Early Feeding

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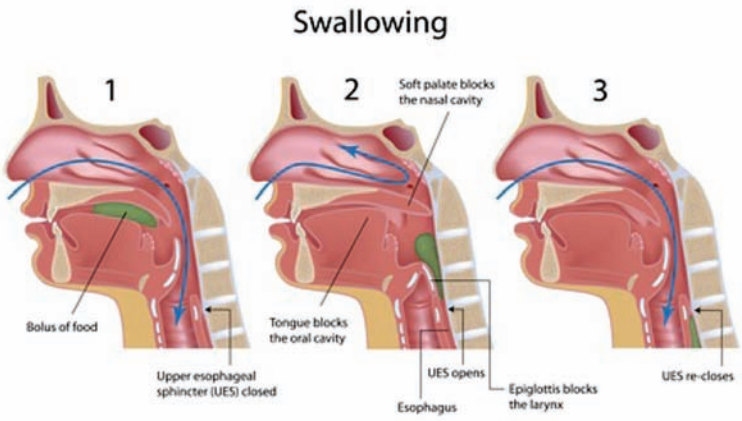
Eating is a pleasurable activity where important emotional, social and communicative foundations are established. When we feed young babies, we hold them close, talk, sing and stroke them. This strong positive emotion that we feel with the young baby helps to create a bond that makes the baby feel secure and the carer feel connected to the child.
When a child has feeding difficulties, it is easy to forget the social side of mealtimes, due to concerns about safety and worries about nutrition. It is important to remember that your baby has the same emotional needs as any other child.

Eating appears to be a very simple process but it is actually extremely complex. It involves over 26 muscles and 7 cranial nerves and problems can occur at different points during the process.



Babies with Down Syndrome typically have low muscle tone. This not only affects the muscles of the arms and legs but also causes the muscles in the neck, face and mouth to be weaker as well. Feeding problems associated with low muscle tone include:

- Difficulty latching on to the breast or bottle.
- The mouth may be less alert or ready for feeding
- Swallowing air leading to tummy cramps/discomfort during feeding
- Loss of interest in feeding before the feed is finished
- Problems with moving on to spoon feeds and different food textures

As children with low muscle tone progress to solid foods, sensory stimulation should be initiated before feeding. Physical activities such as bouncing the child on a ball or on the caregiver's knees, games that encourage balance reaction, or jumping or swinging can stimulate the child.

Tactile stimulation is often used to prepare a child with low muscle tone for jaw and lip closure and for swallowing. Often a wash cloth, sponge or finger is used. It can include lightly stroking from the outside corner of the eyes down through the upper lip and from the sides of the jaw up through the lower lip. It may also include stimulation along or beneath the nose to the lips. Next, lightly stimulate the mouth by lightly stroking the gums with a glove finger, Nuk trainer, or finger-gum massager. Move front to back or back to front in each of the four quadrants. Any or all of these techniques may be needed before mealtime and you can repeat them at intervals during the meal.

There are three important factors for **improving oral skills** and these are position, position, position! A key concept in feeding therapy, which improves the function of the mouth is correct pelvic alignment. The hips should be flexed (bent) at approx. 90 degree angle with the trunk erect, while the head and neck should be in vertical alignment with the trunk. The chin remains in a neutral position. For a child with low muscle tone, they often need external support. A stiff backed chair with side supports can be best and towel rolls can be added if necessary for support or as a cue to the child to maintain trunk alignment. Support the legs at a 90 degree angle.

Cup drinking: As your child progresses from a bottle to cup drinking, one of the key goals is for the child's jaw and lips to remain almost closed and to avoid tongue thrusting into or under the cup. It is important to use the right cup. An appropriate cup typically has a very wide mouth and narrow base or is a cut out cup which allows the cup to be tipped up without the child's neck going into hyperextension (stretching backwards). Make sure the child's head is appropriately positioned. Place the cup on the child's lower lip, not on the teeth or gums and provide some jaw support. It is not critical which fingers are used to provide jaw and lip stability. As you practice you will find what is comfortable for you and what provides the appropriate amount of stability for the child. Make sure you tilt the cup so the liquid just touches

the child's upper lip. This way the child is encouraged to use his lips to draw the liquid into his mouth.

Remember the most important concept is to maintain the child's hips at a near 90 degree angle and to make sure that the head and neck are straight with the chin slightly tucked toward the chest.

Diet modifications consist of altering the viscosity (thickness), texture, temperature, or taste of a food or liquid to facilitate safety and ease of swallowing. Typical modifications may include thickening thin liquids (e.g., breast milk, formula) or softening, chopping, or pureeing solid foods. Taste or temperature of a food may be altered to provide additional sensory input for swallowing. Dietary modifications should incorporate preferences as far as possible. Diet modifications should consider the nutritional needs of the child, and a dietitian should be consulted when needed.

The use of **pacing** for infants or children involves controlling the rate of presentation of food or liquid and the time between bites or swallows to moderate the rate of intake. Feeding strategies for children may include alternating bites of food with sips of liquid or swallowing 2-3 times per bite or sip. For infants, pacing can be accomplished through limiting the number of consecutive sucks, which limits the bolus size (the amount the child tries to manage in one swallow). Strategies that slow the feeding rate or limit the bolus size may allow for more time between swallows to clear the bolus, or support more timely breaths. This may in turn reduce the risk of aspiration (food or liquid going into the lungs instead of the stomach) and optimise safety during feeding and swallowing.

Risk Factors: You should consult your multidisciplinary team for assessment if your child is exhibiting one or more of the following symptoms;

- A weak or uncoordinated suck and swallow
- Breathing disruptions while feeding
- Excessive gag or recurrent cough during feeding
- An at-risk diagnosis
- History of recurrent pneumonia or upper respiratory infections
- Signs of possible aspiration
- Failure to thrive
- New onset of feeding difficulty
- Severe irritability during eating
- Decreased interest in eating
- Prolonged feeding time lasting longer than 30-40 minutes
- Unexplained refusal of food
- Unexplained weight-loss
- Persistent reflux

Please consult with your Speech and Language Therapist before implementing any type of feeding programme. You will find a lot of practical everyday advice around pre-feeding and feeding skills in a booklet developed by Down Syndrome Ireland, Our Lady's Hospital Crumlin and Heart Children Ireland called "Guidelines for Parents, Support Feeding and Oral Development in young children with Down Syndrome, Congenital Heart Disease and Feeding Difficulties". This is available from the National office.

References:
Feeding the Neurologically Involved Child
The source for Paediatric Dysphagia ASHA, Paediatric Dysphagia
Guidelines for Parents, Support Feeding and Oral Development in young children with Down Syndrome, Congenital Heart Disease and Feeding Difficulties