CANADIAN VOICE CARE FOUNDATION

VOICE Talk

Dedicated to serving the needs of professional and occupational voice users in Canada.

Volume 6, Issue 2, Spring 2002

FROM THE DIRECTOR'S DESK

I hope that the Spring has come to your part of the world, as it has been slow, but sure to visit Calgary.

It has been an exciting time for the Canadian Voice Care Foundation in the past few months as we were very fortunate to receive the support of the great one, **Luciano Pavarotti** , when he performed in Calgary on April 16th. The post concert dinner event which benefitted the foundation has perhaps raised the most awareness and exposure to the work that we do to date. It was a pleasure to work with the highly professional Rudas Organization to produce this fundraiser and we thank all of you who supported CVCF with your attendance.

We have also presented a number of vocal health workshops this Spring. One took place on the ice of the Saddledome during the Nokia Brier in Calgary, when we discovered that the teams were experiencing vocal difficulties from improper shouting."Hurry, Hard!!"

Another Vocal Fitness workshop was held at the University of Calgary in March and we are offering this workshop again at the U of C in the Fall.

Also this Fall in Calgary, CVCF will hold workshops concurring with the Canadian Country Music Week and Awards, September 6th to 9th. Please give us a call for more details at 403-284-9590 or email cvcf@shaw.ca.

We welcome Kimberley Wallace who has come to assist CVCF as Administrative Assistant. Jennifer Churchill has moved on to the International Centre at the University of Calgary, but will continue to work with CVCF's Board and other activities.

5th International Care of the Professional and Occupational Voice Update:

We have had many enthusiatic inquiries into the time and place for the CVCF Symposium, and appreciate the excitement those of you have expressed to attend this event. At this point we are not sure when or where the conference will be held. Sept 11th has put a mark on this decision. But rest assured when we hold the 5th Symposium, it will be unforgetable.

We are looking forward to planning a few presenters and workshops during the Canadian Otolaryngologists Association meeting in Calgary, May 2003. Stay tuned.

We hope that you enjoy this issue and find the article "Body Voice Connection" to be useful and interesting. Our plans are to include more Body Therapy Techniques in our next VoiceTalk.

As always, we welcome suggestions and submissions for Voice Talk, and encourage you to keep in touch. All the best for a warm and healthy summer!

INSIDE...

Tips to keep you **talkin'**...

1 **Speaking loudly or frequently may lead to a voice disorder.** Recognize when your voice is tired. Consider vocal training if you have to talk or sing loudly or speak extensively for your vocation or avocation. Vocal endurance, like athletics, requires special skills.

2 **Hoarseness or breathiness may signal a voice disorder.** If either symptom persists for more than two weeks, call a physician or speech-language pathologist.

3 **Stress can lead to forceful voice production, resulting in possible tissue damage.** Relaxation techniques can improve your voice and allow you to speak more effectively and longer. Try stretching shoulder, neck and facial muscles periodically; slow, deep breaths also may help.

4 **Caffeine and alcohol dehydrate vocal folds, which can causes tissue damage.** Drink plenty of water to combat their drying effect. For example, for every mug of coffee you ingest, drink at least a 8-oz glass of water.

5 **Some medications lead to dehydration of the vocal folds.** Antihistamines, taken for colds or allergies, shrink swollen membranes and reduce saliva and mucous production. These medications lesson the discomforts of the cold but dry the vocal tissues. If you are taking medications that dehydrate, drink lots of water and other fluids. Try to keep home and working environments at a relative humidity of 40 percent or more.

6 **Repeatedly clearing the throat or coughing may damage vocal fold tissue.** Sipping water, swallowing or sucking on a cough drop may ease the irritation in the throat.

7 **Frequent heartburn and sour taste may mean stomach acids are spilling over into your larynx, which may lead to voice problems.** If you experience these symptoms, avoid high-acid foods and late-night eating. Elevate your head with extra pillows or raise the head with extra pillows or raise the head of the bed.

8 **Smoking is the leading cause of laryngeal cancer.** At the very least, smoking irritates tissues used for singing and talking. Don't smoke!

NCVS

For more info, call
319-335-6600

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WHO IS A PROFESSIONAL VOICE USER?

A professional voice user may be defined as someone who uses the voice as a primary means of occupational communication. By this definition, salesmen, barristers and trial lawyers, broadcasters and announcers, priests and rabbis, public speakers, telephone operators, politicians, singers, actors and so forth, would be included.

This definition encompasses a large number of people working in disparate professions. The crucial aspects of the definition revolve around (1) a requirement for communication by means of the voice and (2) the production of a clear vocal sound that carries with it its own message and that is, in many cases, compelling.

excerpt from "Special Considerations for the Professional Voice User", Wilbur James Gould, M.D., and John Stephen Rubin, M.D., Diagnosis and Treatment of Voice Disorders, Igaku-Shoin, New York, 1995.

BOOKS AND VIDEOS AVAILABLE THROUGH CVCF

1. Vocalizing with Ease by Linda Rammage

2. The Art of Breathing by Nancy Zi
(includes video with exercises)

Also consult with us for other material available through our reference library for other books, videos, and tutorials. Available by appointment.

The Body-Voice Connection:

A review of the more commonly utilized body work techniques and the development of a systematic, programmatic approach to voice therapy

The human voice is an incredibly dynamic and versatile instrument that is not only an integral part of daily functioning, but also a means of artistic and emotional expression. As such, there have historically been many disciplines involved in treating the disordered voice and optimizing and maximizing the function of the healthy voice. Voice scientists have sought to understand the physiology of vocal function, physicians and speech pathologists have worked to develop better treatments for disordered voices and singing and acting teachers have developed techniques to guide students to peak vocal functioning in order to meet the vocal and emotional demands of the stage.

These demands, be it emotionally projecting a dramatic line in a large theater or singing at the extremes of vocal range over an orchestra, can push the voice to its limits.

Many of the teaching methods from these disciplines have arisen either from a desire to solve problems with improper vocal use or to prevent vocal misuse by optimizing function from the outset. As a result, there is a wealth of valuable knowledge from these methods that can benefit a variety of other professional voice users such as clergy, salespersons, politicians, lawyers and teachers in order to optimize vocal function. These techniques have also drawn the interest of voice therapists as a resource for therapy techniques.

This article will review a number of body awareness and movement training methods, acting methods, and voice therapies that have been successfully implemented with professional voice users.

The Alexander Technique

The Alexander Technique is a method of body awareness and movement training that was developed by Frederick Matthias Alexander, a Shakespearean actor, who frequently lost his voice on stage and suffered from chronic hoarseness.

Following a series of unsuccessful medical treatments, he decided that his problem must be related to the way he used his voice during performance and he began nine years of self-evaluation. One of his initial observations revealed that every time he began to speak, he pressed his chin back and down, while also compressing his spine. This resulted in a series of other tensions throughout his body that cumulatively affected his vocal production.

This observation gave rise to his idea of Primary Control, which states that the relationship between the head, neck and spine is crucial for proper body alignment and function.

This relationship is believed to be present at the time of birth, but gradually after years of stress, people begin to diverge from this optimum state of being and gather an increasing amount of body tension.

Alexander teachers note that a young child will sit at ease, perfectly erect with the head naturally balanced on the neck with a minimum of muscular effort.

A dichotomy is thus often drawn between the natural, which is the way that the body was intended to be used at its most optimal and natural state and the normal, which is the way a person habitually uses his body.

The goal of Alexander lessons are not so much to learn a new way of performing activities, but unlearn the unwanted muscular tensions that have been acquired over the years. Alexander teachers accomplish this by making

the student aware of tensions throughout the body that were previously unnoticed.

During a lesson, a teacher will give verbal directions for performing an action and use a subtle hands-on approach that not so much controls a student's movements, as it encourages muscular release and a more *natural* movement. Lessons last 30 to 45 minutes and the maximum benefit is usually obtained following a series of 30 sessions.

Teachers are certified through The American Society of the Alexander Technique and undergo 1600 hours of training over a minimum of three years. Additional information can be obtained from the American Society for the Alexander Technique at www.alexandertech.com.

The Feldenkrais Method

The Feldenkrais Method is another body awareness and movement training method that was developed by Dr. Moshe Feldenkrais, who was an engineer, physicist and Black Belt in Judo. The method grew from his pursuit to solve his own physical problems by combining his various areas of expertise.

Like the Alexander Technique, the Feldenkrais Method identifies patterns of physical behaviour acquired throughout life that hinder optimum functioning. It uses two approaches to free an individual from his or her habitual patterns of movement called Awareness.

Through Movement and Functional Integration, Awareness Through Movement training uses prescriptive exercises in teacher directed group lessons that focus on specific joints and muscles. The targeted muscle or joint is guided through a wide variety of movement sequences while students attend to bodily sensations. This is intended to expand the range of movement possibilities and thus break the student of habitual patterns.

Functional Integration is a hands on method conducted during individual lessons with a student in which the teacher uses his hands to guide the student to a more varied repertoire of movements.

The combined effect of these two approaches is intended to increase relaxation, eliminate habitual patterns, develop increased body awareness and create a wider variety of movement possibilities through personal exploration.

Feldenkrais teachers are required to complete 800-1000 hours of training over a 3 to 4 year period. Additional information can be obtained from the International Feldenkrais Federation at www.feldenkrais.com.

The Linklater Method

In addition to body awareness and movement training methods, various acting methods have also proved beneficial in preventing and treating voice problems.

Kristin Linklater has developed an acting method described in her book "Freeing the Natural Voice," which is based on the work of her teacher Iris Warren. She has also drawn from Alexander Technique, T'ai Chi and Yoga in the development of her method, which is designed to liberate the "natural voice" rather than developing a particular "technique." Similar to Alexander Technique and the Feldenkrais Method, she believes that everyday tensions and inhibitions hinder the effectiveness of the natural voice.

The program seeks to remove these blocks, which can be physical tension, emotional, intellectual, aural or spiritual. She believes it is important to change the psychological as well as the physiological use of voice.

Although all of the exercises in the program rely very heavily on imagery, the program is kinesthetic in nature. Throughout the training, the teacher uses physical manipulation of the student to break habitual patterns and movements. The foundation of the training is based on developing a strong sense of breath as the source for vocal

production. As students progress through the program by developing the channels for sound, and the use of the resonators, an increasing amount of stress is placed on the meaning of the words to affect vocal production.

The program is intended for daily sessions of at least one hour for at least a year to show marked improvement. Teachers of this method are trained through a program developed by Ms. Linklater.

The Lessac Method

Another acting method that has been used for voice training was developed by Arthur Lessac and described in his book "The Use and Training of the Human Voice." He began his career as a classically trained singer and has worked as a vocal coach, actor and dialogue coach. His method focuses on sensory learning through kinesthetic awareness.

Following training in breathing and relaxation, the lessons work to develop three forms of energy he describes as consonant energy, tonal energy and structural energy.

The concept of consonant energy uses imagery to match the vibratory characteristics of each consonant to an orchestral instrument with a similar acoustic quality.

For example the "m" sound is matched with the viola because they are both sustained sonorant sounds, while the "ch" sound is matched with the crash cymbal because they are both percussive sounds with aperiodic energy. In developing tonal energy, the student attends to the physical sensations of vocal vibration on the face and hard palate.

These sensations are then memorized and made a habitual sensation during vocal production to maintain easy vocal tone. The work with structural energy focuses on increasing the size of the resonating area of the vocal tract to obtain a fuller tone with minimal vocal effort.

As these are mastered, they are combined to allow an individual to speak with great flexibility in vocal dynamics, range and inflection to communicate any emotion. Teachers of the Lessac method are certified through a two to four year training period with a certified instructor and must complete course work in voice and speech sciences.

Lessac-Based Resonant Voice Therapy

Recently, Verdolini has developed a systematic approach to voice therapy partly based on Lessac's work. Traditionally, resonant voice refers to easy voice associated with vibratory sensations in the facial bones. In this therapy approach, nasal consonants are used to facilitate training of resonance.

Therapy is provided once weekly for eight weeks. Each therapy session involves stretches, the "basic training gesture," (a special type of humming with increased sensory exploration of resonance) and the "vocal communicator" (a bridging exercise to link resonant voice production to meaningful conversation).

As therapy progresses, patients are trained in maintaining adequate resonance during loud phonation and while speaking about emotional topics. In addition, patients develop strategies to "pull-out" of a non-resonant phonatory pattern.

This approach to therapy is based on current models of skill acquisition in which sensory information is more important than analytical explanations.

However, a current study is investigating the use of imagery (not sensory information) in resonant voice therapy. Studies indicate that resonant voice is produced with the vocal processes slightly abducted. This posture appears to produce the strongest, clearest vocal output with the least amount of vocal trauma associated with impact stress which appears to provide some protection from vocal injury.

In addition, this laryngeal configuration requires the least

amount of lung pressure (phonatory threshold pressure) to induce vocal fold vibration and is therefore physically easy to produce. Currently, studies are being conducted at the University of Pittsburgh investigating the role of resonant voice therapy in the acute wound healing process.

Analysis at the molecular level is underway and results should be available soon.

While this treatment program is in its infancy, preliminary data regarding efficacy is encouraging. There are several ongoing studies investigating this issue. If you wish to learn more regarding this therapy technique, please feel free to contact Dr. Verdolini at (412) 383-6544 or kittie@csd.pitt.edu.

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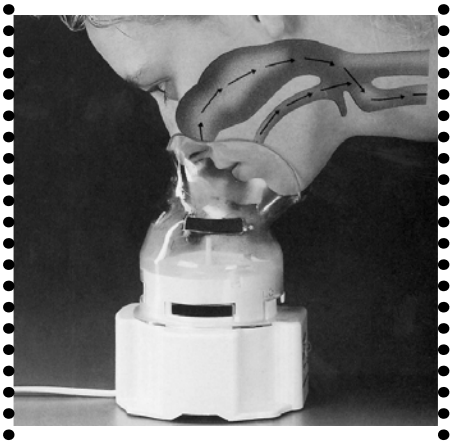
Calendar of Events

Steam Inhaler



This personal steam inhaler is small, light and effective and can be ordered through the Canadian Voice Care Foundation (CVCF) for $68.00 including taxes and shipping.

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For more information call
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Vth International Voice Symposium

The Professional Voice:
Physiology, Voice Technique, Medical Voice Care, and Voice Education

Salzburg, St. Virgil
August 2-4, 2002

AUSTRIAN VOICE INSTITUTE
Email: austrianvoice@sbg.at

47th NATS Convention

July 3 - July 7, 2002

San Diego
July 2 - 7, 2002

Phone: 904-744-9022
Email: info@nats.org

Lessac Summer Workshop Mercersburg Academy

June 23 - July 19, 2002

Phone: 717-328-6225

Email:
summerprograms@mercersburg.edu
www.mercersburg.edu

Experiencing Speech Dudley Knight's Speechwork

University of California, Irving
August 2-6, 2002

Phone: (949) 824-9440
Email: pthompso@uci.edu

The Summer Vocology Institute

Denver, Colorado
June 9 - August 7, 2002

The University of Iowa

Phone: 1-800-272-6430
Email: credit-programs@uiowa.edu

THE VOICE FOUNDATION

31st Annual Symposium:
Care of the Professional Voice

June 5 - June 9, 2002
Philadelphia

Phone: (215)735-7999
Email:
voicefound@onrampcom.com
www.voicefoundation.org

The Mechanics of Normal Hearing

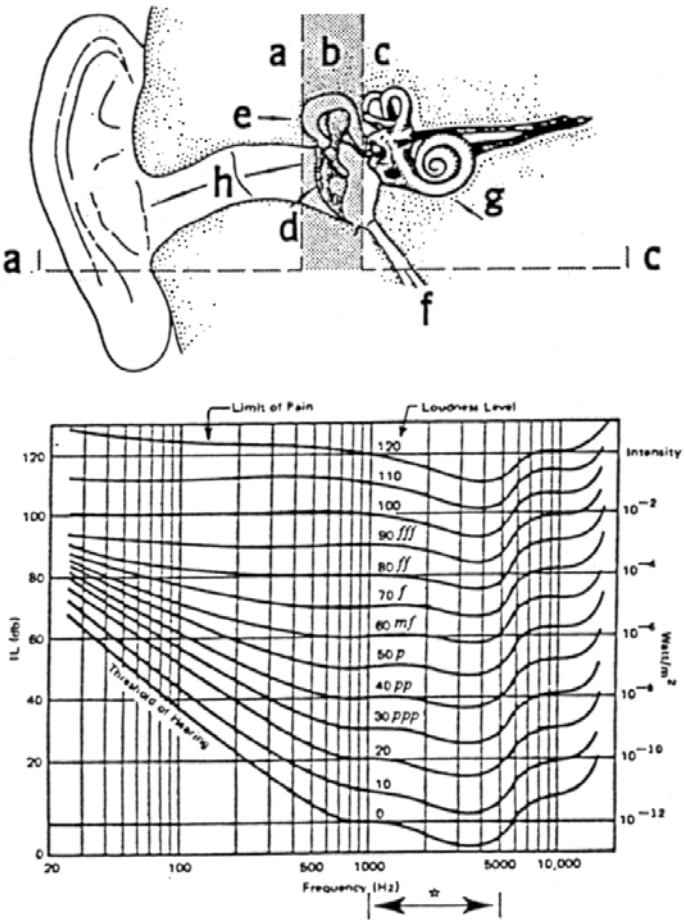
Dr. Françoise P. Chagnon

The ear is divided into three parts: the outer ear (a), the middle ear (b), and the inner ear (c). The outer ear protrudes from the head to capture sounds to be conveyed to the outer ear canal (h). The middle ear, consisting of an eardrum (d) and three auditory ossicles (e), is a small air chamber within the skull bone, The middle ear is connected to the back of the nose, in the upper recess of the throat, by the Eustachian tube (f). This conduit helps equalize pressure on both sides of the eardrum.

The eardrum is made to vibrate by the sound waves reaching it. Those vibrations are transmitted through the chain of ossicles to membranes (or windows) covering the inner ear.

The inner ear is a fluid-filled chamber divided into two parts: the organ of balance (labyrinth) and the organ of hearing (cochlea) (g). Vibrations reaching the inner ear set fluid in motion. As the fluid moves, it strokes the specialized hearing cells into electrical impulses transmitted to the brain by the acoustic nerve.

The audible range for humans captures sounds between 10 cycles per second (Hz) and 24 000 Hz. However, because of its size and structure the ear responds better to certain frequencies than to others. Both the natural resonances and efficiency of the outer and middle ear mechanisms are greatest in the range between 1000 and 5000 Hz (*). Beyond this range, the sensitivity of the ear is a little less for higher frequencies and considerably less for lower frequencies. The speed of sound is also influenced by the quality of the environmental air. In very cold air, sound travels more rapidly than when layers of air of different temperature are encountered. On a very cold night, sounds may be perceived as very clear and sharp.The eardrum and ossicular chain contribute greatly to magnifying the forces transmitted to the inner ear windows. Two small muscles act upon the middle ear ossicles to decrease the transmission of sound to the cochlea. These muscles contract reflexively in response to loud sounds above one hundred decibels. The amount of sound attenuation provided is not large (about ten decibels) but it is helpful in protecting the cochlea from irreversible damage. Since there is a brief latent period before this protective mechanism occurs, the inner ear is still vulnerable to damage from sudden sharp or explosive sounds of high intensity.



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Dr. Françoise P. Chagnon is Assistant Professor of Otolaryngology at McGill University and Associate Director of professional services at the McGill University

Some Treatment Modalities for Chronic Pain

Drug Therapy	Nonsteroidal anti-inflamatory drugs, acetaminophen, opioids, antidepressants, anticonvulsants, local anesthetics, and steroids. Other drugs include tramadol, clonidine, amantadine, and dextromethorphan.
Physical Therapy	Prescribed exercises for the patient to work to tolerance without interuption within each exercise, then increased at a predetermined rate to a predetermined upper limit. This allows the patient to overcome his/her fear that increased activity will result in an increase in pain.
Education	Many patients have trouble understanding that not all pain can be "cured," that the focus of treatment is a return to function, rather than a return to a pain-free state.
Self-management	Relinquish dependence on health-care providers for pain management is important. Learn techniques to take control and manage pain independently, such as the use of pain-control modalities (eg. ice, heat, and self-massage) and a structured home exercise program.
Behavioural modification	Repeated exposure to avoided activities decreases anxiety and fear of them. In fact, during such treatment, chronic pain levels stay the same or decrease, despite significant increases in activity levels.
Acupuncture	Acupuncture produces a reliable decrease in pain that may have been mediated by endorphins.
Placebo	An inactive compound administered as though it is an effective drug. Endogenous opiates naturally released in the central nervous system play a role in some of the placebo effects. Some, but not all, patients show a reduction in pain after being given placebo medication. Placebos probably work for virtually everybody, but the conditions under which they are likely to work may differ from individual to individual.

reprinted from Wellness Options, December 2001-January 2002

Vocal Definitions

NAMES FOR WHAT WE HEAR OR BODYMIND PERCEPTION	***THE PHYSICAL ACTION WHICH CREATES WHAT WE HEAR OR PHYSIOLOGICAL PARAMETERS OF VOCAL SOUND PRODUCTION***	***WHAT ACOUSTIC PHYSICISTS CALL WHAT WE HEAR OR ACOUSTIC PARAMETERS OF VOCAL SOUND***
Pitch of Voice	Degrees of Vocal Fold Stiffness Length and Thickness Oscillations	Fundamental Frequency of Vocal Fold and Air Medium
Loudness of Voice	Degrees of Adductory Force and Subglottic Air Pressure	Amplitude of Vocal Folds and Intensity of Sound Wave Excursions
Voice Quality	Degrees of Vocal Fold Abduction/ Adduction and Compliance / Thickness of Vocal Fold Tissue; Resonance Influences of the Vocal Tract	Differences in the Sound Wave Spectrum Radiating from the Mouth Opening
Vowels	Articulatory Configurations of the Vocal Tract Articulators	Combination of First and Second Formant Regions in the Sound Wave Spectrum

CANADIAN VOICE CARE FOUNDATION

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Membership & Subscriptions: $30/year

Advertising rates: Available upon request

"The CVCF is a national, non-profit organization dedicated to promoting good vocal health in Canada through education and communication between relevant disciplines."

Vocal Definitions

Voice Fatigue Syndrome

Voice Fatigue Syndrome is sensed by the voice user and is not necessarily observable by a physician. The user's voice may become "fuzzy sounding" after ten minutes to one hour of voicing, and sensations of "rawness," "soreness," "ache-iness," may be noticed, or a senation of something lodged in the throat that does not clear ("lump in the throat").

Atrophy of all or portions of vocal fold mucosa, ligament and muscle is sometimes referred to as "bowed vocal folds," a term that is in common use among ENT physicians.

Upon phonation during a laryngeal mirror exam, for instance, the physician sees a degree of separation between the folds, through which excess air escapes to create breathiness.

Vowel Modification

The general principle of vowel modification: as pitches rise and as loudness of energy level increases (regardless of the pitch): the jaw/ mouth opens progressively wider in small increments.

PLEASE RENEW YOUR MEMBERSHIP NOW!

Associate Membership Application Form

Yearly membership in CVCF includes the Voice Talk newsletter, access to program information, the international directory and referrals worldwide, access to an extensive reference library of voice books, video-tapes, audio-tapes and software programs as well as many other benefits.

Please check one: ____ Renewing Member ____ New Member

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Telephone: (day) _____ (eve) _____

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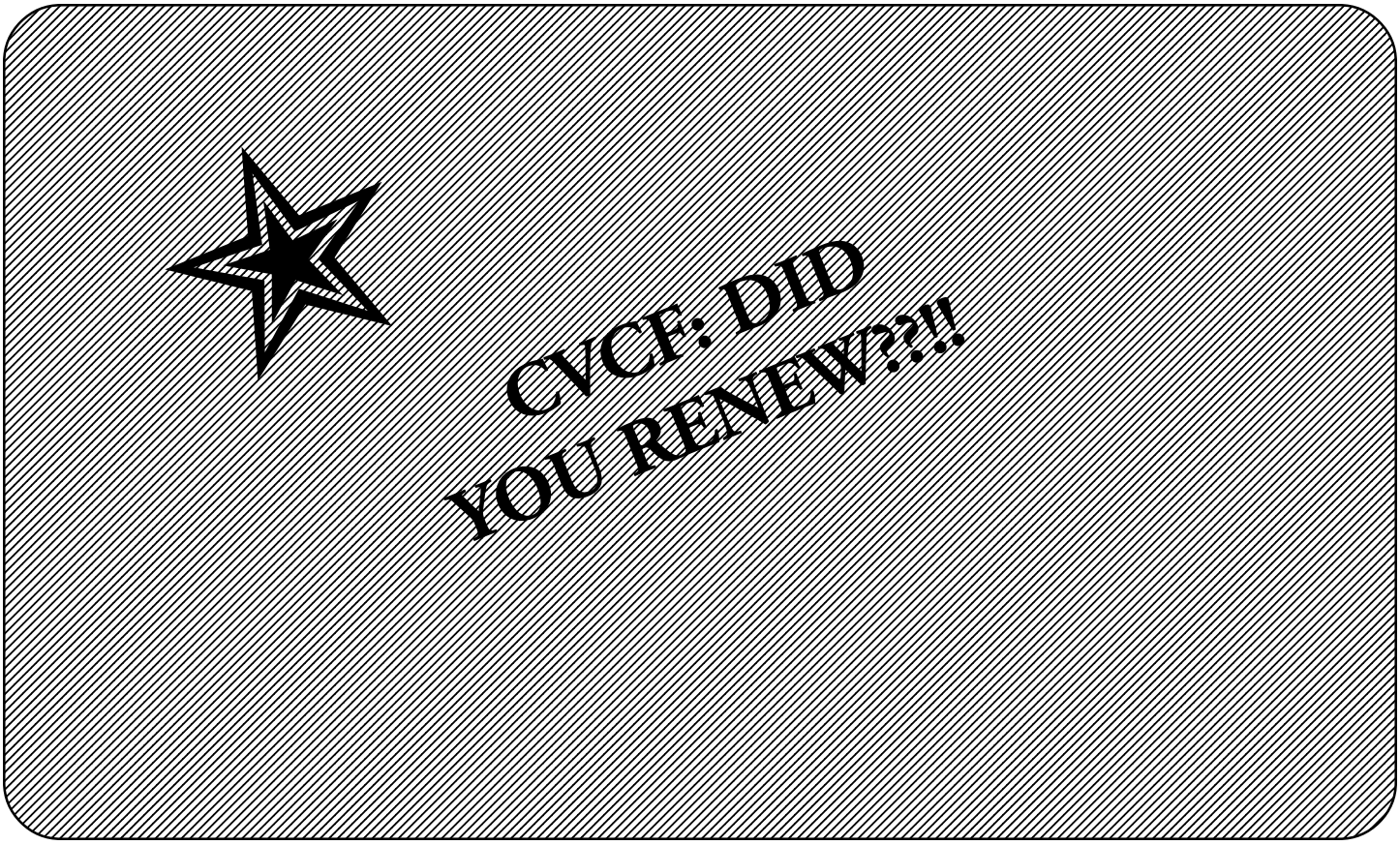
Individual	$30.00	
Institution (Hospitals, Universities, etc.)	$50.00	
Corporate	$70.00	$ _____
My tax deductible donation to assist the CVCF		$ _____
TOTAL ENCLOSED		$ _____

Please send cheque or money order payable to the Canadian Voice Care Foundation.



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