

Feeding an infant or child with Down Syndrome can be challenging and a source of stress for children and parents alike. In addition to the common difficulties of feeding an infant or toddler, there are four complicating issues associated with Down Syndrome that can significantly interfere with feeding development and feeding safety. The four problems include: low muscle tone, respiratory problems, gastrointestinal disorders and cardiac issues. These problems need to be thoroughly evaluated and managed to reduce further complications.

Many children with Down Syndrome have low muscle tone. Low muscle tone can affect large muscle groups as well as the small muscle groups of the mouth, face and throat. These are the muscles used for feeding, swallowing and speech development. Facilitating better muscle tone will reduce the risk of feeding and swallowing disorders and poor intelligibility of speech (articulation). In addition to more efficient feeding/swallowing skills and clearer speech articulation, better muscle tone in a child's face and tongue can reduce the stereotypic open mouth anterior tongue rest position observed in many children with Down Syndrome. Accessing specialized therapy aimed at addressing oral muscle tone and oral motor patterns can positively impact feeding, swallowing and speech development. As with all change, early intervention is best.

Children with Down Syndrome are at significant risk for swallowing disorders, specifically silent aspiration. Silent aspiration occurs when food or liquids enter the airway and a cough is not stimulated. A cough is very important, as it is the body's way to "cough out" or remove the food or liquid from the airway. A cough provides protection for the airway. In a study of 19 children with Down Syndrome under the age of 4 years, silent aspiration was identified during a modified barium swallow study (a very specialized study of swallowing) in 10 of the 19 children studied. Complications of aspiration include respiratory illness, congestion and pneumonia. When you have a population that is already at risk for respiratory illness and feeding problems, it is vitally important to have feeding and swallowing skills thoroughly evaluated.

Children with Down Syndrome are predisposed to increase respiratory problems. Respiratory problems can seriously impact feeding and swallowing abilities. And feeding and swallowing skills can impact respiration. If you can't breathe, you can't eat. Think of what you ate the last time you had a cold and you could not breathe. You didn't eat chicken noodle soup just for its medicinal properties. It is a food that is easy to eat and swallow.

For children of all ages, coordinated respirations are very important for feeding. All infants depend on precise and coordinated patterns of suck/swallow/breathe. Respiratory problems will negatively impact suck/swallow/breathe coordination, significantly increasing feeding difficulties. Respiratory issues can also result in more pronounced tongue protrusion patterns that interfere with eating solids. Tongue protrusion interferes with spoon placement and a child's ability to collect and swallow puree without anterior loss of the food. Children will naturally choose foods that are within their skill level. If they do not develop the tongue patterns to support chewing, they will either refuse solids or will choose foods that they can swallow easily. We call these foods slider foods as they can be swallowed with limited or incomplete chewing; mac and cheese, pre-formed chicken nuggets, crackers, cheese, soft fruits, etc. Swallowing foods inadequately chewed can result in constipation and other gastrointestinal (GI) problems and can increase the risk of airway obstruction.

In part, due to the low muscle tone, infants and children with Down Syndrome are at more risk for gastroesophageal reflux (GER) and constipation. Both GER and constipation challenge feeding development and need to be thoroughly evaluated and managed. It is well documented in the literature that if left untreated, GI issues can significantly complicate feeding.

Cardiac issues can result in fatigue thus impacting an infant or child's ability to finish feeding and take enough volume to support growth and development. Invasive surgical procedures that are necessary to fix the cardiac problem can inadvertently cause or increase oral hypersensitivity and feeding difficulties. For the lucky child, feeding abilities are significantly improved after heart surgery. Unfortunately, some children continue to require feeding therapy from an expert to support feeding development and swallowing safety.

Infants and children with Down Syndrome are predisposed to feeding and swallowing disorders and require specialized evaluations and treatment to reduce the risk of further complications. Please discuss with your child's medical team any concerns that you may have about your child's feeding and swallowing skills. Early intervention can prevent or reduce complicated feeding difficulties. In addition to improving feeding skills, the development of good oral motor skills can also enable clear understandable speech. Good nutrition and the ability to communicate will help your child be on the road to reaching his maximum potential. A goal we want for all of our children.