

## **Pediatric Voice Disorders**

Pediatric voice disorders are among the most common communication disorders in children. In recent years, families have reported increasing barriers to success in school and socialization if their child has been diagnosed with pediatric voice disorders (Connor, Cohen, Theis, Thibeault, Heatley, & Bless, 2008). Voice problems are typically described as difficulties with sound production that originate in the larynx, or “voice box”. Voice disorders are often characterized by a hoarse or quiet voice in the child. There are several causes of voice disorders in children, such as “phono trauma” or voice misuse, vocal fold nodules/polyps, papilloma, muscle tension dysphonia, subglottic stenosis, and congenital laryngeal webs (Rickert & O’Cathain, 2022). This blog post will include common pediatric voice disorders, as well as how your child can be treated and evaluated.

### **Types of Voice Disorders**

- **Phonotrauma:** The most common pediatric voice disorder, phonotrauma, results from voice misuse such as: yelling, excessive coughing, and excessive throat clearing. These behaviors cause the vocal folds to slam together, leading to bruising that can develop into vocal nodules. Voice symptoms of phonotrauma can look like hoarseness, breathiness, variations in pitch or volume, strain, or a complete loss of voice (Theis, 2010).
- **Vocal Fold Nodules/Polyps:** These are small, benign (non-cancerous) growths on the vocal cords caused by frequent vocal strain or misuse, often compared to calluses. Similar to nodules, polyps are growths on the vocal cords but are typically larger and more blister-like and swollen. Vocal polyps can appear after a single episode of vocal trauma.

- **Papilloma:** These are wart-like growths caused by the human papillomavirus (HPV), which can obstruct the airway and affect the voice. While most cases of papilloma tend to regress and disappear as the child's immune system matures, surgical removal is often necessary to ensure a safe airway, prevent spreading, and improve voice quality (Rickert & O'Cathain, 2022).
- **Muscle Tension Dysphonia:** Excessive muscle tightness around the larynx which results in a strained or tight-sounding voice.
- **Congenital Subglottic Stenosis:** Narrowing of the airway just below the vocal folds which can cause difficulty breathing and a weak or strained voice.
- **Congenital Laryngeal Webs:** A band of tissue that forms between the vocal folds. Congenital laryngeal webs develop between the 4th and 10th weeks of gestation and are typically present at birth. In severe cases, a laryngeal web can block up to 75% of the glottal airway, leading to significant breathing and voice problems.

### **Evaluation methods**

Evaluating pediatric voice disorders requires a multidisciplinary approach to fully assess the function of the voice. If you are concerned that your child may be experiencing a pediatric voice disorder, they may first be assessed by a pediatric otolaryngologist (ENT) and speech-language pathologist (SLP) (Theis, 2010). A complete pediatric voice evaluation may include a thorough medical history, acoustic measures, perceptual judgments of voice quality through speech samples, looking at the larynx through an endoscopy, and a formal medical examination by a physician (Rickert & O'Cathain, 2022). Visualizing the larynx through endoscopy may help to identify causes of pediatric dysphonia, as the clinician can better evaluate the movement of vocal cords (Rickert & O'Cathain, 2022). Overall, depending on your child's symptoms and

ultimate diagnosis, the ENT and SLP will work together to develop the best treatment options for your child.

## **Treatment**

Treatment of pediatric voice disorders involves a combination of approaches tailored to the specific needs and conditions of the child. Most commonly used treatment methods include voice therapy, which focuses on improving voice habits and techniques through exercises and day-to-day behavioral modifications. Voice therapy often includes vocal hygiene education, breath support exercises, and resonance therapy to help reduce strain and improve vocal quality. (Possamai & Hartley, 2013) In some cases, medical treatments are necessary to address other conditions such as allergies or reflux that can contribute to voice issues. Some surgical interventions such as, medialization thyroplasty or vocal fold injections, may be required for structural abnormalities or vocal fold paralysis. Emerging techniques like laryngeal reinnervation and the use of injectable materials for vocal cord repair are shown to be effective. (Possamai & Hartley, 2013) Multidisciplinary pediatric voice clinics are beneficial because they offer comprehensive assessments and individualized treatment plans that combine medical, therapeutic, and sometimes psychological support to achieve the best possible outcomes for children with voice disorders. (Possamai & Hartley, 2013)

### *Resources*

Rickert, S. M., & O'Cathain, E. (2022). Pediatric Voice. *Pediatric clinics of North America*, 69(2), 329–347. <https://doi.org/10.1016/j.pcl.2022.01.003>

Theis, S. M. (2010). Pediatric voice disorders: evaluation and treatment. *The ASHA Leader*, 15(14), 12-15. <https://doi.org/10.1044/leader.ftr1.15142010.12>

Possamai, V., & Hartley, B. (2013). Voice disorders in children. *Pediatric Clinics of North America*, 60(4), 879-892. <https://doi.org/10.1016/j.pcl.2013.04.012>