, Section 3; Appendix 9K).
- Offer pacifier or baby's fingers before feedings to help baby take nipple (Appendix 9G).
- Offer pacifier or hands for sucking practice between feedings (Appendix 9G).
- Use rhythmic, repetitive movements and sounds to calm baby.
- Encourage sucking using Lip Stimulation/Stroking Technique (Appendix 9J).
- Support sucking by using Lip and Cheek Support Technique (Appendix 9J).
- Do not force baby to eat. Calm baby before every feeding.



A tiny baby born early is asleep under a special light treatment used to treat jaundice. Babies born early often need many medical procedures to stay alive, which can lead to very sensitive sensory systems and feeding challenges.



CHALLENGE NO. 9: SPECIAL POPULATION: THE BABY WHO IS BORN EXPOSED TO SUBSTANCES

HOW TO IDENTIFY: Substances, such as drugs or alcohol, hurt a baby's developing body when in a mother's belly. Babies who are exposed to drugs (prescription and/or illegal), and/or alcohol often have feeding challenges. Depending on what the baby was exposed to, how much and how often, the feeding difficulties will vary in their complexity. These babies tend to have very sensitive systems because of the substance exposure, leading to frequently spitting up, discomfort when feeding and difficulty staying calm when fed.







COMMON FEEDING PROBLEMS:

- + Difficulty sucking or having a weak suck
- + Difficulty coordinating sucking, swallowing and breathing when feeding
- + Difficulty swallowing, with possible choking and/or gasping
- + Frequent vomiting and spitting up
- + Falling asleep during feedings
- + Can become easily overwhelmed during feedings
- + Fussy, irritable or colicky
- + Feeding refusals
- + Poor growth and weight loss
- + Poor appetite and slow weight gain

After being exposed to drugs in the womb, this young baby had trouble getting her body calm and ready for feedings. Caregivers realized that she fed best when she was swaddled, offered a pacifier before feedings and when offered a bottle at the first sign of her hunger. She also fed better in a quiet room with few sounds and visual distractions.



HOW TO SUPPORT

<p>Feeding and Timing</p> 	<ul style="list-style-type: none"> ○ Offer regular, frequent feedings possibly every 1-3 hours. ○ Wake baby at night for feedings. ○ Pace feedings to allow regular rest breaks (Appendix 9J). ○ Limit all feedings to 30 minutes or less.
<p>Equipment</p> 	<ul style="list-style-type: none"> ○ Use a nipple that offers flow to match baby's abilities. Slower flows can often be easier (Chapter 1, Section 5; Appendix 9G). ○ Use a smaller, softer nipple and shorter bottle (120 ml or 4 fl. oz. bottle) (Chapter 1, Section 5; Appendix 9G). ○ Use a specialty bottle such as a Preemie nipple and bottle (Appendix 9G).
<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies (Chapter 1, Section 1; Chapter 2, Section 3). ○ Feed baby in semi-upright or upright position. ○ Swaddle baby with hands near her face and hips bent (Chapter 2, Section 3). ○ Hold baby snugly if not swaddled.
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Feed in a calm place with low light and sound and limited visual stimulation (Chapter 1, Section 3; Appendix 9K). ○ Offer a pacifier or hands regularly and help baby use for soothing and sucking practice (Appendix 9G). ○ Offer pacifier or baby's finger before feedings to help baby take nipple (Appendix 9G). ○ Provide a pacifier or bring baby's thumb or hands to mouth to help soothe after feedings. ○ Use rhythmic, repetitive movements and sounds to calm and soothe baby (Appendix 9K). ○ Do not force baby to eat. Calm baby before offering bottles.



Remember: When making changes to how you feed a baby, start by changing one element at a time. Too many changes all at once can be stressful for a baby and it can make it hard to know what changes worked well and which did not.



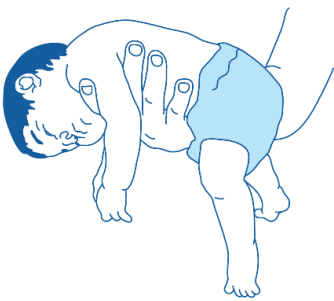
CHALLENGE NO. 10: THE CHILD WHO HAS PROBLEMS WITH MUSCLE TONE

HOW TO IDENTIFY: Children can have low (hypotonia = floppy) or high (hypertonia = tight, rigid) muscle tone. When a child has trouble controlling the tone in his muscles, this can make feeding activities challenging. Sitting upright, holding your head in a neutral position and using your tongue and lips for managing foods are all examples of activities that can be hard when tone is either low or high. These children can also be at higher risk for swallowing problems and aspiration because the muscles that assist with swallowing can be floppy or tight. Some children move back and forth between high and low tone. This is called “fluctuating tone” and it is most commonly seen in babies with specific types of cerebral palsy. May include children with cerebral palsy, damaged spinal cords or brain injuries, Down syndrome, heart (cardiac) conditions or children who are medically fragile, born early or who are exposed to substances in the womb.



MOST COMMON REASONS FOR HIGH AND LOW MUSCLE TONE

<i>Hypotonia → Low Tone</i>	<i>Hypertonia → High Tone</i>
Cerebral palsy	Cerebral palsy
Muscular dystrophy	Spinal cord injuries
Down syndrome (Trisomy 21)	Brain injuries
Autism	Substance exposures in womb



LOW TONE: A child with **hypotonia** will often have a floppy quality or "rag doll" feeling when they are held. They may lag behind in acquiring fine and gross motor skills such as holding their heads up, balancing themselves, grabbing and holding onto foods to feed themselves or getting into a sitting position and remaining seated without falling over. They may also have trouble with feeding and swallowing. For example, they may be unable to suck or chew, become fatigued with eating and older children may stuff large amounts of food in their mouths resulting in choking or gagging). These children need extra support such as greater stimulation to “wake up” their bodies for feeding and good positioning that meets their individual needs.



COMMON FEEDING PROBLEMS (LOW TONE):

- + Difficulty maintaining stable positions for feedings
- + Difficulty sucking or having a weak suck
- + Difficulty swallowing with possible coughing, choking or gagging
- + Difficulty transitioning to solids and/or managing more complex food textures
- + Tire quickly and may stop feedings early → decreasing volume of feedings and decreasing calorie consumption
- + Less sensitive to sensory input such as how things taste, smell, feel, sound, etc.
- + Messy mealtimes with frequent loss of liquid or food out of mouth
- + Excessive drooling and open mouth posture
- + Spitting out food and/or holding food in their mouths
- + Overstuffing of food in mouth
- + Poor growth and/or slow weight gain

HIGH TONE: A child with **hypertonia** will often have an arched body, clenched fists and a clenched or thrusting jaw. They may lag behind in acquiring fine and gross motor skills such as holding their heads upright and forward, opening their hands, straightening their arms and legs or getting into a sitting position and remaining seated without falling over. They may also have trouble with feeding and swallowing. For example, they may be unable to suck or chew, become fatigued with eating, difficulty using spoons and cups and sometimes aspirating foods or liquids. These children need extra support such as reduced stimulation and good positioning that meets their individual needs.



COMMON FEEDING PROBLEMS (HIGH TONE):

- + Difficulty sucking such as having an uncoordinated or not well controlled suck
- + Difficulty swallowing with possible coughing, choking, gasping or gagging
- + Difficulty transitioning to solids and/or managing more complex food textures
- + Tire quickly and may stop feedings early → decreasing volume of feeding and decreasing calorie consumption
- + More sensitive to sensory input such as how things taste, smell, feel, sound, etc.
- + Messy mealtimes with frequent loss of liquid or food out of mouth
- + Difficulty closing their mouth using the lips and jaw, in addition to having trouble removing foods from utensils and positioning lips for drinking
- + Poor growth and/or slow weight gain

HOW TO SUPPORT LOW AND HIGH TONE

Feeding and Timing



- Offer smaller, more frequent feedings if child fatigues easily.
- Use a rate of feeding that matches rate child can handle.
- Pace feedings to allow regular rest breaks (Appendix 9J).
- Feed smaller meals more frequently during the day.
- Limit all feedings to 30 minutes or less.

Equipment



- flows can often be easier (Chapter 1, Section 5; Appendix 9G).
- Use a small cup or spoon for offering blended foods and liquids if spoon feeding is difficult (Chapter 1, Sections 6 and 7).
- Offer thickened liquids and blended diets if chewing and swallowing are difficult (Chapter 1, Section 9; Appendices 9C, 9E).
- Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I).
- Use extra physical supports for seated child such as rolled up towels or blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendix 9I).
- Use spoons that match size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H).
- Use cut-out “nosey” cups (Chapter 1, Section 7; Appendix 9G).

Positioning



- Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4).
- Feed child in upright position at a greater than 45-degree angle.
- Sit at eye-level with the child while feeding.
- Do not let a child with low tone lean or fall forward or to the side with her head and neck.
- Do not let a child with high tone extend her head and neck backward or to the side.

Other Ways to Help



- **Low tone:** Use activities that gently wake child before feedings or that wake child if she has fallen asleep (Appendix 9K).
- **High tone:** Use activities that gently calm child before feedings or that calm her if she has gotten excited or overstimulated (Appendix 9K).
- **Low tone:** Feed in a place with bright lighting and/or more sound (Chapter 1, Section 3).
- **High tone:** Feed in a calm place with low lighting, less sound and limited visual stimulation (Chapter 1, Section 3).
- **Low tone:** Interact with child through touch, eye gaze, movement and sounds using faster rates of movement, louder voices/sounds and increased animation from caregivers (Chapter 1, Section 3).

- **High tone:** Interact with child through touch, eye gaze, movement and sounds using slower rates of movement, softer voices or sounds and reduced animation from caregivers (Chapter 1, Section 3).
- Encourage self-feeding when possible to build skills (Chapter 1, Section 8; Chapter 3, Section 2; Appendix 9I).
- Offer different food and liquid flavors or textures when a child is ready and able to manage (Appendix 9F).
- Make changes to the type of bottle, nipple, cup and/or spoon if challenges persist.
- Never force feed a child.



***Remember:** Positioning for every child must be individualized. Always find the best position by considering the child's capacity and safety, and seek consultation with a feeding specialist such as a physical, occupational or speech therapist when in doubt.*



The same bottle, nipple, cup and spoon do not work for every child.



For more specific information on feeding positioning across different ages, refer to Chapters 2, 3, 4 and 5.



Where the feeder sits matters. Sit at eye level facing a child so that he does not need to extend his head and neck to see you and reach the food or liquid.



CHALLENGE NO. 11: THE CHILD WHO HAS PROBLEMS WITH THE STRUCTURES OF THE MOUTH

HOW TO IDENTIFY: Children may have feeding difficulties due to structural differences in their bodies. Problems with the jaw, tongue, lips, cheeks and palate may lead to problems with feeding such as difficulty sucking, biting, chewing, swallowing, and eating different food textures. This may include children with a variety of syndromes or conditions such as down syndrome, cerebral palsy, autism, neurodevelopmental delays, children who are medically fragile, born early or who are exposed to substances in the womb.

COMMON STRUCTURAL PROBLEMS OF THE FACE AND MOUTH

JAW	TONGUE	LIPS AND CHEEKS	PALATE
<ul style="list-style-type: none"> ⇒ Jaw thrust ⇒ Tonic bite 	<ul style="list-style-type: none"> ⇒ Tongue thrust ⇒ Tongue retraction 	<ul style="list-style-type: none"> ⇒ Lip retraction ⇒ Cleft lip ⇒ Poor lip closure 	<ul style="list-style-type: none"> ⇒ Cleft palate



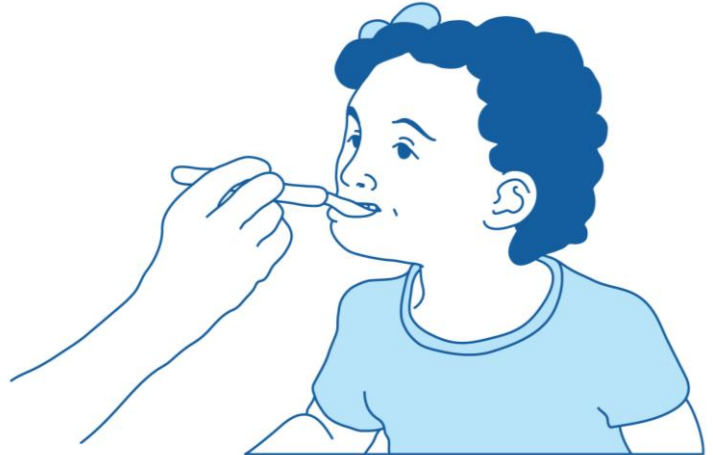
A child shows a tonic bite while being fed by a caregiver due to sensitivity to a spoon.



JAW: When the jaw does not work properly it can make feeding challenging for a child, especially when they begin to eat solid foods. Problems with the jaw can also make it hard to open or close the mouth, lead to accidental biting of objects and self, make feeding tiring, create discomfort or pain and restrict a child's ability to efficiently learn how to bite and chew foods⁹.

COMMON JAW PROBLEMS: JAW THRUST AND TONIC BITE

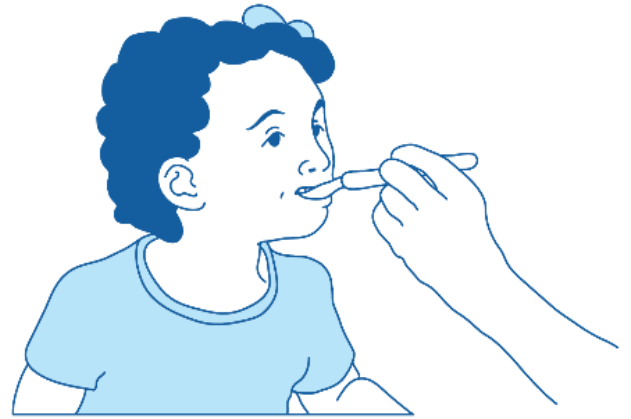
JAW THRUST: The jaw opens through a strong down, out and forward movement. It occurs most often when foods are offered to a child for biting. It can also happen if a child has differences in muscle tone, such as hypertonia. When a child has increased abnormal tone in the jaw muscles, pressing up on the jaw only makes the jaw thrusting worse.



COMMON FEEDING PROBLEMS (JAW THRUST):

- + Difficulty removing food off of a spoon or fork
- + Difficulty positioning the lips, tongue and jaw for cup drinking
- + Difficulty closing the mouth for swallowing
- + Difficulty transitioning to solids and/or eating more complex food textures
- + Tendency to tire quickly, stop feedings early and consume a lower volume of food or liquid and therefore consume fewer calories
- + Messy meal times with frequent loss of liquid or food out of the mouth
- + Excessive drooling
- + More sensitive to sensory input such as how things taste, smell, feel, sound, look, etc.
- + Poor growth and/or slow weight gain

TONIC BITE: When the teeth are touched by an object (food, finger, spoon, cup), the jaw moves up into a tightly clenched position. This makes it hard for a child to open her mouth for eating. Typically, children with hypertonia are more likely to have a tonic bite.



COMMON FEEDING PROBLEMS (TONIC BITE):

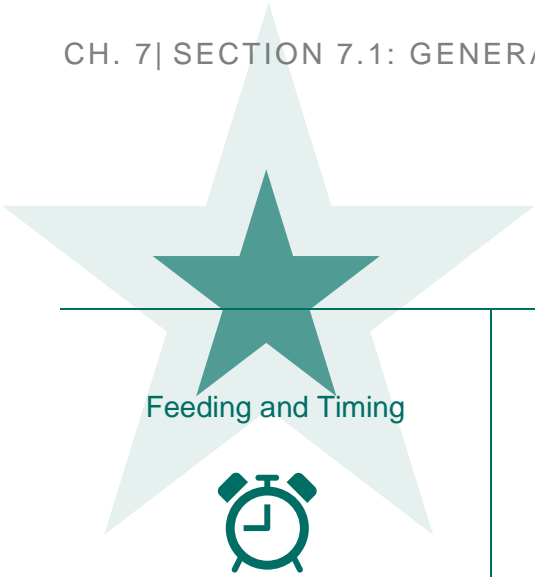
- + Difficulty transitioning to solids and/or eating more complex food textures
- + Difficulty using spoons and cups
- + More sensitive to sensory input such as how things taste, smell, feel, sound, look, etc.
- + Difficulty getting enough to eat, as caregivers assume child is indicating with this behavior that she is not hungry
- + Poor growth and/or slow weight gain

MOST COMMON REASONS FOR JAW THRUST AND TONIC BITE

ISSUES	REASONS
Physical	<ul style="list-style-type: none"> ⇒ Poor positioning ⇒ Hypertonic (tight) body patterns ⇒ Structural/anatomy differences that make proper positioning difficult
Sensory	<ul style="list-style-type: none"> ⇒ Overstimulation from environment causes thrust and bite responses ⇒ Direct Stimulation by touch of food, drink, cup, utensil to mouth, face or body
Interaction	<ul style="list-style-type: none"> ⇒ Child behavior used to communicate with caregiver ⇒ Child's way to communicate readiness to eat, need for another bite, excitement, pleasure with food/mealtime or when finished eating



Remember: When a child has a tonic bite, do not pull on the bottle, cup or spoon to release. The child's reflex will only cause them to bite down harder. Use the Tonic Bite Technique from Chapter 9.



Feeding and Timing



HOW TO SUPPORT JAW THRUST AND TONIC BITE

- Use a rate of feeding that matches rate child can handle
- Pace feedings to allow regular rest breaks (Appendix 9J).
- Limit all feedings to 30 minutes or less

Equipment



- Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I).
- Use extra postural support for seated child such as rolled up towels or blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use spoons that match size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H).
- Non-metal spoons may work best for children with sensitivities to metal or cold materials (Chapter 1, Section 6; Appendices 9G, 9H).
- Use cut-out “nosey” cups (Chapter 1, Section 7; Appendix 9G).

Positioning



- Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4).
- Feed child in upright position at a greater than 45-degree angle.
- Sit at eye-level with the child while feeding.
- Do not let a child with jaw thrust or tonic bite extend her head and neck backward.

Other Ways to Help



- Jaw thrust: Help child find other ways to express her wants and needs using sign language, gestures, pictures or sounds and words (Chapters 2, 3, 4, 5, Section 4; Chapter 6, Section 3).
- Jaw thrust: Use the L-shape Technique (Appendix 9J).
- Jaw thrust: Provide gentle pressure under the chin using 1-2 fingers while the child takes a bite or sip.
- Tonic bite: Use Tonic Bite Spoon/Cup Removal Technique (Appendix 9J) .
- Feed in a calm place with low lighting, less sound and limited visual stimulation (Chapter 1, Section 3).
- Interact with child through touch, eye gaze, movement and sounds using slower rates of movement, softer voices or sounds and reduced animation from caregivers (Chapter 1, Section 3).
- Increase child’s tolerance to sensory input (Chapter 1, Section 3).

- Make changes to the type of bottle, nipple, cup and/or spoon if challenges persist.



Remember: Good positioning and a quiet calm environment can help reduce high muscle tone or physical response, including the strength and frequency of jaw thrust.



TONGUE: When the tongue does not work properly it can make mealtimes hard for children and their caregivers. Problems with the tongue can create challenges with bottle feeding, cup drinking and spoon feeding. It can be difficult for a bottle, cup or spoon to fit into a child's mouth. The airway can be blocked by the tongue for eating and breathing. The tongue can interfere with necessary movements for sucking and swallowing, or it can push food and liquid out of the mouth. It can also disrupt the process of moving food in the mouth to prepare it for eating and swallowing⁹.

COMMON TONGUE PROBLEMS:

TONGUE THRUST AND TONGUE RETRACTION

TONGUE THRUST: Strong protrusion (forward pushing) of the tongue out of the mouth.

TONGUE RETRACTION: Pulling of the tongue far back in the mouth toward the throat.



COMMON FEEDING PROBLEMS (TONGUE THRUST AND TONGUE RETRACTION):

- + Difficulty allowing a nipple, cup and/or spoon to enter the mouth
- + Difficulty swallowing with possible coughing, choking, gagging or gasping
- + Difficulty transitioning to solids and/or eating more complex food textures
- + Messy meal times with foods or liquids frequently pushed out of the mouth (*tongue thrust*) or falling out of mouth (*tongue retraction*)
- + More sensitive to sensory input such as how things taste, smell, feel, sound, etc.
- + Poor growth and/or slow weight gain

MOST COMMON REASONS FOR TONGUE THRUST AND TONGUE RETRACTION

ISSUES	REASONS
Physical	<ul style="list-style-type: none"> ⇒ Low tone or high tone ⇒ Hyperextension of the head and neck
Sensory	<ul style="list-style-type: none"> ⇒ Hypersensitivity (increased sensitivity) in the mouth ⇒ Contact of food/liquid/cup/spoon causes thrust response ⇒ Sensitivity or avoidance of food or liquid texture, taste or temperature causes thrust or retraction responses ⇒ Overstimulating environment causes thrust and retraction responses
Interaction	<ul style="list-style-type: none"> ⇒ Child behavior used to communicate with caregiver ⇒ Child's way to communicate dislike, fullness (not hungry), upset, feeling unsafe, avoiding being fed, or wanting more food
Oral Control	<ul style="list-style-type: none"> ⇒ When a child with a retracted tongue position tries to move their tongue forward, they push the tongue too far forward leading to a tongue thrust






Remember: Proper positioning will reduce tongue thrust. Always first ensure that a child is in a well-supported position for feedings and that his head is in a slightly forward, neutral position.



HOW TO SUPPORT TONGUE THRUST AND RETRACTION

Feeding and Timing

- Retraction: Feed using a slow and patient rate.
- Use a rate of feeding that matches rate child can handle.
- Pace feedings to allow regular rest breaks (Appendix 9J).
- Limit all feedings to 30 minutes or less.

<p>Equipment</p> 	<ul style="list-style-type: none"> ○ Thrust: Place cups and spoons on child’s lower lip below the tongue. ○ Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use extra postural support for seated child such as rolled up towels/blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use spoons that match size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H). ○ Non-metal spoons may work best for children with sensitivities to metal or cold materials (Chapter 1, Section 6; Appendices 9G, 9H). ○ Use cut-out “nosey” cups (Chapter 1, Section 7; Appendix 9G).
<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4). ○ Feed child in an upright position at a greater than 45-degree angle. ○ Reduce the amount of high tone through good positioning. ○ Sit at eye-level with the child while feeding. ○ Do not let a child with tongue thrust or retraction extend his head and neck backward.
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Tongue Thrust: Provide gentle pressure under the chin using 1-2 fingers while the child takes a bite or sip. ○ Tongue Thrust: Use the Press Down Technique for spoon and cup drinking (Appendix 9J). ○ Tongue Thrust: Try offering the spoon from the side paired with downward pressure. ○ Feed in a calm place with low lighting, less sound and limited visual stimulation (Chapter 1, Section 3). ○ Try helping the child become calm before the meal. ○ Interact with child through touch, eye gaze, movement and sounds using slower rates of movement, softer voices or sounds and reduced animation from caregivers (Chapter 1, Section 3). ○ Increase child’s tolerance to sensory input (Chapter 1, Section 3). ○ Make changes to the type of bottle, nipple, cup and/or spoon if challenges persist.

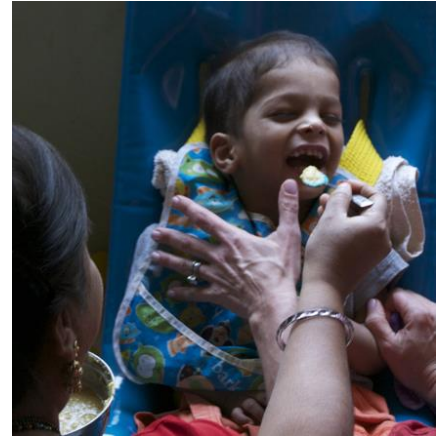


LIPS AND CHEEKS: When the lips and cheeks do not work properly feeding can be challenging for a child. Poor lip and cheek control can lead to difficulty grabbing and holding onto foods in the mouth, preparing foods in the mouth for swallowing, challenges creating pressure in the mouth to swallow, loss of saliva and food or liquid out of the mouth, increased potential for food to become stuck in the cheeks, increased instances of coughing and choking and reduced efficiency with chewing foods.⁹

COMMON LIP AND CHEEK PROBLEMS:

LIP RETRACTION AND POOR LIP CLOSURE

LIP RETRACTION: The lips are pulled back tightly making it difficult for the lips and cheeks to assist with sucking, removing food off of utensils, drinking from a cup and/or keeping food or liquid inside of the mouth.



POOR LIP CLOSURE: The inability to close the lips when desired. Children with poor lip closure frequently keep their mouths open (during and outside of feedings). Closing your lips is necessary for eating because it assists with grabbing and removing food or liquids, chewing and swallowing.






COMMON FEEDING PROBLEMS (LIP RETRACTION AND POOR LIP CLOSURE):

- + Difficulty sucking
- + Difficulty removing food from a cup and/or utensil
- + Difficulty munching, chewing and moving food around in the mouth
- + Difficulty swallowing with possible coughing, choking or gagging
- + Difficulty transitioning to solids and/or managing more complex food textures
- + Messy mealtimes with frequent loss of liquid or food out of mouth
- + More sensitive to sensory input such as how things taste, smell, feel, sound, etc. (*retraction*)
- + Poor growth and/or slow weight gain

MOST COMMON REASONS FOR LIP RETRACTION AND POOR LIP CLOSURE

ISSUES	REASONS
Physical	<ul style="list-style-type: none"> ⇒ High tone ⇒ Poor positioning with too much extension in the hips ⇒ <i>Lip retraction</i>: neck hyperextension
Sensory	<ul style="list-style-type: none"> ⇒ Overstimulating environment causes retraction response
Interaction	<ul style="list-style-type: none"> ⇒ Child’s behavior used to communicate with caregiver ⇒ <i>Lip retraction</i>: way to communicate excitement, happiness, hunger or to stop the feeding ⇒ <i>Poor lip closure</i>: way to communicate: hunger, fullness (not hungry), feelings of unsafety, dislike or happiness

HOW TO SUPPORT LIP RETRACTION AND CLOSURE

<p>Feeding and Timing</p> 	<ul style="list-style-type: none"> ○ Use a rate of feeding that matches rate child can handle. ○ Pace feedings to allow regular rest breaks (Appendix 9J). ○ Limit all feedings to 30 minutes or less.
<p>Equipment</p> 	<ul style="list-style-type: none"> ○ Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use extra postural support for seated child such as rolled up towels or blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I). ○ Use spoons that match size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H). ○ Use cut-out “nosey” cups (Chapter 1, Section 7; Appendix 9G).
<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4). ○ Feed child in an upright position at a greater than 45-degree angle. ○ Do not let a child with lip retraction or poor lip closure extend his head and neck backward.

Other Ways to Help



- **Lip retraction:** Feed in a calm place with low lighting, less sound and limited visual stimulation (Chapter 1, Section 3).
- **Poor lip closure:** Feed in a more alerting place with brighter lighting and more sound (Chapter 1, Section 3).
- **Lip retraction:** Interact with child through touch, eye gaze, movement and sounds using slower rates of movement, softer voices or sounds and reduced animation from caregivers (Chapter 1, Section 3).
- **Poor lip closure:** Interact with child through touch, eye gaze, movement and sounds using faster rates of movement, louder voices or sounds and increased animation from caregivers (Chapter 1, Section 3).
- **Lip retraction:** Increase child's tolerance to sensory input (Chapter 1, Section 3).
- **Lip retraction:** Use activities that help calm a child before a feeding (Appendix 9K).
- **Poor lip closure:** Use activities that help wake child before a feeding (Appendix 9K).
- **Poor lip closure:** Use Lip Closure Technique (Appendix 9J).
- **Poor lip closure:** Use L-shape Technique (Appendix 9J).
- **Poor lip closure:** Use Pat-Pat Facial Massage Technique (Appendix 9J).
- Make changes to the type of bottle, nipple, cup and/or spoon if challenges persist.

PALATE: When the palate is not formed correctly, feeding challenges can arise for children. A problematic palate can make sucking challenging, and it can lead to a loss of foods and/or liquids through the nose or even into the lungs. Children with cleft palates can be highly sensitive to touch around the face and mouth because of frequent medical procedures. Refer to cleft lip and/or palate feeding for babies earlier in this chapter for more information about support.

COMMON PALATE PROBLEMS: CLEFT PALATE

CLEFT PALATE: A hole in the roof of the mouth that creates challenges for swallowing and also can lead to food and liquid escaping into the nose or lungs.



COMMON FEEDING PROBLEMS (PALATE):

- + Difficulty swallowing with possible choking, coughing and aspiration
- + Difficulty transitioning to solids and/or managing more complex food textures
- + Vomiting and spitting up
- + Messy feedings with liquid/food coming out of the mouth and/or nose

- + Food or liquid refusals
- + Frequent ear infections, ear drainage and/or difficulty hearing
- + Poor growth and/or slow weight gain

HOW TO SUPPORT CLEFT PALATE (THE OLDER CHILD)

Feeding and Timing



- Feed child using rate that does not allow food or liquid to leak out of mouth or nose.
- Use a rate of feeding that matches rate child can handle and does not cause leakage or aspiration.
- Liquids and foods should not leak out of a child's nose.
- Limit all feedings to 30 minutes or less.

Equipment



- Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I).
- Use extra postural support for seated child such as rolled up towels or blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use spoons that match the size of the child's mouth (Chapter 1, Section 6; Appendices 9G, 9H).
- Use a specialized feeder system, syringe or cup such as a "nosey" cut-out cup or bite-valve cup (Chapter 1, Section 7; Appendix 9G).

Positioning



- Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4).
- Feed child in an upright position at a greater than 45-degree angle.
- Keep child upright for 15-45 minutes following meals to keep food or liquid down in her stomach.

Other Ways to Help



- Increase child's tolerance to sensory input (Chapter 1, Section 3).
- Encourage self-feeding when possible to increase child's comfort. (Chapter 1, Section 8; Chapters 3 and 4; Sections 2).
- Offer different food or liquid flavors and textures when a child is ready and able to manage (Appendix 9F).
- Watch for leakage from nose and signs of aspiration such as coughing, choking wet voice or breathing, etc. Modify food textures and/or liquids to reduce risk of aspiration and leakage (Chapter 1, Section 2; Appendix 9E).
- Make changes to the type of bottle, nipple, cup and/or spoon if challenges persist.



***Remember:** When feeding challenges arise, always consider positioning, rate and volume. Change one of these elements at a time and determine if the problem is solved or needs additional support.*



CHALLENGE NO. 12: THE CHILD WHO HAS A SENSITIVE SENSORY SYSTEM

HOW TO IDENTIFY: Every child has a unique sensory system. Children can have sensory systems that are hyporeactive (under-stimulated) or hyperreactive (over-stimulated). Problems with a child’s sensory system occur when the body does not process and control sensory information well. This can make many daily activities difficult and very stressful for a child, especially mealtimes. This may include children with cerebral palsy, Down syndrome, autism spectrum disorders, fetal alcohol spectrum disorders, children with visual or hearing impairments, children who are medically fragile, born early or who are exposed to substances in the womb⁹



MOST COMMON REASONS FOR HYPOREACTIVITY AND HYPERREACTIVITY

<i>Hyporeactivity → Under Stimulated</i>	<i>Hyperreactivity → Over Stimulated</i>
Cerebral palsy (CP) – low tone	Cerebral palsy (CP) – high tone
Down syndrome (Trisomy 21)	Fetal alcohol spectrum disorders (FASD)
Medically fragile babies/prematurity	Substance exposure in womb
Fetal alcohol spectrum disorders (FASD)	Visual and hearing impairments



HYPOREACTIVITY: This is when a child has a lower response to certain sensations than would be expected. Children with lower sensitivities are said to be “under-stimulated” or “hyposensitive.” They may not be as sensitive to smells or tastes, or touch and pain no matter how intense the sensation. These children frequently have lower muscle tone and a reduced awareness of foods and liquids in their mouths. This often leads to difficulty eating different food textures, pocketing of food in the cheeks, stuffing of food in the mouth, coughing and choking and messy eating.

HYPERREACTIVITY: This is when a child has a higher response to certain sensations than would be expected. Children with higher sensitivities are said to be “overstimulated” or hypersensitive.” They may be more sensitive to smells or tastes or touch and pain, no matter how subtle or soft the sensations. These children frequently have higher muscle tone, and experiences that have led to extra sensitive systems (substance exposure, prematurity). Due to this, these children have an increased awareness of foods and liquids in their mouths, which can often lead to difficulty eating different food textures, trying new foods, avoiding or refusing certain textures or challenges getting a child to eat enough during mealtimes.



COMMON FEEDING PROBLEMS: HYPOREACTIVITY AND HYPERREACTIVITY:

- + Tires quickly → stops feedings early → take less volume and fewer calories (*hyporeactivity*)
- + Less sensitive to sensory input such as how things taste, smell, feel, sound or look (*hyporeactivity*)
- + Messy mealtimes with more frequent loss of liquids or food from mouth (*hyporeactivity*)
- + Excessive drooling and open mouth posture (*hyporeactivity*)
- + Spitting out foods or holding (“pocketing”) food in their mouths (*hyporeactivity*)
- + Picky eating and reduced diet or texture diversity (*hyperreactivity*)
- + Avoiding certain flavors, textures, temperatures, smells, etc. (*hyperreactivity*)
- + Frequent gagging or vomiting (*hyperreactivity*)
- + Frequent tonic bite reflex (*hyperreactivity*)
- + Disinterest or dislike touching foods and feeding self (*hyperreactivity*)
- + More sensitive to sensory input such as how things taste, smell, feel, sound or look (*hyperreactivity*)
- + Spitting out foods and liquids (*hyperreactivity*)

- + Difficulty maintaining stable positions for feedings
- + Difficulty sucking
- + Difficulty swallowing with possible coughing or choking
- + Difficulty transitioning to solids and/or managing more complex food textures
- + Poor growth and/or slow weight gain



HOW TO SUPPORT SENSITIVE SENSORY SYSTEMS
(HYPOREACTIVE AND HYPERREACTIVE)

Feeding and Timing





- Use a rate of feeding that matches rate child can handle.
- Pace feedings to allow regular rest breaks.
- Limit all feedings to 30 minutes or less.

Equipment



- Hypo: Offer objects for mouthing and “waking up” child’s mouth and face before meals such as a teether, toothbrush, etc. (Appendix 9K).
- Hyper: Offer objects for mouthing and desensitizing mouth and face before meals such as a teether, toothbrush, washcloth, etc. (Appendix 9K).
- Hyper: Use non-metal spoons such as maroon, plastic, etc., to avoid causing mouth and face sensitivities (Chapter 1, Section 6; Appendices 9G, 9H).
- Hyper: Use cups that are not glass or metal to avoid causing mouth and face sensitivities. Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 6; Appendices 9G, 9H).
- Use extra postural support for seated child such as rolled up towels/blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use spoons that match the size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H).

<p>Positioning</p> 	<ul style="list-style-type: none"> ○ Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4). ○ Feed child in an upright position at a greater than 45-degree angle.
<p>Other Ways to Help</p> 	<ul style="list-style-type: none"> ○ Hypo: Use activities that wake and alert child's body before feedings (Appendix 9K). ○ Hyper: Use activities that calm child's body before feedings or that calm him if he has gotten excited or overstimulate (Appendix 9K). ○ Hypo: Feed in a brighter place with bright lighting and/or more sound (Chapter 1, Section 3; Appendix 9K). ○ Hyper: Feed in a calm place with low lighting, less sound and limited visual stimulation (Chapter 1, Section 3; Appendix 9K). ○ Hypo: Interact with child through touch, eye gaze, movement and sounds using faster rates of movement, louder voices or sounds and increased animation from caregivers (Chapter 1, Section 3; Appendix 9K). ○ Hyper: Interact with child through touch, eye gaze, movement and sounds using slower rates of movement, softer voices or sounds and reduced animation from caregiver (Chapter 1, Section 3; Appendix 9K). ○ Hypo: Increase child's awareness of sensory input (Chapter 1, Section 3). ○ Hyper: Increase child's tolerance to sensory input (Chapter 1, Section 3).



CHALLENGE NO. 13: THE CHILD WHO HAS PROBLEMS BITING AND/OR CHEWING

HOW TO IDENTIFY: These children have trouble biting through solids and developing effective chewing for eating all types of foods. For some children with lots of medical needs, biting and chewing can be very tiring, which means they tend to eat less during meals. Also, biting and chewing requires healthy teeth and gums. For children who have cavities and other tooth and gum problems, eating harder textured foods can be painful, leading to avoidance of these foods. Other reasons for biting and chewing challenges may be linked to high or low tone, sensory issues and/or structural abnormalities. May include children with Down syndrome, cerebral palsy, heart (cardiac) conditions, dental problems, children with visual impairments or who are medically fragile, born early or exposed to substances in the womb.





COMMON FEEDING PROBLEMS: BITING AND CHEWING:

- + Difficulty transitioning to solids and/or eating more complex food textures
- + Picky eating and reduced diet or texture diversity – avoidance of certain textures
- + Gagging and/or vomiting
- + Spitting out of foods
- + Swallowing foods whole or partially chewed
- + Poor growth and/or slow weight gain



Feeding and Timing



HOW TO SUPPORT BITING AND CHEWING

- Use a rate of feeding that matches rate child can handle.
- Pace feedings to allow regular rest breaks (Appendix 9J).
- If child is self-feeding, encourage a slow rate of eating.
- Limit all feedings to 30 minutes or less.

Equipment



- Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I).
- Use extra postural support for seated child such as rolled up towels/blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use spoons that match size of the child’s mouth (Chapter 1, Section 6; Appendices 9G, 9H).
- Use foods that allow practice for biting and chewing — under careful supervision of a caregiver.
- Use appropriately sized foods for biting and chewing practice.

Positioning



- Follow key elements of positioning for babies and children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4).
- Feed child in upright position at a greater than 45-degree angle.

Other Ways to Help



- Offer different food or liquid flavors and textures when a child is ready and able to manage.
- Smaller spoons lead to smaller bites.
- Use activities that help wake and alert a child's body before a feeding such as brushing teeth or chewing on a ChewyTube (Appendix 9K).
- Use facial molding techniques to wake a child's face for eating (Appendix 9J).
- Offer frequent opportunities to explore different textures (see, smell, touch) without any pressure for a child to eat them during meals.
- Offer easier, familiar textures alongside new, harder textures to increase a child's comfort and success (Appendices 9E, 9F).
- Offer small amounts of new textures at a time.
- Offer new textures often across many meals each day to increase a child's comfort, practice, and skill.
- Eat with a child so he can see how others chew food.
- Encourage small bites, which are easier to chew (Appendix 9E).
- Offer long, skinny, crunchy, dissolvable finger foods for chewing practice on the teeth.
- Offer foods a child can safely "bite through" for building jaw strength and chewing skills.
- Offer gentle reminders and praise during meals about a child's chewing ("Chew! Chew! Chew!" "Nice work chewing your food, Angel!").



CHALLENGE NO. 14: THE CHILD WHO HAS PROBLEMS WITH SWALLOWING (THE OLDER CHILD)

HOW TO IDENTIFY: These children may cough while taking liquids from cups or straws during a feeding, directly after a feeding or during both instances. These children may look like they are struggling to eat and breathe or are gasping for breath while feeding. However, sometimes we can't see that they are having problems. May include children with heart (cardiac) conditions, Down syndrome, muscle tone issues such as cerebral palsy, cleft lip and/or palate, children exposed to substances in the womb, born early or with neurodevelopmental delays.





COMMON FEEDING PROBLEMS:

- + Difficulty managing their own saliva, excessive drooling
- + Excessive loss of liquid during feedings
- + Tire easily
- + Frequent coughing, choking, gasping and/or gagging
- + Wet “gurgly” voice or breathing
- + Congested sound when breathing or making sounds
- + Fussiness or irritability before and during feedings
- + Frequent illnesses
- + Poor growth and slow weight

HOW TO SUPPORT SWALLOWING

Feeding and Timing



- Use a rate of feeding that matches rate child can handle.
- Pace feedings to allow regular rest breaks (Appendix 9J).
- If child is self-feeding, encourage a slow rate of eating.
- Limit all feedings to 30 minutes or less.
- Stop feeding if coughing, choking or gasping for air repeatedly occurs.
- Use a chair or seat that provides optimal positioning and support (Chapter 1, Section 1; Appendices 9G, 9I).

Equipment



- Use extra postural support for seated child such as rolled up towels or blankets, pillows, foam, stuffed animals, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Use foot support for seated child such as boxes, books, suitcases, benches, stools, containers, wood, etc. (Chapter 1, Section 1; Appendices 9G, 9I).
- Feed smaller, controlled amounts using a spoon, cup, dropper, syringe or pipette (cut straw) if child coughs or chokes often.
- Try using a different spoon or cup to decrease the incidence of coughing, choking, etc.
- Offer thickened liquids and/or change food textures that match child’s skills and allow her to eat safely and easily (Chapter 1, Section 9; Appendices 9C, 9D, 9E, 9F).

Positioning



- Follow key elements of positioning for children (Chapter 1, Section 1; Chapter 2, Section 3; Appendix 9L-4).
- Try a different position that will decrease the incidence of coughing, choking, etc. such as a more upright posture.
- Feed child in upright position at a greater than 45-degree angle.

Other Ways to Help



- Ensure the child is of the appropriate age and/or is showing the necessary developmental skills for textures and consistencies being offered.
- Use alerting strategies such as brushing teeth before feedings if a child appears understimulated (Appendix 9K).
- Use calming strategies such as reducing external sounds and visual stimuli before and during feedings if a child appears overstimulated (Appendix 9K).
- Encourage small, single bites and sips, and a slow rate of eating and drinking if a child is self-feeding (Appendix 9L-3).
- If feeding a child, offer small bites and sips at a slow enough rate he can handle.
- Cut foods into safe and appropriately sized bites for a child and offer small amounts of food and liquids at a time.
- Offer frequent breaks for child
- Watch for signs of aspiration such as coughing, choking, wet voice and breathing, etc., and stop feeding if these continue to occur despite modifications.
- Change food textures or liquids consistencies to reduce risk of aspiration (Chapter 1, Section 9; Appendices 9C, 9D, 9E, 9F).



***Remember:** Children who cough, choke and/or gag with feedings may be aspirating — liquid goes into lungs instead of into their stomachs. This can make them very sick with upper respiratory infections and/or pneumonia, which can lead to poor weight gain and even death*



SECTION 7.2: FINAL THOUGHTS FOR SUPPORTING FEEDING CHALLENGES

Just as every child is unique, so too are her feeding challenges and needs around mealtimes. It is essential that all caregivers understand each individual child's strengths and challenges, and have the knowledge and skills to offer the best possible support. Mealtimes are valuable experiences that happen every day, multiple times a day. Therefore, it is essential to work toward ensuring each child has the opportunity for positive and safe feeding experiences.



