

Vocal Cord Paresis

What is vocal cord paresis?

Vocal cord paresis is weakness of one or both vocal folds that can greatly impact your daily life depending on the severity of the symptoms. These symptoms can include:

- **Hoarseness**
- **Vocal fatigue**
- **Pain or tightness in your throat with speaking**
- **Aspiration (food or liquids going down the trachea instead of your esophagus)**
- **Breathing difficulties due to incomplete vocal cord closure**
- **Feeling short of breath while speaking**

What are the causes of vocal cord paresis (weakness)?

Causes of weakness in you vocal cords include:

- **Viral infection**
- **Neuromuscular problems**
- **Cancer or tumor that compresses the nerve that controls the vocal cords.**
- **Trauma from either an external injury or surgical injury**
- **Compression of the vocal cord nerve during intubation (placement of a breathing tube through your vocal cords to keep your airway open)**
- **Laryngopharyngeal Reflux (LPR)**

- **Idiopathic (unknown cause)**

What tests might my doctor order to determine if I have vocal cord paresis?

The diagnosis of vocal cord paresis is obtained through a careful history and physical examination. Your physician will ask you detailed questions regarding the development of your voice symptoms. You will be asked when you first noticed the onset of your symptoms and what may have precipitated the onset of these symptoms. The physical examination will include a complete examination of your voice box. This is accomplished by using a flexible fiberoptic scope. This scope will be inserted through one of your nostrils and gently passed down the back of your nose to your throat allowing the physician to carefully examine your vocal cords and the way they are currently functioning.

Your physician may order additional tests including voice measures, airflow studies, and laryngeal electromyography (EMG). Voice measures are non-invasive measures that tell us how well your voice is working. Airflow studies involve measurement of the amount of airflow passing through your vocal folds as you speak. You will speak into an airflow mask during this study. In some instances of vocal cord paresis, the vocal cords cannot close sufficiently resulting in elevated levels of airflow through the vocal cords.

Laryngeal EMG involves an analysis of the electrical energy that is generated within your vocal cord muscles. Abnormal types and amounts of energy confirm a diagnosis of vocal cord paresis. This test can also be beneficial by providing you a prognosis for recovery of nerve function. Laryngeal EMG involves placing sterile needle electrodes into your vocal cords. These electrodes are connected to a special amplifier allowing us to “hear and see” the electrical energy in the vocal cord muscles.

When will the laryngeal EMG study and voice measures occur?

If time allows, we will try to perform all studies during your initial visit to the Voice Treatment Center. Please allow 1-2 hours for your evaluation.

Will any other tests be required to determine the cause of my vocal cord paresis?

To further rule out any organic cause for your vocal cord paresis, your physician may order a CT scan of your neck and chest as well as an MRI of your brain with contrast. In some instances your physician may order an x-ray swallowing study.

What treatment will the doctor recommend?

After your work-up is complete, your physician will discuss the best treatment option for you. Your treatment will depend on your symptoms, vocal requirements, and the potential for recovery of your vocal cord paresis without treatment. Your treatment may include observation alone, voice therapy, injection augmentation procedures, or surgical correction of the abnormal position or shape of the vocal cord(s).

Injection augmentation may occur using a variety of materials. Some of these injection procedures can occur in the clinic without anesthesia while others require injection in the operating room under a general anesthesia. Vocal cord injection materials include cow collagen (Zyplast), cadaver human fascia (Cymetra), and fat taken from your body. Collagen and fascia are temporary materials while fat is a permanent material. If you are offered a collagen injection, we expect an improvement in your voice that may last 3-6 months while fascia appears to provide vocal improvement lasting up to 9 months. The temporary materials are designed to provide you with relief of your voice symptoms while we await natural nerve function recovery.

If your voice has failed to recover normal function by 9 months after the onset of your vocal cord paresis, it is unlikely that your voice will recover on its own. If this is the case, you may be offered permanent treatment that includes a thyroplasty procedure on one or both sides of your larynx with or without an arytenoid adduction procedure. These operations occur through a small incision in your neck in the operating room under local anesthesia with sedation. Your physician will discuss all of these options with you and help you make the best treatment plan.