



FEEDING AND SWALLOWING PROGRAM FACTSHEET:

FEEDING AND SWALLOWING DIFFICULTIES

During normal swallowing, food and liquids are propelled from the mouth (oral cavity) through the throat (pharynx) and down the food pipe (esophagus). At the same time, the voice box (larynx) closes over. This helps to ensure that the food/ drink ends up in the stomach and not in the airway.

Dysphagia ([link to the dysphagia page on the website?](#)) occurs when there is a problem with swallowing food and liquids, and may occur at the oral, pharyngeal, and/or esophageal phases of swallowing.

Laryngeal penetration occurs when food or liquids enters the top of the airway (the voice box/ larynx).

Aspiration occurs when food or liquids enters the lower airway (below the level of the vocal cords in the larynx).

Choking occurs when a food (or another object) physically blocks the airway.

Mealtime behavior disturbances or **oral aversion** commonly arise in association with dysphagia, aspiration, or a choking event. At other times, there is no apparent physical reason for behavioral feeding issues, although aversive experiences in or around the mouth (e.g. tube feeding, suctioning), undetected pain (e.g. as associated with tonsillitis, gastroesophageal reflux, pharyngitis, teething, etc.), or sensory disturbances (e.g. oral hypersensitivity) are usually involved at some level.

Childhood medical conditions, and the interventions required to treat them, have the potential to interrupt feeding development in young children. In addition, prolonged hospitalization (and the resulting frequent exposure to hospital lights, alarms, and painful procedures) can interfere with the child's development, and can affect the caregivers' ability to interact and bond with their child.

There are a number of **medical conditions** that are commonly associated with feeding/ swallowing difficulties (see table below). It should be noted that some of these conditions have the potential to impact on oral feeding **directly** (i.e. they may affect sucking strength, suck-swallow-breathe coordination, or the ability to bite and chew effectively), and others impact on oral feeding **indirectly** (i.e. they may not directly impact on swallowing, but may cause pain, discomfort, or fatigue with feeds, or limit the volume the child can consume by mouth). However, during the period of time when young children are developing their oral feeding skills, any feeding disturbances can potentially impact on later feeding skills through interruption of the normal developmental process.

Table: Disorders commonly affecting feeding and swallowing in infants and children

We address feeding and swallowing issues in children who have :

Prematurity

- Low gestational age at birth
- Respiratory disease
- Broncho-Pulmonary Dysplasia (BPD)

- Chronic Lung Disease (CLD)
- Low birth weight
- Comorbidities associated with prematurity

Respiratory and AeroDigestive disorders that can impact feeding and swallowing

- Apnea of the newborn
- Laryngomalacia, tracheomalacia, bronchomalacia
- Laryngeal cleft
- Reactive Airway Disease
- Pneumonia/Bronchiolitis

Cardio-pulmonary disorders that can impact feeding and swallowing

- Cyanotic heart defects, Acyanotic heart defects
- Hypoplastic Left Heart syndrome
- Cardiac disease
- Congenital heart disease
- Ventricular Septal Defect (VSD)
- Ventricular Septal Defect (ASD)
- Patent Ductus Arteriosus (PDA)

Gastrointestinal and Growth Issues that can impact feeding and swallowing

- Congenital diaphragmatic hernia
- Food allergies
- Food intolerances
- Esophageal strictures
- Failure to thrive
- Necrotizing Enterocolitis (NEC)
- Gastroschisis
- Hirshprung's disease
- Tracheo-Esophageal Fistula (TEF)
- Esophageal Atresia (EA) and Long Gap Esophageal Atresia (LGEA)
- Gastro-Esophageal Reflux (GER)
- Food allergies and food intolerances
- Eosinophilic Esophagitis (EE)
- Omphalocele (does this belong here?)
- Short Gut syndrome /Short Bowel syndrome

Neurological and Neuromuscular Disorders that can impact feeding and swallowing

- Intra-Ventricular Hemorrhage (IVH)
- Peri-Ventricular Leukomalacia (PVL)
- Hydrocephalus
- Seizures
- Epilepsy
- Microcephaly
- Traumatic Brain Injury (TBI) and Acquired Brain Injury (ABI)
- Brain tumors
- Hypoxic Ischemic Encephalopathy (HIE)
- Spinal Muscular Atrophy (SMA)
- Muscular Dystrophy (MD)

- Multiple Sclerosis (MS)
- Cerebral Palsy (CP)
- Chiari malformation

Congenital abnormalities that can impact feeding and swallowing

- Cleft lip, cleft palate
- Pierre Robin sequence
- Other cranio-facial syndromes
- Moebius syndrome
- Micrognathia

Medical treatments that may impact feeding and swallowing

- Tube feeding (OG, NG, NJ, PEG, gastrostomy)
- Respiratory support (e.g. ventilation, high-flow, CPAP, oxygen)
- Tracheostomy, Naso-Pharyngeal (NP) airway
- Some medications

Ingestional injuries (e.g. swallowing detergents or a battery)

Structural or Airway Complications

- Laryngeal cleft
- Tongue Tie
- Chronic Tonsillitis
- Vocal cord/vocal fold paralysis
- Sub-glottic stenosis
- Laryngomalacia
- Tracheomalacia
- Tracheostomy
- Choanal atresia

Genetic Disorders that can impact Feeding and Swallowing

- Down syndrome
- CHARGE Association
- Rett Syndrome
- Prader Willi syndrome
- Cornelia de Lange syndrome
- 22q11 deletion (DiGeorge or VeloCardioFacial Syndrome)

Sensory Processing Disorders (SPD), Autism Spectrum Disorders (ASD)

Behavioral feeding difficulties (e.g. food aversion)

Please note this list is not exhaustive.

POTENTIAL IMPACT OF FEEDING DIFFICULTIES ON GROWTH

In order for a child to reach their physical and cognitive growth potential, they need to consume enough energy and nutrients. **Feeding difficulties can have a detrimental effect on dietary intake and, therefore, growth.**

Often, prematurity and/or chronic, ongoing illness can result in periods of time where children cannot feed by mouth, or are unable to eat enough by mouth. When children are unable to feed by mouth (or feed fully by mouth), they may require some form of **tube feeding** to meet their energy, nutrition, and fluid requirements.

Tube feeding (as well as other invasive procedures that occur in and around the mouth, such as suctioning and intubation) may cause irritation of the structures involved in feeding. In addition, lack of oral feeding practice may contribute to the development of inefficient feeding skills, altered oral sensitivity and/or oral aversion. Therefore, children who are tube fed usually need help from feeding therapists once they are well enough to start oral feeding again.

Please see our website for additional factsheets – **Feeding and Swallowing Program**

Please note: Factsheets are not intended to replace professional advice

If you have any concerns about your child's feeding/ swallowing skills, please discuss this with your child's physician and contact our scheduling office if you wish to arrange a **clinical feeding evaluation**.

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