



# Canadian Hard of Hearing Association

## North Shore Branch

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September and December by CHHA – North Shore Branch,  
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Editor: Hugh Hetherington

Issue 41 June 2003

# Mountain Ear

## You Are Invited to Attend

Canadian Hard of Hearing Association  
North Shore Branch  
Members' Meeting

June 23rd at 7:00 PM

Location: The Summerhill  
135 West 15th Street  
North Vancouver, B.C.



Guest Speaker,  
Dr. Eytan A. David, MD, FRSC(C),  
Topic: Middle Ear and Cochlear Implants.

Open to the Public  
Friends and Family Members Welcome  
Refreshments will be Served

# President's Message

## Sound Advice for the Hard of Hearing

Are you an "informed consumer" when it comes to your hearing needs? Do you have strategies that help you cope with your hearing loss?

If you answered "yes" or "no" to the above questions, you are very welcome to join us at *SOUND ADVICE*, a group that meets once a month. We share our knowledge and experiences, and learn more about hearing impairment, hearing aid technology and how to cope with a hearing loss. Each meeting is unique as we focus on different aspects of hearing loss and address issues and concerns that come up.



Who can attend Sound Advice? Anyone with an interest in hearing loss issues is welcome. Most of the attendees have a hearing loss. A few bring their friends or spouses, and occasionally we have a professional who is interested in what we are doing. Since we meet during the morning, we generally have retirees and non-working parents.

Our Sound Advice meetings have become a highlight for me for several reasons. First, I am getting excellent strategies from people who have a hearing loss. If a strategy works for them, I am more likely to try it than if I get the idea from a hearing person who may not understand hearing loss. I come away amazed that, even though I have had my hearing loss for over 40 years, there are still new ideas and strategies to try.

Second, our meetings are hearing accessible! We meet in a circular setting so we can all see each other and there is an FM system available for anyone needing it. And because I know everyone un-

derstands, I feel very relaxed about asking someone to speak up or repeat what they have just said. I find myself improving on the assertiveness skills I need to use in other social settings.

Third, I'm getting the latest on hearing aid technology and all the aids available for the hearing impaired. Since many of these helpful devices are not advertised in the media, I was not aware that they were available until I started attending CHHA seminars. Our Sound Advice meetings are a wonderful opportunity to check out the newest technology and resources available to hearing impaired persons.

And finally, I always come away feeling encouraged and more relaxed about my hearing disability. This lively group of people has become both a sounding board for me as well as a spring board to apply what I've learned to my life.

So check us out sometime. Sound Advice meets on the **FIRST FRIDAY** of the month at the **WEST VANCOUVER SENIOR'S ACTIVITY CENTRE** in the Learning Studio from 10 A.M. TO 12 NOON.

See you there!

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## Donations

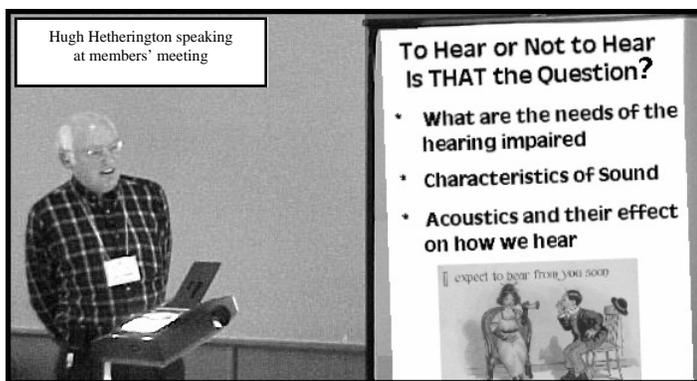
The North Shore Branch of CHHA gratefully acknowledges a donation of \$500.00 from the Howe Sound Lions Club. This donation will be put to good use on the many projects the North Shore Branch is Currently undertaking.

# April Members' Meeting

Report by: Andrea Gauthier

The April members' meeting was held at the Summerhill on April 28<sup>th</sup> with over 30 members and visitors attending. Hugh Hetherington, North Shore Branch Secretary, was the speaker for the evening. Hugh's talk was entitled *To Hear or Not To Hear, Is That The Question?* It's always interesting to attend one of Hugh's talks, not only because he is knowledgeable in so many ways about the problems of the Hard of Hearing but he is also always aware of the latest developments in that field. This evening's talk was no exception.

The three aspects Hugh focused on were Sound,



Acoustics, and their effect on the Hard of Hearing. He began by talking about hearing, how it functions and what happens when it becomes impaired.

Our hearing sense is very complex and not only involves the external and internal parts of the ear, but is also heavily reliant on the brain and how it has learned over time to interpret the sounds we hear. Adapting to a hearing aid can be quite different, to draw a parallel, to adapting to a pair of eyeglasses. The process of adapting to a hearing aid can also vary with a number of factors that include things like how and at what age we lost or started to lose our hearing. For instance, was it a sudden hearing loss or did it happen gradually over time? The more knowledge we can gain about sound, acoustics, and our hearing loss, the better we will be able to tailor our expectations and work more effectively with our hearing professional to achieve a satisfactory result.

Hugh pointed out that recent health reports indicated that more people are showing signs of hearing loss these days, and at a younger age. It is now estimated

that 20-30% of the population between the ages of 30 and 60 are involved and that a major cause is noise pollution. This is an alarming statistic. Another cause is medications. Many prescription drugs can have ototoxic side effects (potential to damage hearing) on some people. It is always a good idea to discuss this with your doctor when being prescribed a new medication. If a medication causes problems with your balance, dizziness, nausea or ringing in the ears it is a sign that it may have ototoxic effects on you and you should ask your doctor about alternative medications, if any.

We were born into a world of sound and from infancy on over time the brain mapped these sounds, hence our ability to discriminate between wanted sounds like speech, and unwanted sounds like noise. The human body is purposely equipped with two ears which give it the ability to not only directionalize sound, but also gives us a natural ability to suppress unwanted and/or commonplace sounds. Examples of this would be the ticking of a clock, or the hum a refrigerator. Hearing loss causes an impairment of this ability. As hearing loss progresses, to put it simply, the brain forgets how to hear. Sounds that were once commonplace are no longer heard. Hearing can be relearned with hearing aids, but it takes time and perseverance. New technology in hearing aids, such as directional microphones and digital noise suppression attempt to mimic this ability. We expect so much more when we get a hearing aid, because we know science can do better, but we need to keep in mind that our expectations must be realistic. When we first put on hearing aids, the sudden return of the sounds we used to hear may sound unnatural and can be very disturbing. It is worth taking time to persevere and readjust to the new sounds and not give up and just put the hearing aids away in a drawer.

The characteristics of sound and acoustics and their

**CHHA – North Shore Branch  
Annual General Meeting  
Monday September 22nd, 2003  
7:00 PM at The Summerhill  
135 West 15th Street, North Vancouver  
Guest Speaker: Jeff A. Small, Ph.D.,  
Assistant Professor, School of Audiology  
and Speech Sciences, U.B.C.**

*(Continued from page 3)*  
effect on how we hear.

The sound that we hear is actually the vibration of air molecules as they vibrate our ear drums. Important aspects of sound are amplitude, the loudness and softness factor, and frequency, whether the sound is high or low pitched. Because sound must travel through a medium, in this case air, it is acted upon by a number of factors. The most important ones for a Hard of Hearing person to know about are reflection and interaction.

With reflection, sounds are bounced off hard surfaces and result in echoes. These echoes arrive at our ear with a time delay over the direct sound. The longer the delay of these reflected sounds, the more it affects our ability to hear the direct or wanted sound. These reflected sounds interact with the direct sound and result in distortion and interference.

To explain interaction, we might take an example of two tones. Tone A and tone B which start out from separate sources but arrive at our ear as a mixed stream containing not only the two original tones but also the many harmonics that are generated through the interaction of the two sounds. This is a simple example, but with speech sounds and various noise conditions it becomes more complex. With normal hearing the brain has learned to sort out the wanted from the unwanted sounds, providing the conditions are not too severe. With hearing loss, or perhaps only one hearing ear, the brain will have difficulty and will have to work harder.

Adverse listening situations which cause great difficulty for the hearing impaired includes:

- competing speech (restaurants, malls, social settings, etc. )
- constant noise (motors, such as fans or air conditioners, wind, etc.)
- intermittent or fluctuating noise (business machines, background radio)
- reverberant rooms (churches, auditoriums, gymnasiums)
- distant speakers (churches, sports arenas, theatre)

Although all of these adverse conditions make life difficult for the Hard of Hearing, reverberation de-

serves some special mention. Reverberation is the persistence of sound after the sound source has ceased. For example, everyone has noticed the cacophony of sound in an indoor swimming pool or a school gymnasium. Because of the many hard reflecting surfaces, reflected and re-reflected sound can carry on for several seconds after the primary sound has ceased. All of these sounds interacting with each other make for an impossible listening situation. A person with normal hearing can usually tolerate a reverberation time of 1 second or more, whereas a person with hearing impairment will have difficulty with a reverberation time of 0.4 seconds. It is also important that the noise level be at least 15 Db below the speech level. (Note: According to guidelines set by the American Speech-Language Hearing Association (ASHA), ambient noise should be no louder than 30-35 dBA in an empty classroom. Reverberation time should not exceed 0.4 seconds, and Signal to Noise ratios should be no lower than +15 db.)

Hugh went on to speak about the various styles of hearing aids available in the market.

Completely in the canal (CIC) hearing aids are the very tiny aids which sit deep in the ear canal and are mostly invisible. These are usually good for mild to moderate hearing losses and do take advantage of the ears natural sound capturing capability allowing for directionalization of sound. Because of their small size they do not normally have any special features, such as a telecoil (T-Switch), or a directional microphone.

In the ear (ITE) hearing aids are larger and fit within the ear and are quite visible in profile. Because they fill the ear cavity, the natural sound capturing ability of the ear is diminished. They can, however, be equipped with directional microphones and sometimes can accommodate a telecoil. They can be used in cases of mild to moderate to somewhat severe hearing loss.

Behind the ear (BTE) are the larger of the three types and can generally house more sophisticated circuitry and features. Directional microphones are a common feature available and function better on BTE aids because of the microphone placement which can be front and rear. Most BTE aids are equipped with telecoils so the wearer can take advantage of better telephone communication with background noise

*(Continued from page 4)*

eliminated and hear better in situations where loop systems are provided. Direct audio input is another feature that can be provided on a BTE aid. Another strong advantage is the separate earmold which can be tailored to the hearing loss of the individual. Another advantage not always thought of is the capability to transfer the earmold to a loaner hearing aid if yours has to be sent away for repairs. BTE hearing aids can be used for any degree of hearing loss right up to severe and profound losses.

Hugh also spoke briefly about the differences between analogue and digital hearing aids.

Analogue hearing aids are the least expensive and can still be the best solution for non-demanding lifestyles and listening needs. Generally they are straight amplifiers and the output signal is an amplified copy of the input signal. The sound can be shaped through the use of filters or tone controls to accommodate the slope of the hearing loss. They come in programmable and non-programmable models.

Digital hearing aids can provide a wide range of highly sophisticated signal processing systems. People with active lifestyles who find themselves in many different listening situations are prime candidates for digital hearing aids. These advanced hearing aids can improve speech recognition in noise and can adapt automatically or through the use of a remote control to changing listening situations. Multiple bands which can be individually programmed make it possible to match difficult or unusual hearing losses which were difficult or impossible to help with analogue hearing aids. Directional microphones, telecoils and direct audio input are all features that can be provided on digital aids.

Your needs are all individual and depend on a large number of factors including your lifestyle. It is important to find a good audiologist or hearing professional and to work with them to find a solution to your hearing needs. Your doctor may refer you, or you might ask someone you know who has purchased hearing aids before.

Hugh finished his talk by describing some of the assistive listening devices that are available on the market:

- Williams Sound Pocket Talker II ® One-to-one

communicator

- Phonic Ear Easy Listener ® Personal FM System
- Phonak Micro-Link ® FM System – tiny FM receiver fits onto the hearing as a boot

Hearing Aids and Assistive Listening Devices may qualify as a medical expense for tax deduction. If you are buying a lot of equipment it might be beneficial to get it all in one tax year.

Questions from the audience:

Where can I purchase assistive listening devices?

Some Audiologist's offices carry these items. They are also available at the Communications Aids Department at the Western Institute for the Deaf and Hard of Hearing (WIDHH) at 2125 West 7<sup>th</sup> Avenue in Vancouver. Telephone: 604-736-7391.

Can hearing aids be used with cell phones?

Not all cell phones are hearing aid compatible. It is best to arrange a trial, if possible, before purchasing. Cell phone loops are available for certain cell phones and can be used with your T-Switch.

What to do about phone feedback?

Digital aids may have feedback suppression. If this is correctly programmed you shouldn't have difficulty. On an analog hearing aid, try switching to T before you use the phone. If your hearing aid is not equipped with a telecoil you may have to remove your hearing aid and use an amplified telephone.

How to listen/use an intercom?

Some people find them squawky and the sound poor.

One of our members told about an intercom system she had to use regularly. She asked them to bring her a copy of the text to help her. Otherwise there is not much help for the hearing impaired. Be heartened by the fact that people with normal hearing also have difficulty hearing over these intercoms.

The meeting ended with a social with refreshments and Hugh was available to answer more questions on an individual basis.

## BC Balance And Dizziness Disorders Society (BADD)

By Andrea Gauthier

On May 15th I attended a meeting of BADD, the BC Balance and Dizziness Disorders Society, held at Lion's Gate Hospital. This was the first meeting BADD has held on the North Shore. BADD is an organization that offers support for people with balance, dizziness, and related vestibular disorders which includes many people who have hearing problems.

BADD publishes The Balance Sheet, an informative quarterly newsletter for members. A one-year membership costs \$15.00 and can be had by sending a cheque to BADD - Treasurer, #325 - 5525 West Boulevard, Vancouver, BC V6M 3W6.

BADD regularly sponsors informative talks by professionals on topics of interest to members, such as treatments available, medications, alternative medicine, exercises that can help, and it reports these in the newsletter.

Members have access to a special weekly Tai Chi for Balance class.

Their society is compiling a list of medical professionals who deal with balance and dizziness disorders and a list of organizations, books and websites of interest to people with vestibular disorders.

They hold monthly brunch meetings at a local restaurant in Vancouver for members and friends. BADD members have a common bond of understanding. They all know how it feels to cope with a disorder that is not apparent to others but which affects our ability to engage in ordinary everyday activities.

These disorders generally originate from a problem with the inner ear and brain that help control balance and eye movements. Many things including head or neck injury, ear infections, aging, illness, medication and strokes can cause problems.

There were two presenters at the May meeting.

There was a beautiful demonstration of Tai Chi by Teruko Ueda and information about the special weekly class for Balance. Tai Chi is a soft martial art which builds awareness, concentration and flexibil-

ity. It could be described as a form of moving meditation . There was also a presentation by Bernard Tonks, a physiotherapist at Planet Ice, South Coquitlam Physiotherapy & Massage Therapy Clinic, who talked about Vestibular Disorders. This was a very illuminating presentation.

At the time of diagnosis, it is important to understand that dizziness is a broad category. Vertigo, which gives the illusion of movement occurring in the environment, is a sub-category.

The information needed to maintain balance is (1) visual (2) vestibular (3) somatosensory.

Tonks gave particular attention to Benign Paroxysmal Positional Vertigo (BPPV) which affects the largest proportion of people who suffer from vertigo. This is a type of vertigo that is triggered by movements, i.e. looking up, down, rolling over. There are fairly simple treatments available for this problem.

Unilateral Vestibular Lesion (UVL) is a vertigo caused by a viral or bacterial infection of the vestibular system and leads to vestibular hypofunction. The virus kills the nerve cells. The treatments for this include habituation exercises, adaption exercises and balance and postural control exercises, motion sensitivity, static and dynamic balance habituation programs and gaze stability adaptation programs.

Bilateral Vestibular Lesion (BVL) caused by ototoxicity and Meniere's Disease were also touched on. Tonks mentioned that we hear a lot about Meniere's Disease although it affects a very small percentage of the population suffering from dizziness. We don't hear as much about the other types of dizziness.

This talk was encouraging in that it offered help for some of the dizziness ailments.

You can reach the BC Balance and Dizziness Disorders Society at #325 - 5525 West Boulevard, Vancouver, BC V6M 3W6

Voicemail: 604-878-8383

Toll Free: 1-866-780-2233

Website: [www.balanceanddizziness.org](http://www.balanceanddizziness.org)

E-mail: [info@balanceanddizziness.org](mailto:info@balanceanddizziness.org)