



Phonatory Phacts

Design Your Voice and Let it Flow

David L. Witsell, MD, MHS

IN THIS ISSUE:

Design Your Voice	1
Vocal Health for the New Year	1
Pediatric Vocal Fold Paralysis	2
Call Center-"itis"	2
DVCC's Educational Video	2
2011 World Voice Day Celebration	3
In-Office Laryngeal Surgery	3
DVCC Welcomes New Voice Therapist	3
Updates on Voice Enhancement Workshops	4

How can modern engineering help us to understand the human voice? Many of the most revealing discoveries in recent times have occurred out of the collaboration of two or more seemingly unrelated partners. So I pose the question, "How does an airplane help us to understand the human voice"?



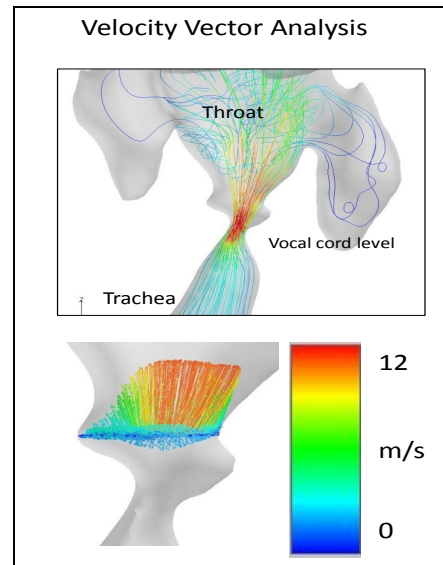
The answer is airflow. The glide and speed of air above and below an airplane's wing makes flight possible. The curve and incline of the airplane wing causes the air above the wing to travel faster than the air below. This creates lift. Similarly, in people, air accelerates as it flows from the lungs and then through the vocal cords causing them to lift and vibrate.

Our challenge is how to apply the science and design of today's modern airplane to voice function and voice problems. Turns out you need an engineer and a mathematician to help with an analytic process called computational flow dynamics, or CFD analysis.

By applying modeling and design programs such as CFD, we may be able to understand how to restore and improve the voice for many of our patients in a better way. CFD can create a dynamic

image similar to a photographic negative and allow us to see what is happening between the vocal cords and in the throat where the air is. While this research effort is just beginning here at the DVCC, we believe that it holds important clues about how to design better voice implants and where to direct treatments in the most complicated patients.

In these pictures, a real patient's voice is modeled through airflow vectors. These new ways to look at the voice through contemporary design programs will help us to virtually correct problems before we surgically correct them. Careful and comprehensive planning is an essential element to excellent results, and good voices!



Vocal Health for the New Year

Gina Vess, MA, CCC-SLP

Mark your calendars for World Voice Day 2011: April 16 at the Renaissance Raleigh Hotel!

Each year we make resolutions for a healthy lifestyle or to get our financial house in order. Consider this: If you focus on healthy lifestyle and prevention, it will cost less in the long run. A person who is hoarse, for example, may lose many hours or days of work because his/her voice becomes too tired to talk. Take action.

This is the year to take care of yourself. Look for vocal health tips on our website www.dukevoicecare.org or sign up for health newsletters on websites like www.webMD.com. As always, if your voice is not getting better after following our vocal hygiene tips, seek consultation from a knowledgeable voice care team.

Pediatric Vocal Fold Paralysis

Eileen Raynor, MD, FACS and Hilary Bartholomew, MS, CCC-SLP

Vocal fold paralysis in children is often the result of injury to the laryngeal nerve during heart surgery. The recurrent laryngeal nerve (vocal cord nerve) begins at the base of the brain and runs down to the chest, looping around the major heart blood vessels before traveling up to the larynx, making it more susceptible to injury during cardiac surgeries.

The larynx, where the vocal cords reside, is the crossroads for breathing, swallowing, and speaking. Any of these functions can be affected by paralysis, and oftentimes several of them are. Signs of vocal fold paralysis include choking and coughing during feedings and a weak, hoarse cry. In children old enough to speak, the voice will be noticeably breathy and they will

experience vocal fatigue where they feel like they run out of air with speaking or singing.

The art of managing vocal fold paralysis is balancing improvement of the affected areas without compromising the functioning ones. Swallowing and breathing are the most medically important aspects to control so that the child can thrive and grow. However, the voice is an important communication tool and is part of language and sound learning. Voice management is similar to swallowing management in that a speech-language pathologist can provide intervention and develop feeding modifications or voice therapy exercises. Swallowing modifications can be created at the youngest of ages,

but voice therapy is best pursued as early as preschool age. Voice therapy teaches children how to work with their voices to maximize their vocal potential and reduce strain and effort.

When medically necessary, surgical intervention, such as a vocal fold injection, can be performed. Unfortunately this is a short-term solution, as the injected material will usually wear off within a few months. Permanent surgical options are available; however, children are not good candidates until they have reached full maturity and the larynx has finished growing. Because of the extreme evolution of the voice from birth through maturity, vocal fold paralysis requires long-term monitoring and management.

Call Center-“itis”

Caroline Banka, MS, CCC-SLP

When you picked up the phone to order gifts at Christmas, you were talking to an occupational voice user. Voice is an essential tool of the trade for call center representatives at major retailers, like L.L. Bean and Lands' End. Despite our high unemployment numbers, jobs in call centers serving retail, finance, insurance and other industries continue to grow in the Triangle and in the US overall.

Taking so many calls a day can take a toll on the voice, leading to hoarseness and vocal strain – call center-“itis”. Imagine what you would think if the L.L. Bean representative sounded hoarse and strained when taking your order. How would you feel about the product? The catalogue models look healthy and attractive, and the voices representing the product should also sound healthy and attractive. Voice disorders in the call center can conflict with good product branding.

How can call center agents avoid call center-“itis”? Some tips include staying well hydrated and pacing the voice. That means drinking 64 ounces of water (or other non-caffeinated beverage) a day. Taking a five minute break from voice use each hour while at work helps allow the voice to rest. If working from a script, it is helpful to avoid long monologues by building in “microbreaks” for the voice, pausing for customer input. Outside of work, call center agents should monitor their voice use, especially singing, cheering at sports events, and talking

over noise at social gatherings.

Call center management should be vigilant in providing headsets that work properly and fit the employee using them. Humidity and temperature should be monitored, and background noise should be minimized. Call center agents suffering from colds or upper respiratory infections should not work while hoarse to guard their vocal health for the long term. Hoarseness that lasts more than three weeks warrants medical voice evaluation. Attention to these recommendations can help keep call center voices healthy, as well as enhance branding and overall productivity.

Check out DVCC's new video!
Watch us on YouTube or visit www.dukevoicecare.org



Duke Voice Care Center: Voice Care for Everyone

YouTube

0:00 / 6:12

Join us for our 2011 World Voice Day Celebration April 16

Emily Wolber, MEd, CF-SLP and Leda Searce, MM, MS, CCC-SLP

DVCC is excited to announce that plans for World Voice Day 2011 are well underway! This free event on Saturday, April 16, 2011, will be our 5th annual celebration of the voice. Join us from 12:00-5:00 at the Renaissance Raleigh Hotel at North Hills to learn about the importance of vocal health, and to take action in learning and maintaining healthy voice habits. Courses will cover vocal anatomy and physiology, how to keep your voice healthy and how to treat common voice problems, care of the singing voice, and care of the occupational voice. At the Introduction to Voice Enhancement workshop,

guests will learn the basics of vocal exercises. There will also be a Q&A session with DVCC voice experts focusing on medical voice problems, and a panel discussion with former DVCC patients on what it's like to have a voice problem.

The guest host for our World Voice Day 2011 community celebration will be **Frank Stasio**, host of WUNC's daily talk show "The State of Things". Our World Voice Day Celebration will also feature guest speaker bass-baritone **Simon Estes**, recipient of the 2011 Patrick D. Kenan Award

for Vocal Health and Wellness, presented by the Duke Voice Care Center annually to an individual who has made significant contributions to increasing awareness of vocal health issues. Internationally renowned opera star **Simon Estes** enjoys the ecstatic praise of music lovers around the globe. A prize winner in Moscow's Tchaikovsky competition in 1966, he has since performed with all of the major international opera companies, as well as with symphony orchestras and in recital around the world.



2011 World Voice Day features guest speaker Simon Estes

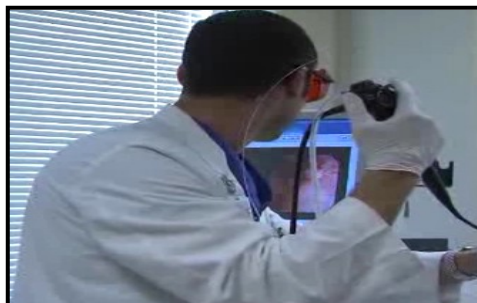
Space at World Voice Day 2011 is limited -- call 888-ASK-DUKE to register.

We look forward to seeing you on April 16th!

In-Office Laryngeal Procedures Now Available

Seth M. Cohen, MD, MPH

The Duke Voice Care Center continues to bring new, exciting treatments for patients. A procedure clinic has been created where patients undergo in-office vocal fold injections for vocal fold paralysis, in-office laryngeal and tracheal biopsies, and office-based laryngeal laser surgery. Office-based laryngeal laser surgery using the KTP laser is particularly advantageous for patients with vascular lesions involving the larynx and vocal folds. In particular, patients with recurrent respiratory papillomatosis and precancerous lesions of the vocal folds, who often require repeated procedures due to the recurrent disease, are excellent candidates. Research has shown that office-based surgery is well tolerated, more economical, has less morbidity than traditional surgery in the operating room, and has good treatment outcomes. Procedures which can be performed with topical anesthesia without sedation can be more convenient for



Dr. Cohen performs in-office laser surgery

patients. Patients with vocal fold granulomas, vascular polyps, and Reinke's edema are also good candidates. We are pleased to bring this service to the community. See more info: <http://www.wral.com/lifestyles/healthteam/story/742690/>

DVCC Welcomes New Voice Therapist



Emily Wolber
Photo courtesy Marc Banka Photography

The DVCC is pleased to introduce our newest team member. Emily Wolber, M.Ed., CF-SLP, is a Clinical Speech-Language Pathologist for the Duke Voice Care Center at Duke University Medical Center. Emily received her Bachelor of Arts in Vocal Performance and Speech and Hearing Science from the University of North Carolina at Chapel Hill in 2008, and her Master of Education degree in Speech-Language Pathology from the University of Virginia in 2010. During graduate school, Emily completed her final clinical practicum in speech-language pathology at Duke Voice Care Center, where she underwent extensive training in the diagnosis and treatment of voice disorders. While Emily enjoys working with patients representing the full gamut of voice disorder populations, she holds special interest in rehabilitating the singing voice, spending time outside of DVCC on furthering her expertise in vocal performance and pedagogy. Emily particularly enjoys opera, cooking, yoga, and travel. Welcome, Emily!

FIND US ON THE WEB:
www.dukevoicecare.org



Duke Voice Care Center Staff

David L. Witsell, MD, MHS, Director
Seth M. Cohen, MD, MPH
Richard L. Scher, MD, FACS
Eileen Raynor, MD, FACS
Leda Searce, MM, MS, CCC-SLP
Caroline Banka, MS, CCC-SLP
Gina Vess, MA, CCC-SLP
Hilary Bartholomew, MS, CCC-SLP
Emily Wolber, MEd, CF-SLP
Karen Stark, Liaison
Erika Juhlin, Staff Assistant

Duke University Medical Center
Division of Otolaryngology-Head and Neck Surgery
Box 3805
Durham, North Carolina, 27710

Information: 919-681-4984
Appointments: 1-800-385-3646
or 919-684-3834

Locations:
Durham: 200 Trent Drive
Raleigh: 3480 Wake Forest Road

Update: Duke Voice Care Center Voice Enhancement Programs

This past October, DVCC held its first **Sing Out** workshop, a component of our new Voice Enhancement program geared especially toward singers. The workshop was attended by beginning through advanced singers, as well as singing teachers. DVCC is hosting its second **Sing Out** workshop on May 21, 2011.

Our **Speak Out** workshop for healthy speaking voice will premiere on May 14, 2011.

Visit dukevoicecare.org for more information. To register, call 919-681-4984. *World Voice Day 2011 registrants receive a special discount!*