

Velopharyngeal Dysfunction (VPD)

Your family can feel confident in Gillette's knowledge and expertise in VPD. You'll work closely with the nation's top pediatric specialists in [craniofacial and plastic surgery](#) in a family-centered environment.

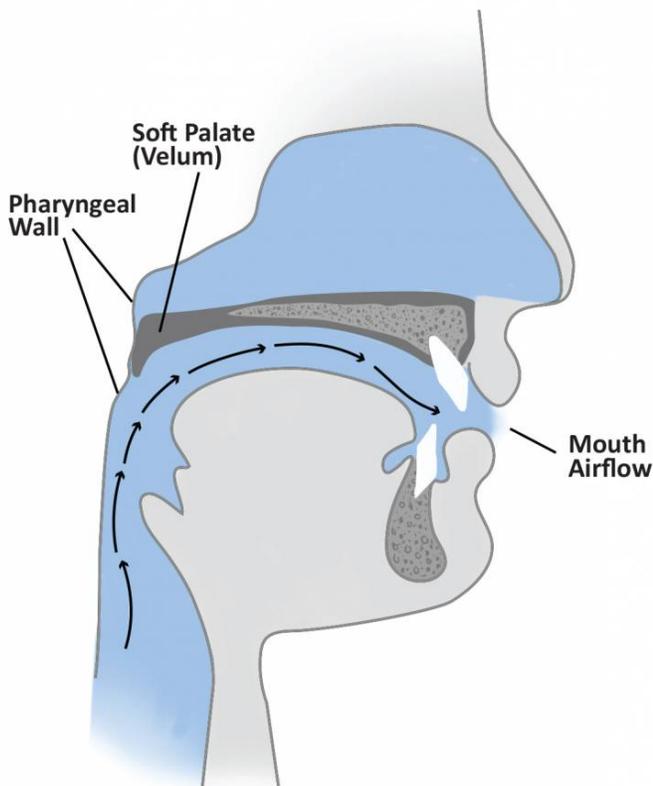
Your child's well-being and self-esteem guide every decision we make at Gillette. Our team of specialists will make sure you have the information and support you need, every step of the way. Through advanced surgical techniques and treatment options such as VPD surgery or speech therapy, we help your child feel their best.

What is Velopharyngeal Dysfunction (VPD)?

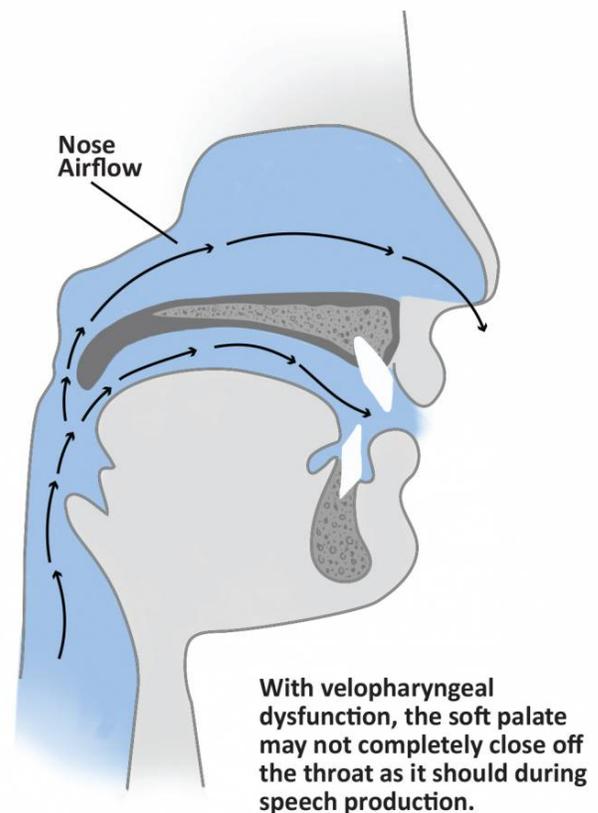
Velopharyngeal dysfunction (VPD) and velopharyngeal insufficiency/inadequacy (VPI) are umbrella terms that describe multiple disorders that cause leakage of air into the nasal passages during speech production. Parts of a child's throat or the roof of their mouth is not working properly and allows air to escape through the nose during speech or swallowing.

Velopharyngeal Dysfunction (VPD)

Normal, non-nasal speech



Nasal speech caused by VPD



What causes Velopharyngeal Dysfunction (VPD)?

VPD is caused by structural and/or functional abnormalities of the soft palate and pharyngeal muscles. Parts of a child's throat or the roof of their mouth is not working properly and allows air to escape through the nose during speech. Children who are born with a cleft palate are at the most risk for VPD or VPI, although it can occur in children without a cleft palate.

Velopharyngeal Dysfunction (VPD) Symptoms and Effects

Patients with VPD may sound excessively "nasal," (ie, hypernasal) or, on the other end of the spectrum, they could sound excessively "congested" (ie, hyponasal). They may also have audible nasal air escape during speech production and their speech may be hard to understand. These qualities are what qualify VPD and VPI as

“resonance disorders.”

- Other signs and symptoms of VPD may include:
- Very nasal speech quality (hypernasality)
- Leakage of air through the nose while speaking (audible nasal air emission)
- Speech which sounds “weak” or muffled
- Speech which sounds “congested” without a cold or allergies
- Abnormal motor production of speech sounds
- Leakage of food or liquid through the nose while eating or drinking
- History of conductive hearing loss or middle ear dysfunction

Velopharyngeal Dysfunction (VPD) Diagnosis and Treatment

VPD or VPI is diagnosed initially by a speech-language pathologist (SLP) with specialized training in the area of cleft palate/craniofacial anomalies. The SLP works closely with the craniofacial surgeon to determine if the patient would benefit from surgical management or speech therapy alone. This is often completed with diagnostic imaging conducted by the SLP and surgeon.

Many patients can present with VPD without an overt cleft palate (e.g., submucous cleft palate, cerebral palsy), but still need to be evaluated by our multi-disciplinary team for appropriate care. The VPD team includes professionals in speech-language pathology, plastic surgery, otolaryngology, audiology, genetics, dentistry/orthodontics and psychology.

The Velopharyngeal Dysfunction Program at Gillette Children's Specialty Healthcare provides coordinated interdisciplinary diagnostic and treatment services for patients with speech disorders resulting from velopharyngeal dysfunction, including:

- Comprehensive Perceptual Speech Evaluation
- Speech Therapy (if recommended)
- Diagnostic Imaging including Nasopharyngoscopy and Multiview Speech Videofluoroscopy
- Genetic Evaluation and Testing
- VPD Surgery

Surgery to Treat VPD

Successful surgical management of VPD requires precise diagnosis and an individual treatment plan. In most cases of VPD, speech therapy alone is typically not effective at treating hypernasal speech and velopharyngeal dysfunction, so surgery may be recommended. Surgical options can include a Furlow palatoplasty, pharyngeal flap

or sphincter pharyngoplasty. Your VPD team at Gillette can help explain and recommend the best option for you.

Surgical management of VPD is highly effective and aims to improve fullness of voice, normalize pressure inside the mouth so speech sounds are “stronger” and louder, and reduce the leakage of airflow through the nose during speech. The anticipated results of speech surgery are speech that is clearer to understand. Surgery is typically conducted by one of our expert Plastic Surgeons from the Gillette Cleft Lip and Palate team.

For patients who have cleft lip and palate, roughly 40 percent of kids with a repaired cleft palate need VPD surgery. In these cases, VPD surgery restores a normal mechanism for speech. VPD surgery is less extensive than the original repair to the cleft lip and palate, and the short recovery after surgery is fairly straightforward. Children might have a sore throat for a few days and might be on a soft or liquid diet until the soreness passes.

In rare cases, some individuals with VPD may not be a surgical candidate, so speech prosthesis may be an option to improve their speech. These can be fabricated in coordination with our orthodontist.

Speech Therapy to Treat VPD

Many children with VPD will also require intensive speech therapy in addition to speech surgery or a speech prosthesis. If the child is not receiving speech therapy with a specialist at Gillette, the Gillette SLP works closely with SLPs in the community to collaborate on treatment plans and therapy needs to ensure the patient’s speech outcome is successful.

Integrated Care

If your child has VPD or VPI, our multidisciplinary team of experts will create a treatment plan that fits your unique needs. We provide services throughout the diagnosis and treatment process that might include:

- **Audiology.**
- **Chaplaincy.**
- **Child life.**
- **Dentistry and orthodontics.**
- **Ear, nose and throat (ENT or otolaryngology).**
- **Medical genetics and genetic counseling.**
- **Occupational therapy.**
- **Physical therapy.**
- **Psychology.**
- **Radiology and imaging.**
- **Social work.**
- **Speech and language therapy.**

Make An Appointment

[651-290-8707](tel:651-290-8707)

Refer a Patient

[651-325-2200](tel:651-325-2200)

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](tel:651-229-3890).