



**Medical
Blueprints**

SINGER SAVVY: A FITBIT FOR YOUR VOICE REPORT #2780

BACKGROUND: The human voice consists of sound made by using the vocal tract, such as talking, singing, laughing, crying, screaming, shouting, or yelling. The frequency is specifically a part of human sound production in which the vocal folds, or cords, are the primary sound source. The mechanism for generating the human voice can be categorized in three parts: the lungs, the vocal folds within the larynx (voice box), and the articulators. The lungs must produce adequate airflow and air pressure to vibrate vocal folds. The vocal folds then vibrate to use airflow from the lungs to create audible pulses that form the laryngeal sound source. The articulators then articulate and filter the sound coming from the larynx. To some degree, they can interact with the airflow to strengthen or weaken it as a sound source.

(Source: https://en.wikipedia.org/wiki/Human_voice)

SYMPTOMS AND TREATMENT: Vocal cord paralysis occurs when the nerve impulses to your voice box are disrupted. This results in paralysis of the vocal cord muscles. Possible causes include nerve damage during surgery, viral infections and certain cancers. Some signs and symptoms are: a breathy quality to the voice; hoarseness; loss of vocal pitch; choking or coughing while swallowing food, drink or saliva; the need to take frequent breaths while speaking; inability to speak loudly; loss of your gag reflex; and frequent throat clearing. Treatment for vocal cord paralysis usually involves surgery, and sometimes voice therapy. Voice therapy sessions involve exercises or other activities to strengthen your vocal cords, improve breath control during speech, prevent abnormal tension in other muscles around the paralyzed vocal cord or cords and protect your airway during swallowing. Occasionally, voice therapy may be the only treatment you need. Some surgical options include: bulk injection; structural implants; vocal cord repositioning; replacing the damaged nerve; and tracheotomy.

(Source: <https://www.mayoclinic.org/diseases-conditions/vocal-cord-paralysis/symptoms-causes/syc-20378873>)

NEW TREATMENT APPROACHES: Studies at NYU Langone's Voice Center, co-led by Milan R. Amin, MD, clinical associate professor of otolaryngology, head and neck surgery, chief of the Division of Laryngology, and director of the Voice Center, and Ryan C. Branski, PhD, associate professor of otolaryngology, head and neck surgery and associate director of the Voice Center, reveal promising new therapies that could transform treatment for vocal cord paralysis, scarring, and recurrent respiratory papillomatosis. One of the most significant issues confronting patients with vocal cord paralysis is aspiration that can lead to pneumonia. That study revealed vocal fold augmentation can improve cough strength and peak airflow in patients with glottic insufficiency, potentially preventing aspiration and pneumonia in high-risk patients with Parkinson's disease and other neuromuscular diseases. "Our investigation suggests that improving glottic closure improves cough strength. This finding is critical considering the significant morbidity and mortality associated with pneumonia, particularly in the elderly and the neurologically impaired," noted Dr. Amin, senior author of the study.

(Source: <https://nyulangone.org/news/groundbreaking-vocal-fold-insights-inform-new-treatment-approaches>)

✉ **For More Information, Contact:**

Theresa Brancaccio
SingerSavvyApp@gmail.com

Free weekly e-mail on Medical Breakthroughs from Ivanhoe. To sign up: <http://www.ivanhoe.com/ftk>