



Catch it early
Know the risks to
reduce the damage



Age-related factors
How your hearing
needs will change



HEARING HEALTH



A TRUE HEARING AID



“Celebrity Apprentice” Marlee Matlin helps make hearing tests possible for people around the world

PHOTO: MICHAEL ROSENTHAL



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Association of Hearing Instrument Practitioners of Ontario

CHALLENGES



With an **aging population**, hearing loss is a growing concern for everyone. Whether you are taking steps to prevent damage, or are relearning to communicate with a loved one, it is important to understand the condition that eventually **affects us all**.

Listen up and learn about hearing loss

Hearing loss has frequently been called the invisible handicap.

It is something that is very gradual, typically painless, and is more often than not mistaken for something else. People with hearing loss may report ringing in their ears, increased fatigue, especially later in the day, or be under the impression that they can only hear OK; it's just that people mumble. Many people don't mention it to their friends, family or physicians fearing that their lack of understanding or lack of clarity of speech is some sort of cognitive decline. For all of these reasons it is difficult to get an exact estimate of the number of people with hearing loss. Conservative estimates suggest that about three to four million Canadians or one in 10 Canadians have a significant enough hearing loss to warrant intervention.

Deafness denial

More often than not, hearing loss is noticed by others long before a person realizes or admits that they are experiencing it. When people are seen for a hearing assessment the first comment is typically, "My wife sent me in—she thinks I can't hear her." So why is hearing loss so frequently misunderstood or thought to be something else? Part of the answer is related to the various mechanisms of hearing loss.

A primary reason for a visit to a paediatrician or an emergency room is an ear infection. This is more spe-

cifically called a "middle ear infection". This type of pressure or fluid build-up in the middle ear can be quite painful but is treatable either by medication or minor ear surgery. This type of hearing loss is called conductive because it interrupts the conduction of sound to our ears.

Fading over time

In contrast to a conductive hearing loss, problems of the inner ear and beyond are called a sensori-neural hearing loss. This is typically not medically treatable, is painless, and unlike a conductive hearing loss that can start during a cold or immediately after an airplane flight, is very gradual in progression. Sensori-neural hearing loss may take years to notice and more often than not affects the higher pitched consonant sounds first. Sounds such as "s", "sh", "f", and "th" contribute most of the clarity of speech and this is usually the case for most languages spoken in the world. People with this type of hearing loss would report that they can hear fine but that people mumble.

Examples of sensori-neural hearing loss are noise and music exposure, hearing loss associated with aging, and very rarely, certain medications. Some forms of sensori-neural hearing loss are preventable—simply turning down the music or listening less often—while others are inevitable and associated with aging.

Know your options

Treatment of people with sensori-neural hearing loss can be multifaceted. Hearing aids that automatic-



Marshall Chasin, AuD.
Director of Research,
Musicians' Clinics of Canada

MY BEST TIPS

Hearing loss is gradual and painless. Friends and family frequently notice it before the person who has it does.

- 1 Initial signs of hearing loss are that you may notice that people mumble or speech is not clear, as well as tinnitus or ringing in the ears.
- 2 While speaking with someone who has a hearing loss, face them so that they will have the best chance of lipreading speech cues visible on people's faces.
- 3 When in a noisy place such as a restaurant, sit with your back to a wall—this serves to minimize the sound from behind you covering up what you want to hear.
- 4 Speak slower, not louder, to a hard of hearing person.

ally adjust themselves in the presence of background noise can be very useful. Assistive listening devices such as wireless FM systems bring the speech closer to the listener and can be very helpful at theatres and other noisier locations. And not everything that we "hear" is heard. Knowing the context or topic of the speech allows us to fill in the blanks. The same can be said for using your vision (or lipreading) to supplement what may be missed. Those sounds that are frequently missing with sensori-neural hearing loss are those very sounds that are visible on the speaker's lips. Facing someone is not just good manners—it's good for communication as well.

In this report, you will find great examples of good communication with deaf and the hard of hearing. Actress Marlee Matlin has shared her story and is an inspiration to others with profound hearing loss. Her use of American Sign Language (or ASL) on television and in movies has demonstrated the rich cultural heritage of the deaf community. Peter Stelmachovitch is another communication star with hearing aids, some really impressive technical devices and an amazing hearing-ear dog. Peter can communicate more effectively than many with normal hearing abilities.

I invite you to explore this 16-page report and discover the importance of preventing hearing loss and managing a sensory deficit that affects three to four million Canadians—maybe even you. I encourage you to learn the insight this report provides on issues such as noise induced hearing loss, tinnitus and the number one risk; age related hearing loss.

The noisy culprit behind hearing loss

Bill Hodgetts often shakes his head when he thinks of people all geared up to go snowmobiling, drive their all terrain vehicle or tackle a woodworking project.

"They've got helmets, goggles and gloves on, which is great," says Hodgetts, assistant professor of speech pathology and audiology at the University of Alberta, and program director of bone conduction amplification at the Institute for Reconstructive Sciences in Medicine, a joint initiative of the University of Alberta, Caritas Health Group and Capital Health. "But they're all missing the same thing—they've got nothing to protect their ears from the noise associated with these ac-

tivities."

Noise is one of the leading causes of hearing loss. There are no Canadian statistics tracking noise-induced hearing loss. But south of the border, one in three of the 36 million Americans with hearing loss developed their condition because of exposure to noise, according to the American Academy of Audiology.

Pay attention to the background noise

Dino Sophocleous, president of the Toronto-based Hearing Foundation of Canada, says lack of awareness is one of the key culprits behind the high prevalence of noise-induced hearing loss.

"People today are still not making the connection between excessive

noise and hearing loss, which is a shame because noise-induced hearing loss is almost a hundred per cent preventable," he says.

Ease up on the drums

In its position paper on noise pollution, the Canadian Hearing Society proposes a noise control strategy founded on three Rs: removing as much noise as possible from the environment, reducing the amount of noise that enters in the listening space, and resting the ears after exposure to loud noise to give the hearing system a chance to recover.

"It helps to take a break," agrees Hodgetts. "When you've been exposed to loud noise, the outer hair cells in your ears get tired and lay down, resulting in that ringing in

your ears—a telltale sign of exposure to loud noise.

"Assuming it's a one-time exposure, in about eight to 16 hours the hair cells will come back to life, but if they're not given time to recover, they'll just die."

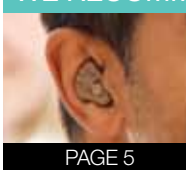
It's also a good idea to always have on hand a pair of earplugs, which most drugstores today sell for just a few dollars, says Hodgetts.

But in a pinch, he suggests using small, balled-up pieces of toilet paper or facial tissue.

"It's a really easy thing to do, a simple strategy that can make such a big difference," he says.



WE RECOMMEND



How I hear
Robert Chamberland's story of living with profound hearing loss.

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"Since a hearing aid is a sound amplification device, you would think it would solve the problem of hearing loss. But this simply is not true."

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How to face the implications of living with hearing loss.

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WHAT'S UP DOC?

Hearing doctors and their specialties

ENTs, also known as otolaryngologist-head and neck surgeons, are medical doctors who specialize in head and neck disorders, affecting the ears, nose and throat. ENTs with specialty training can cure ear-related disease and infection, repair deformities and restore hearing through micro-surgery.

Audiologists assess and diagnose hearing difficulties, select and fit hearing aids, and develop rehabilitation strategies for patients with hearing loss. Audiologists work in various settings including private clinics, schools, hospitals, government and universities. Some are also involved in research and public education promoting hearing health.

Speech-language pathologists help adults and children with speech, language, voice and swallowing disorders through interventions that include prevention, counseling, treatment, management and rehabilitation. There are more than 7,300 speech-language pathologists in Canada working within a multidisciplinary team. A doctor's referral is not necessary to see a speech-language pathologist.

Hearing instrument specialists work to select and fit hearing aids and other assistive devices. They also have a solid understanding of acoustics, sound perception and physiology of the ear. Hearing instrument specialists work in various settings, including private practice and hospitals.

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Advertorial

Zen program by Widex - clinically proven to help reduce the effects of tinnitus



Do you hear ringing or buzzing in your ears? You're not alone.

The ringing in your ears is known as tinnitus and is characterised by periodic or constant sounds like ringing, buzzing or humming. It is a common problem that everyone, regardless of age or hearing status, experiences at some point. Often, the cause of tinnitus is unknown; frequently it is noise induced, or related to medical disorders, such as ear infections, or caused by use of certain drugs. Regardless of the cause, there is a very high correlation between the presence of hearing loss and tinnitus.

Over 70% of people with hearing loss experience some degree of recurring tinnitus. 10% of individuals with hearing loss report that tinnitus has a negative impact on their quality of life, creating anxiety and stress.

Tinnitus management programs aim to help people with tinnitus improve their quality of life. Although there is no cure for tinnitus, the effects can be minimized by a combination of counselling and sound stimulation. Examples of sound stimulation include

amplified sound from hearing aids, environmental sounds or music.

Music for relaxation

Many of us use music for relaxation and stress relief without ever thinking about it. In fact, studies have shown that carefully selected music, such as soft and slow-paced music, can improve relaxation and concentration, as well as slow breathing and reduce the heart rate.

Zen tones can help improve quality of life

Inspired by music research, Widex developed Zen, a unique listening program available in select Widex hearing aids. This revolutionary program offers a choice of harmonic tones designed to promote relaxation, reduce stress, improve concentration and provide relief from tinnitus. For tinnitus sufferers, these harmonic tones, or the optional broadband noise, can be used as a sound therapy tool in an overall tinnitus management treatment program.

Recent clinical studies on the Zen program found:

- 86% of patients found Zen made them feel very or somewhat relaxed

when Zen was fine tuned to their individual preferences

- 71% of patients said their tinnitus symptoms were milder after 6 months of daily use
- 57% felt they were less bothered by the stress of tinnitus than before

Studies show that the majority of people suffer from hearing loss and tinnitus for many years before they begin inquiring about the benefits of wearing a hearing aid. The driving force for Widex is to improve the quality of life for the 500 million people around the world who have problems hearing. Whatever your life-style, whatever your needs, Widex has a solution that's right for you.

Consult your hearing health care professional or visit www.widex.ca to learn more about the benefits of Widex hearing aids and Zen!



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- to reduce the effects of tinnitus
- to increase speech understanding in noise

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THE CANADIAN HEARING SOCIETY
LA SOCIÉTÉ CANADIENNE DE L'OUÏE



"Alone we can't do much. But, together we can change the world."
Starkey Hearing Foundation founder William F. Austin



Globally, there are approximately **63 million** hearing impaired children.

Every year, more than 50,000 hearing aids are delivered through over 100 Starkey Hearing Foundation Missions around the world.

Since 1984, the Starkey Hearing Foundation has fitted approximately 500,000 hearing aids and devices around the world.

These numbers will continue to grow and all because of donations from people like you.

Help give the gift of hearing.

Starkey Canada is a proud supporter of the Starkey Hearing Foundation.

Our Mission:

Change the social consciousness of hearing and hearing matters through education and research while providing the gift of hearing to those in need around the world.

Marlee Matlin photos courtesy of Kevin Grandalski.

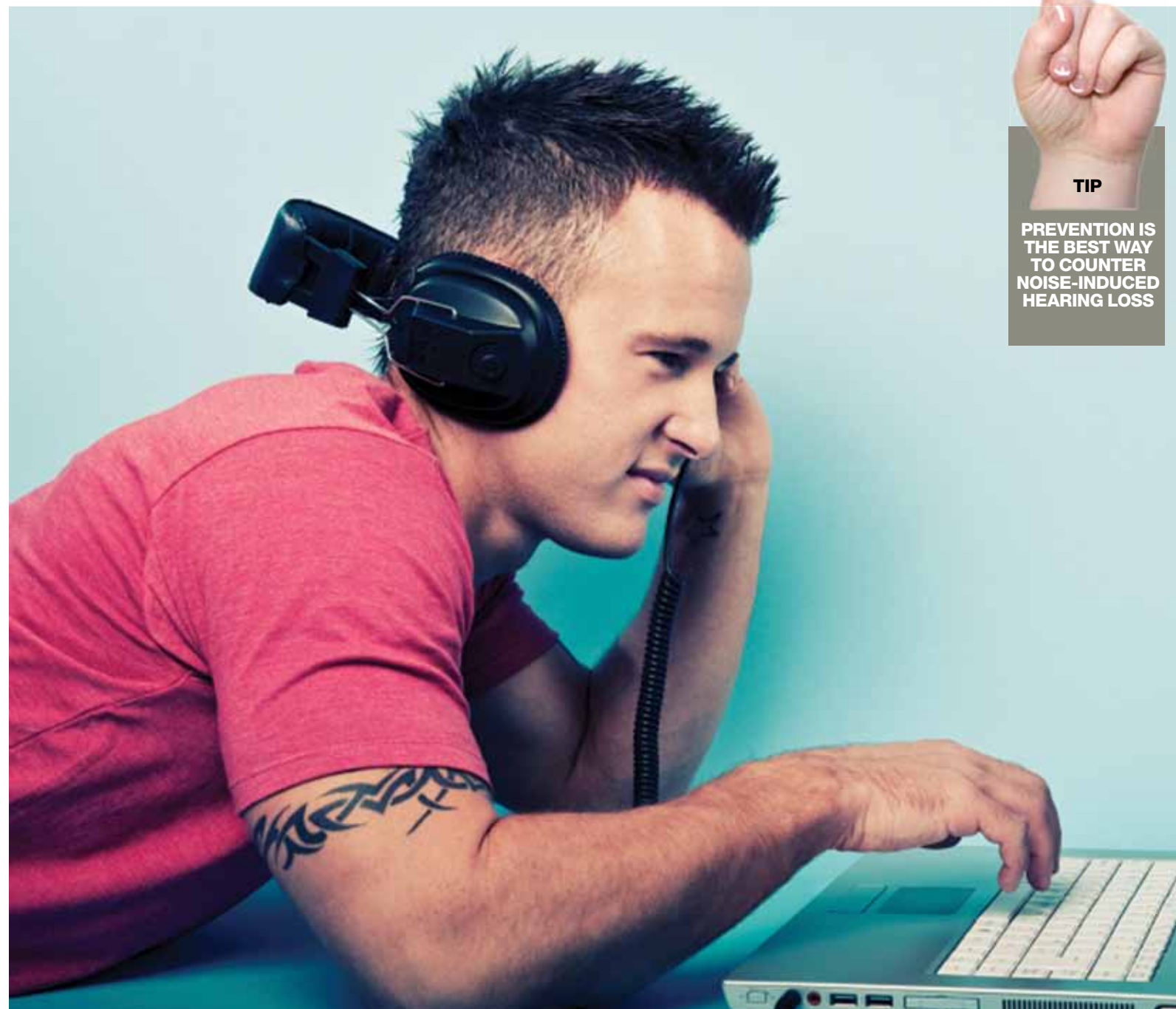
www.starkeyhearingfoundation.org



Marlee Matlin on a Hearing Foundation Mission in Kenya.



RISK FACTORS



TIP
PREVENTION IS THE BEST WAY TO COUNTER NOISE-INDUCED HEARING LOSS



DON'T MISS!

Hearing loss in the workplace

■ The Accessibility for Ontarians with Disabilities Act (AODA) became law in 2005.

The Act is a first—unique in Ontario's and Canada's history—promising an Ontario that is accessible to all persons with disabilities by 2025.

The law is setting new standards and timelines for implementation and applies to information and communication, the built environment, employment, transportation, and customer service (standard already enacted). It addresses policy as well as the removal of practical and attitudinal barriers.

The Canadian Hearing Society has been actively involved in the implementation of the AODA representing the interests of Deaf people and people with hearing loss on the Standards Development Committees.

What you need to know is that people with hearing loss have the right to not be discriminated against based on their hearing ability, and the right to not be denied access to information and communication, goods and services, transportation, buildings, and employment.

For those of us not experiencing hearing loss, it's important that we take the measures to prevent industrial induced hearing loss.

Noise deafness still ranks high in occupational diseases. Many employees assume the employer alone is responsible for the protection of the employee's hearing however this is only partially correct: The employer is responsible primarily for the reduction of sources of noise on the job but it's up to you to ensure proper use of hearing protectors.

There are two types of hearing protectors:

■ **Passive ear muffs** dampen all sound, which means that all noises are reduced as they pass through the ear muffs. It is important that the hearing protection used provides enough attenuation to protect the hearing. But it is also important that it doesn't give attenuation so high that you are over-protected.

Overprotection can prevent you from hearing your workmates, alarms and other important signals. The recommended sound level under the hearing protector is between 70 - 80 dB.

■ **Active [electronic] ear muffs** with a built-in electronic circuit limit noise but let you hold normal conversation with other people—without having to remove your hearing protector. Built-in level dependent amplification amplifies speech and other harmless sounds while protecting against harmful sound levels. To prevent harmful noise levels, the internal speaker output is limited to 82 dB.

The choice of the correct hearing protection depends on the kind of noise arising and also on working conditions. The following factors play a role in the selection of correct protection for the ears:

■ **Exactness of fit:** The ear must be completely sealed.

■ **Effectiveness:** The noise must be absorbed effectively.

■ **Comfort:** Since the hearing protection must be worn all the time that a high noise level prevails, it must be as light and comfortable as possible.

■ **Easy handling:** The hearing protection must be practical and easy to use.

■ **Compatibility:** Other safety devices must also be able to be worn at the same time, such as helmets, eye protectors, face shields or respirators.

Are you at high risk for hearing loss?

■ **Question:** What's the best way to minimize your risk of developing hearing loss?

■ **Answer:** Turning down the volume helps—the earlier, the better.

SHOWCASE

About 1.2 million Canadians aged 15 or older have some form of hearing limitation, according to a 2006 survey by Statistics Canada.

While hearing loss is not always preventable, understanding the risk factors behind this serious condition is an important first step in protecting your hearing.

"It's much better to take the steps now to prevent hearing loss than to deal with it later," says Kathy Pichora-Fuller, an adjunct scientist at the Toronto Rehabilitation Institute and professor of psychology at the University of Toronto in Mississauga.

Turn it down—while you still can

Hearing loss can be caused by various reasons. Age, says Pichora-Fuller, has long been recognized as one of the leading causes. But recent research by Charles Liberman, a professor at



"It's much better to take the steps now to prevent hearing loss than to deal with it later."

Kathy Pichora-Fuller
 Adjunct Scientist,
 Toronto Rehabilitation Institute

Harvard Medical School Massachusetts Eye & Ear Infirmary, also suggests that hearing loss may be more likely or worse in older people who were exposed to loud noise during their youth.

Two conditions that are largely preventable, diabetes and cardiovascular disease, can also lead to hearing loss. Other causes include

BUT WHAT ABOUT THE KIDS?

Hearing loss isn't just an older person's disease. Babies, children and teens are also affected by hearing loss.

"One in five teenagers now have some hearing loss, according to a study by the Journal of the American Medical Association," says Dino Sophocleous, president of the Toronto-based Hear-

ing Foundation of Canada, which runs Sounds Sense, a program that educates elementary school children about hearing loss. "The problem is growing."

The main culprit: noise—from MP3 players, concerts and clubs. Sophocleous says young people need to either turn it down, minimize exposure to loud noise, or wear protective ear plugs.

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they lost their hearing.

Protect the noggin

Head trauma can also cause hearing loss, says Pichora-Fuller, even when the ear hasn't been damaged.

"The sound may start in your ear but it has to get to your brain, so hearing really is connected to various parts of the brain," she says. "If your skull gets shaken up and you have a traumatic brain injury, then you can experience neural degeneration that could affect your hearing."

There are other possible causes of hearing loss that researchers are still trying to figure out, says Pichora-Fuller, including the role of genetics. Scientists recently discovered a gene called GJB2, which contains the instructions for a protein that affects the functioning of the cochlea, that snail-like tube in the middle ear that transmits incoming sounds as nerve signals to the brain. Changes to the GJB2 gene can lead to hearing loss, with the likelihood increasing for babies who have two copies—one from each parent—of the changed gene.

"There's so much more for us to learn," says Pichora-Fuller. "But we're continuing to look for answers and we'll get there."

MARJO JOHNE
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The inner workings of tinnitus

For some people, it's a mere nuisance—a faint noise inside their heads they eventually learn to ignore.

For others, it's an unrelenting sensory attack that often leads to depression or high levels of frustration.

Tinnitus, the Latin word for "ringing", affects more than 360,000 Canadians, according to the Tinnitus Association of Canada. About 150,000 of these tinnitus sufferers say their condition seriously interferes with their ability to function and enjoy their lives.

Often accompanied by hearing loss, tinnitus is generally charac-

terized by noise coming from within the ear. The Tinnitus Association of Canada notes that 50 different sounds have been reported by people with tinnitus, ranging from ringing and clicking to hissing, sizzling and roaring.

In a rare manifestation of this condition, called objective tinnitus, the sound is also audible to other people.

Getting to the source

Enza Ciurlia-Guy, an audiologist at the Canadian Tinnitus & Hyperacusis Centre in Whitby, Ontario, says the first step toward addressing tinnitus is to see a family doctor, who

would typically refer the case to an ear, nose and throat specialist.

"It's important to first identify if there is anything going on medically," she says. "A critical part of this discovery process is an audiological assessment by an audiologist."

Treatment for tinnitus varies according to the severity and nature of the condition. Some practitioners recommend a "masker" that drowns out the tinnitus sound with another, more pleasant sound, such as running water.

The Canadian Tinnitus Association singles out tinnitus retraining therapy as an effective sound-based treatment, citing

its combination of stress reduction strategies, low-level neutral sound and ongoing educational counseling.

"Education is really effective in the management of tinnitus," says Ciurlia-Guy, whose clinic specializes in tinnitus re-training therapy. "By giving people a better understanding of tinnitus, we can help them better control and manage their condition."

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Courtesy of MSA – The Safety Company & The Canadian Hearing Society
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INSIGHT

How I hear: coping with conversation

I have a profound hearing loss—80 percent in my left ear, 100 percent in my right. The hearing aid I wear has a miniature sound cancellation chamber to solve the problem of feedback and echo associated with especially loud hearing aids.

Since a hearing aid is a sound amplification device, you would think it would solve the problem of hearing loss, but this is simply not true.

There is so much involved in hearing that most people take for granted. For instance, you need two ears to determine the direction of a sound. If you only have one and you're in a group conversation you'll be doing as I do, constantly scanning the room for the source of the sound—only to find it moving again just as you've found it.

If, like me, you also depend heavily on speechreading then this is especially difficult, as not only will you be chasing the elusive conversation from one person to another, but when you do track down each speaker, they'll already be well into their discourse, and you've missed the opening context of their remarks.

Following secret clues

That context of conversation is crucial, since you can move from discussing, say, work, a familiar topic with a familiar terminology, to a completely different topic which, with few clues—could be literally anything. You could unexpectedly encounter words like “RBI” and

“pitcher,” with no obvious connection to what was being discussed before, no clue how things transitioned to this topic, and it'll take a few moments before you're certain the conversation has really moved on to baseball and you're not just imagining it.

Sorry... Can you repeat that?

But it gets worse. Suppose I have your undivided attention; you and I are the only ones in a quiet room, and there is no noise or distraction (optimum hearing conditions). Even though I can hear every word you've said, it's likely I'll only understand anywhere from 30 percent to 70 percent of them.

This is because I don't hear with the same clarity as someone who is hearing. What I understand looks like this: “Rob, remember wmmmpmhwed to veenay oomsum and saw the rambam? Wasn't dot an incred-immul painting?” And I'll politely smile and nod while trying to decipher what you've said. It will look like this in my head:

“Rob, remember [wmmmpmhwed]” (A proper name? Verb? Wed? Sounded like ‘when?’ ‘When we went’ would be consistent with ‘remember’) “to [vee-nay]” (Unknown, move on.) “[oomsum]” (A place we went to? Maybe ‘museum?’) “and saw the [rambam]?” (What did I see that sounds like rambam?) “Wasn't dot an [incred-immul] (not many words begin with ‘incred’, must be ‘incredible’)

painting.” Painting! Ah-ha! Major clue, time to reprocess.

This occurs in my mind as you're still talking: “Remember when we went to [vee-nay oomsum] (a place with paintings) and saw that [rambam] (a name of a painting, two syllables starts with R, possibly Rembrandt, Raphael or Rubens.)”

Meanwhile, I'm taking in your next sentence, but this time I have a bit more of a clue what you're talking about: “Oh, the collars (obviously colours, I hope), the lines, the useflytenshedo (yikes).”

Third pass, mind racing: “Remember when we went to (logical deduction, I've never seen a Raphael or Rubens, plus rambam sounds more like Rembrandt. Where did I see Rembrandt? Now I remember, the Victoria and Albert Museum, also known as the “V and A”—that explains the vee-nay oomsum).”

Meanwhile, you're now onto your third sentence, which I'm taking in, but now I have enough clues to process your second sentence: “Oh, the colours, the lines, the [useflytenshedo] (Ok, Rembrandt was known for colours, good lines, um...could lytenshedo could be light and shadow? Yes! “Use of light and shadow”).”

Filling in the blanks

At this point, because I was in my thoughts, I missed most of your third sentence and only just caught the ending: “[...[one syllable] [four syllables] [one syllable] again.”

“Since a hearing aid is a sound amplification device, you would think it would solve the problem of hearing loss, but this simply is not true.”



Robert Chamberland
Web Architect
The Canadian Hearing Society

you to repeat the last part or gamble and guess what you've just said. It seems likely you said “we should definitely go again.” I respond, “Oh yes, for sure!” Often I can have a seemingly successful conversation even while missing whole tracts of it; I'm used to it.

Of course, you could have been asking me a question, in which case you might now be looking at me strangely—a look I know well, the one which says “that was an unusual response.” Then I'll know I've missed something and will ask you to repeat.

Or you could have been asking me to buy tickets to the museum, in which case I've just answered affirmatively and there's no hint for either of us that I completely misunderstood.

You'll walk away thinking I'm going to buy tickets, I'll walk away thinking we've just had a pleasant conversation about a painting we once saw.

Perhaps the best thing you could do is double check—make sure I understood I'm buying tickets, to the V and A, to see Rembrandt, on such and such a date. Most people would find such a conversation strange. After all why was I nodding and smiling if I didn't really understand? I even said “for sure!” with great conviction. But that's the thing—how can I know I misunderstood? How can either of us?

On the other hand, how about those Toronto Blue Jays? They sure know how to use light and shadow!

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TECHNOLOGICAL ADVANCEMENTS



TIP

KNOW YOUR
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The digital age of hearing aids

When you think about vision and wearing glasses, what is your first impression? Once considered a “nerdy” accessory, glasses are now fashionable—they imply that an individual is smart or studious; they’re cool, even geek chic.

However, the loss of vision to some degree is exactly like the loss of hearing—so why does everyone fear the stigma of a hearing aid? The fact is that hearing aids are sleek, stylish, and offer a variety of technological advancements.

The digital age

Today’s hearing aids are almost all digital. They are programmed on computer software to give bass, treble, or any other pitch required for any particular hearing loss. There are lots of features that digital technology provides, but let’s start at the beginning. Today’s digital hearing aids have a job where they have to do two things: 1) amplify sounds to be heard by those with hearing loss, and 2) separate speech from back-



Ted Venema PhD
Hearing Instrument Specialist Program
Conestoga College

“The technological advancements in hearing aids, accessories and other assistant listening devices is staggering.”

ground noise.

Hearing loss prevents one from hearing soft sounds. What most people don’t realize is that loud and obnoxious sounds to those with normal hearing are also loud and obnoxious to those with hearing loss! So, hearing aids must amplify soft

sounds extensively, and loud sounds minimally, or not at all. The word for this is “compression,” and all digital hearing technology today uses it.

Tuning out

Separating background noise from speech is what listeners with hearing aids want; however, this is easier said than done. One way is for the hearing aids to use Directional Microphones (Dmics). On hearing aids, these are tiny specialized microphones, about the size of a pinhole. Compared to regular microphones found in hearing aids, Dmics are less sensitive to sounds coming from the sides and behind. This way, one hears less background noise. Digital Noise Reduction (DNR) is another way to help improve picking up speech through noise. Most noises, like fans, air conditioners, etc., have a steady loudness. Speech, on the other hand, is different because it constantly changes from soft to loud to soft. DNR uses these characteristics to differentiate the speech you want and the noise you

don’t. Some digital hearing aids give more amplification to speech-like sounds and others give less amplification to noise-like sounds. The jury is out on whether these techniques really improve hearing speech in noise but one thing is certain; DNR surely makes listening in noise more comfortable.

Another digital feature, Automatic Feedback Reduction, is a way to deal with the awful whistling that can occur with hearing aids. Feedback occurs when a microphone is placed too close to a speaker. Sounds from the speaker get picked up by the microphone, sent on to the speaker, picked up by the microphone and the circle goes on and on—the result of which is a sharp and constant whistle. In hearing aids, the whistling results from high pitches that can leak out between the hearing aid and the walls of one’s ear canal. These sounds get picked up by the hearing aid microphone, and the circle begins. Digital technology can cancel out this feedback before it gets started.

Tech toys

Other advancements in digital hearing aids include Bluetooth and wi-fi technology. Bluetooth allows link-up to other devices like telephones and iPods. It also allows hearing aids to communicate with each other, so that adjusting the volume on one hearing aid automatically adjusts the same on the hearing aid for the opposite ear. In short, the line between hearing aids and other listening devices is fast becoming blurred—a good thing for the emerging, bulging, baby-boomer population.

The technological advancements in hearing aids, accessories, and other assistive listening devices is staggering. From lights in your home that flicker when the doorbell rings, FM transmitters that allow students at the back of a class to seem right next to their teacher’s voice, to connectivity systems that allow the user to connect wirelessly to the tv, computer or mobile phone, technology is making the stigma and interruption in normal daily function associated with hearing loss a thing of the past.

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PEOPLE FIRST

TECHNOLOGICAL ADVANCEMENTS

How do cochlear implants work?

Sound is captured by the microphone on the sound processor.

The sound processor converts sound into detailed digital information.

The magnetic headpiece sends the digital signals to the cochlear implant.

The cochlear implant sends electrical signals to the hearing nerve.

The hearing nerve sends impulses to the brain, where they are interpreted as sound.

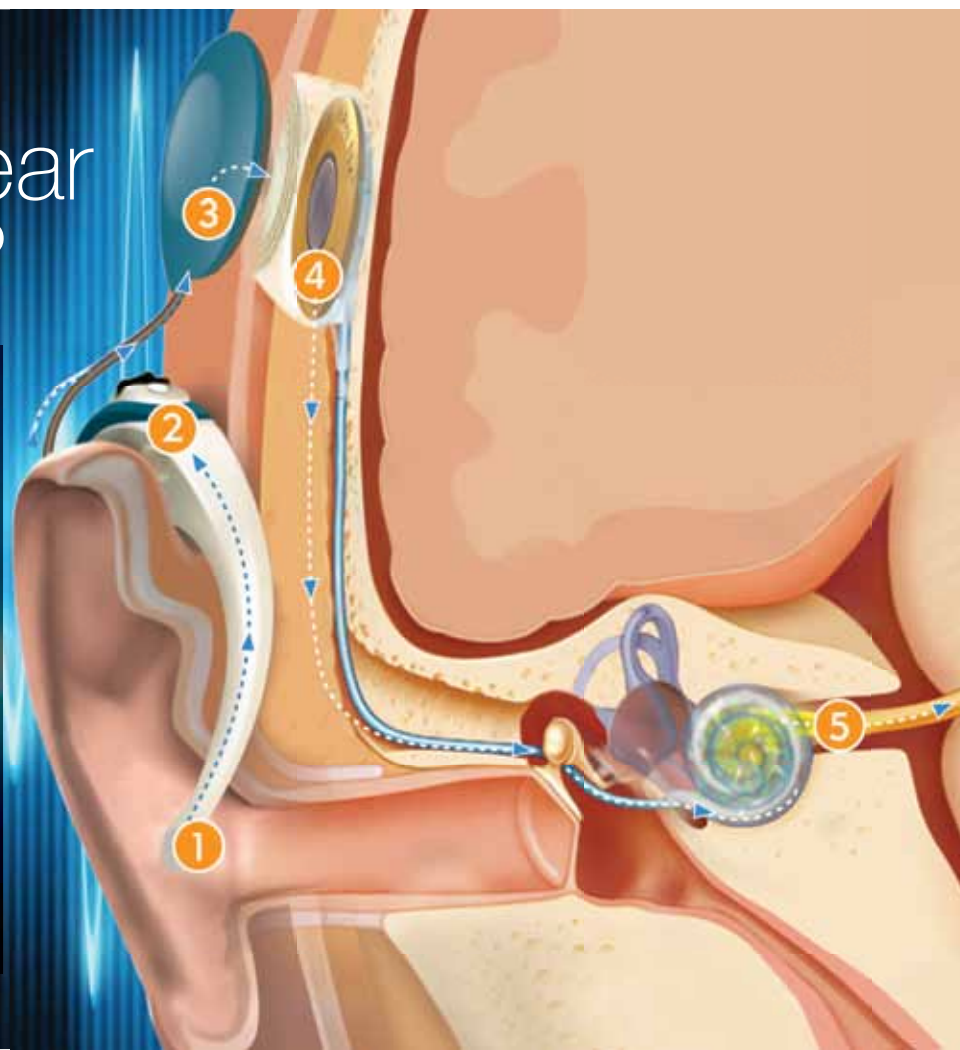


IMAGE COURTESY OF: ADVANCED BIONICS



DON'T MISS!

Age: The number one reason for hearing loss

Once people enter their 70s, two-thirds will have hearing loss.

By age 90, ninety percent will have hearing loss. The number of seniors in Ontario experiencing hearing loss is projected to more than double in the next 20 years. 1.8 million Ontario seniors were affected by hearing loss in 2009. That number is estimated to go as high as 3.7 million by 2030. The impact of hearing loss can be substantial for seniors: dependence on social and health care services can be significant; misdiagnosis and not following health recommendations can exacerbate the problem.

An 83-year-old widow living alone in a rural area who was headed for a long-term care home was diagnosed with hearing loss. Hearing aids and hearing counseling meant that she was able to move into a downtown apartment instead. Stories like this are no surprise when one notes that one of the leading reasons for admission to long term care facilities includes social isolation and a lack of communication which is often a result of unmanaged hearing decline. We need to get the message out to families, health professionals and seniors to make hearing health a routine priority in managing their aging process before we are hit with a tidal wave of preventable impacts.

DAVID LEE
editorial@mediaplanet.com

Question: What are your options when hearing aids no longer prove effective?

Answer: Cochlear implants may provide the clarity you need.

Cochlear implants bring hearing back—and quality of life

EXAMPLE

Michel David will never forget that day in April seven years ago when he heard his children's voices for the first time. He had just had a cochlear implant put in and was amazed to finally hear his five children speak.

"It was a terrific moment," says David, who works as a project lead at the Canadian Hard of Hearing Association in Ottawa. "Strangely enough, I had imagined each of them to sound a certain way and

they all did, except for my son, whose voice had changed and didn't sound like a kid anymore."

Sometimes referred to as a bionic ear, a cochlear implant is a tiny electronic device that uses electrical signals to stimulate the cochlea, the snail-like tube inside the ear. It has two main parts: an "implant package" that goes under the skin with a wire leading to the cochlea, and an external speech processor that sits behind the ear.

Now hear this

"What a cochlear implant does is help with hearing perception," ex-

plains Dr. Vince Lin, an otolaryngologist—also known as a head and neck surgeon—at Sunnybrook Health Sciences Centre in Toronto, which has performed more than 1,000 cochlear implants in the last 30 years. "Although it does not restore hearing, what it does for many people is restore quality of life."

Restoring quality of life

Many children who receive cochlear implants are able to go to regular schools, according to Lin. Adult patients tend to report better performance on the job and improved family and social lives.

Advancements continue in this technology as companies like Phonak and Advanced Bionics partner their efforts toward researching ways to combine hearing aid and implant technologies.

Not everyone is a candidate for a cochlear implant. Because it requires anesthetic, it is generally not recommended for people with advanced diseases, says Lin. It is also not for people who can hear sounds with a hearing aid.

MARJO JOHNE
editorial@mediaplanet.com

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INSPIRATION

Losing her hearing as an infant hasn't slowed down Academy Award winner **Marlee Matlin**. The first Deaf actress to garner such an award, she is now raking in big bucks for a charitable cause on **"The Celebrity Apprentice."**

Marlee Matlin shows em' who's boss

LEADER TO LEADER

She captured everyone's heart in "Children of a Lesser God", a romantic drama centred on a Deaf woman named Sarah, who is brought out of her insular existence by a speech teacher who encourages her to learn to talk.

Today, 25 years after that Oscar-winning performance—an achievement made even greater by the fact that she was the youngest and only deaf actress to win the Academy Award for best actress—Marlee Matlin continues to charm and amaze audiences around the world.

Her acting credits include 15 movies and numerous appearances in shows ranging from "CSI" and "Dancing with the Stars" to "Nip/Tuck" and "The West Wing". She has also authored two novels and an autobiography, titled "I'll Scream Later".

Competitive spirit

These days, Matlin is hard at work on "Celebrity Apprentice", the television show where contestants are given challenges that allow them to raise money for their charity of choice while proving their business acumen. The winner gets a \$250,000

bonus to give to their charity.

Spreading the power to listen

Matlin has chosen to champion the Starkey Hearing Foundation, which provides free hearing aids to deaf and hard-of-hearing people around the world who cannot afford them.

"The Starkey Hearing foundation is important to me because every child they fit with a hearing aid as a result of the money that is donated to distribute free hearing aids reminds me of myself," says Matlin, who lives in the Los Angeles area with her husband and four children. "Fortunately, my family was able to afford hearing aids for me when I was growing up and I am grateful every day for having them."

Matlin says she can't imagine living without her hearing aid.

"So when I hear of the thousands upon thousands of children who, for whatever reason, are unable to see a doctor, have their hearing tested or be able to buy a hearing aid, I want to reach out and help," she says. "The Starkey Hearing Foundation provides a barrier-free environment for children and adults in Third World countries and here in North America to have their hearing tested and to get hearing aids. They are truly hearing angels."

PROFILE



PHOTO: MICHAEL ROSENTHAL
Marlee Matlin

Position:

Actress, author, charitable advocate

At the age of 21, became the youngest actress to win an Oscar for best actress in a leading role, and the only deaf actress to win this award.

Spokesperson for the American Red Cross

So far, Matlin has been successful with her mission, even breaking records by raising \$1 million in a single day. But raising money isn't the only thing she's succeeding at—her appearance on "Celebrity Apprentice" is raising awareness about the hundreds of thousands of people around the world who have a hearing loss but cannot get financial help to buy a hearing aid.

The possibilities are loud and clear

Matlin, who lost her hearing when she was 18 months old, landed her first acting role at the age of seven, when she played Dorothy in a Chicago stage production of "The Wizard of Oz". She was soon spotted by actor, director and producer Henry Winkler, who later became her mentor.

Although Matlin went on to become a highly successful actress, her journey to fame and fortune was not without challenges.

"The challenges I faced were not as a result of my 'loss' but because of the barriers that people who

viewed it as some sort of disability put up," she says. "I achieved success by applying the formula I believe should be taught in every school: courage plus dreams equal success."

"I gathered up the courage to dream whatever dream I had despite what others thought I couldn't do and applied it to achieve success. In other words, I just did it and refused to let the barriers that were in people's minds—not the one they saw in my ears—get in my way."

For young people experiencing hearing loss, Matlin offers this advice: Follow your heart and follow your spirit and your dreams will come true.

"If you will it, it is not a dream," she says. "Courage and determination can overcome any barrier."

MARJO JOHNE

editorial@mediaplanet.com

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INSPIRATION



1-2. Interacting with a child while on a mission trip to Africa.
PHOTO: JACK JASON

DON'T MISS!

Interpreters facilitate communication between parties who do not share the same language or mode of communication. Professional sign language interpreters are specifically trained in providing this service when Deaf, deafened or hard-of-hearing individuals are present. Language barriers and discriminatory attitudes have, in the past, served to deny Deaf people adequate access in all sectors of society including health care, legal proceedings, education, training and politics. As a result, Deaf people have sometimes experienced a compromised quality of life. In recent years our judicial system has affirmed, through the Supreme Court of Canada, the rights of Deaf people to be provided with professional interpreting services to facilitate their participation in various situations. In 2005 the Ontario government, recognizing the historical discrimination against persons who have disabilities or who are Deaf, passed the Accessibility for Ontarians with Disabilities Act (AODA), to develop, implement and enforce accessibility standards in order to achieve accessibility for people with disabilities and for people who are Deaf. Interpreting services are an essential means to bridge the linguistic and cultural differences between people who are Deaf and society at large. Providing access may call for the use of technologies such as captioning services for those who prefer to read written text or the use of video or web cam conferencing for individuals who live remotely in addition to providing on-site interpreters. Diversity within the Deaf community leads to the need for flexibility and respect for individual preferences when arranging for services.

LESLEY ROACH

Director of Membership
OASLI Board
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EAR CARE



DON'T MISS!



Connor Quinn
Contributor,
Lifestyle Hearing



TIP

BE CAREFUL
NOT TO BLAST
MUSIC OVER
YOUR HEAD-
PHONES

Hear better—
and play better

Slowly but surely, people are starting to prioritize hearing loss in their personal healthcare habits. Hearing loss is being recognized as an important detriment to one's day-to-day life.

This is due to an increased amount of information being made available about hearing loss and its consequences on family, social, and professional life. Hearing loss is proven to negatively affect relationships including marriages, intimacy, income levels, stress, anxiety, mental health and a number of other areas in one's life. These effects may have finally convinced people to finally stop yelling "WHAT DID YOU SAY," and instead start fixing their hearing.

A big lack of understanding exists when it comes to hearing and sports. Gordie Howe, the iconic NHL Hall of Famer, recently corrected his hearing, and declared that if he knew how much clearer everything would be, he'd have thought to tackle his hearing loss while he was still playing—he realized how much it had impacted his playing.

The June 2005 cover story in *Golf Digest* magazine by Peter Morrice, entitled "The Search for Feel," drew a direct link between one's hearing capabilities and one's performance on the course. According to Morrice's tests, normal hearing is necessary to find what golfers call a "feel" for the shot. The article is constructed around several experiments and stories of professional and blind golfers who place hearing as the number-one sensory impression affecting their swing. "When it comes to drivers, sound dominates what the player calls feel," says Matt Erickson, manager of product analysis for Callaway. The article went on to quote Arnold Palmer: "without my [hearing] aids...I lose all feel for what I want to do."

Liam Maguire, Ottawa-based hockey analyst, tried *Golf Digest's* experiments with a hockey stick in lieu of a golf club: "You just can't handle the puck if you're not able to hear it hitting the stick. It's amazing how much hearing plays into these basic capabilities."

Know your hearing history

It's not only about sports performance, but knowing how well one hears can be an important diagnostic indicator in the event of head injuries. Recent studies in the *Journal of Neurotrauma* tell us that hearing impairment is one of the subtle and often unnoticed deficits after a concussion. This is important to athletes who play contact sports such as hockey, football, or lacrosse. The problem is that hearing professionals don't usually have a baseline of hearing sensitivity for a given athlete. Without a pre-trauma hearing assessment, audiologists and physicians have no essential information to determine whether the head injury has contributed to a post-trauma hearing loss, which might be important in determining the extent of any brain damage sustained. It is up to teams, coaches, and trainers to advocate for assessments and the proper safety measures to avoid head trauma in the first place.

The significance of hearing health hasn't made it all the way to the world of sports just yet. However with the help of influential studies and respected spokespeople, it soon will. All it takes is for someone like Gordie Howe to say, "Don't wait like I did."



1



2

1. Using cotton swabs to clean the inner ear is ill advised.
2. Hearing plays a surprisingly large role in sports performance.

Ear care: the general do's and don'ts

Question: How can you prevent unnecessary damage to your inner ear canal?

Answer: By protecting your ears from invasive cleaning methods, excessive noise, you can maintain healthy hearing.

There are many ways to prevent ear problems from occurring.

There are also many ways to cause damage to your ears if you don't take care of them properly. To clean the outer ear, you should use a damp soft wash cloth, alcohol based wipes, or a cotton swab such as a Q-tip. Have you ever noticed that the side of Q-Tips brand boxes specifically say that you should not put the cotton swab inside your ear canal? You should ONLY use the Q-tip for the outer ear. If inserted in the canal it may push wax further into the can-



"Do not use household objects or anything sharp...in an attempt to clean the inner ear."

Brittany Randall H.I.S.
Association of Hearing Instrument
Practitioners of Ontario

al causing impaction. Do not use household objects or anything sharp such as car keys, pens or pencils, paper clips, toothpicks in an attempt to clean the inner ear.

Ear Wax: A small amount of ear wax is healthy to have in the ear canal. Ear wax is naturally produced to protect your eardrum from potential hazards such as unwanted bacteria, insects, and water. However, sometimes the pores in the ear canal don't know when to stop producing

ear wax and excessive build-up can occur. When there is a large amount of ear wax in the inner, softeners such as baby oil, mineral oil or olive oil can be used safely to help loosen the wax. If the use of softeners proves ineffective in reducing the amount of excess wax, an appointment with your hearing specialist or physician to have the excess wax removed should be made. Ear Candling also known as ear coning is not an ef-

ficient alternative. Researchers have shown that it's not only ineffective, but dangerous. Do not waste your money or risk your health on such procedures.

Keep it to a dull roar

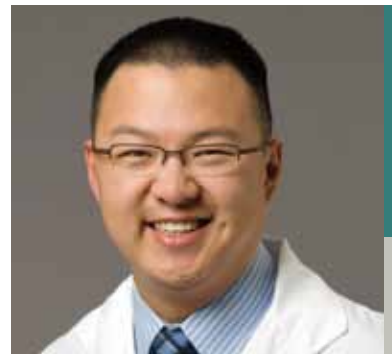
People working in an environment with noise above 70 decibels should wear ear protectors such as ear muffs or ear plugs. At home try to keep all volumes at a comfortable level especially the television, stereo, mp3 players, and radios. Periodic hearing evaluations with your hearing specialist should also be scheduled, especially when buzzing, also known as tinnitus, is occurring in the ear.

Ear care doesn't have to be invasive and is pretty much as easy as breathing. Speak to your hearing care professional if you have any concerns about how to best take care of your ears!

Can hearing loss be cured?

Will regenerative medicine provide a cure for hearing loss?

Unfortunately hearing loss associated with aging, excessive noise exposure and ototoxic medications cannot be restored. It is estimated that approximately 70 percent of Canadians over the age of 70 will have significant sensorineural hearing loss. However, sensorineural hearing loss is also becoming more prevalent in younger individuals usually from excessive noise exposure from personal listening devices, clubs, and concerts. Sensorineural hearing loss is the result of death of auditory hair cells



"It is estimated that approximately 70 percent of Canadians over the age of 70 will have... hearing loss."

Vincent Lin MD FRCS
Assistant Professor, Associate Scientist Otolaryngology/Head & Neck Surgeon
Sunnybrook Health Sciences Centre Faculty of Medicine,

within the cochlea and is permanent in humans. These hair cells convert energy of the sounds we hear into distinct nerve signals that travel along the auditory nerve and into the centres of the brain where it is

interpreted.

In the late 1980's scientists discovered that birds that were deafened from excessive noise had the ability to regenerate these hair cells and furthermore recover their hearing.

Since then, scientists from all over the world, including those at the Sunnybrook Research Institute have been exploring and understanding these mechanisms and cellular pathways with the hope that this ability can be triggered in deafened humans thus providing a potential cure for hearing loss. There has been some recently published success from the University of Michigan in regenerating auditory hair cells in deafened guinea pigs by viral manipulation. Currently one area that auditory regeneration scientists are extremely excited about involves the manipulation of adult stem cells as a potential method to regenerate new auditory hair cells.

My audiologist helped me hear again.

My audiologist helped me to live with the buzzing in my ears.

My audiologist helped me reconnect with my family.

My audiologist helped me to live a full life again.

An audiologist is the primary health care professional who evaluates, treats, and guides you and your family to manage hearing loss and balance disorders.

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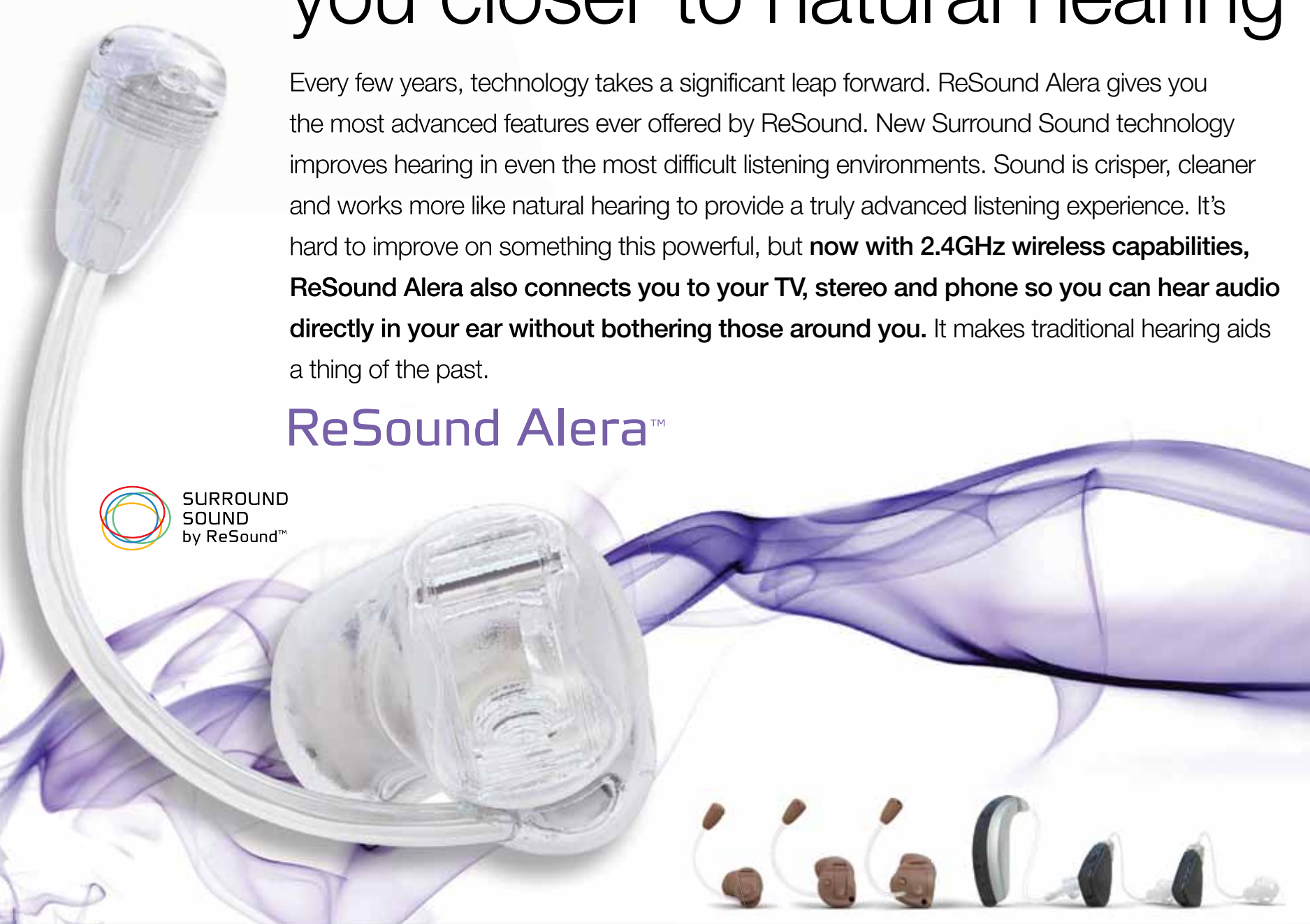


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INSIGHT

Aging alone is a good reason to get your **hearing checked**. The importance is compounded when coupled with some conditions such as diabetes, kidney disease and cardiovascular disease which are **independently linked** to higher prevalence of hearing loss.



TIP

YOUR HEARING NEEDS WILL CHANGE AS YOU AGE

Countering hearing conditions as we age

While hearing loss can occur at any age, it is well known that acquired hearing loss is more likely as we age and is experienced in two thirds of people by their 70s.

People in their 50s and 60s may start to have subtle changes, like finding it difficult to hear conversation in noisy restaurants, feeling that people seem to be mumbling more, and turning up the volume on the TV.

Filling in the blanks

Over time, some people compensate by guessing missed words and removing themselves from conversations. As time continues, hearing loss often deepens and a pattern of social isolation may develop. Lack of communication can impact the level of comfort people have to do the things they love, and stress reactions grow. Social isolation and lack of communication can lead to loneliness, anxiety, relationship breakdown and even depression. The good news is that there are lots of technical and other management methods that can help regain communication effectiveness. Other articles in this supplement talk about hear-



Rex Banks, M.A.CCC-A, Reg. CASLPO
Director, Hearing Healthcare
Hearing Healthcare Initiative
Chief Audiologist
The Canadian Hearing Society

“Communication is needed everywhere in our lives.”

ing aids, FM amplification systems, etc. and there are counselling programs that can help people and their families find effective non-technical methods to help with hearing loss.

The importance of connection

Communication is needed everywhere in our lives. If we have a doctor's appointment, a hospital admission, home care services or live in a long-term care facility, we need to have conversations that help to diagnose our health condition and under-

stand how we should take care of ourselves. A research report in the Canadian Medical Association Journal in 2008 showed a significant relationship between preventable medical adverse effects and patients who had communication challenges (including hearing loss). In clinics, hospitals, at home and in long term care residences, it is very important to make sure that hearing aids are working and overall hearing healthcare needs (e.g. checking for ear wax) are managed. Optimize the listening environment by reducing noise, using materials to absorb sound and providing lighting to see faces better. Hand-held amplification systems and TV-to-headset systems can help to reduce isolation and loneliness for those without hearing aids. Hearing should be checked before entering health education programs.

Research has identified higher prevalence of hearing loss with other chronic health conditions such as diabetes, chronic kidney disease and cardiovascular disease, suggesting a higher need for hearing tests. Recent research has shown that hearing loss is independently associated with dementia. Whether hearing loss is a marker of early stage dementia or is a modifiable risk factor, it is important to detect hearing loss as soon as possible. We need to continue researching the effect of declining communi-



Jean Holden, MSc MBA
Hearing Healthcare Initiative
The Canadian Hearing Society

“It is important for healthcare system policies to integrate hearing healthcare into strategies for managing aging adults.”

cation on brain health. There is some evidence that hearing interventions can improve the lives of even those with significant dementia.

Considering the impact of hearing loss on effective communication in healthcare, it is important for healthcare system policies to integrate hearing healthcare into strategies for managing aging adults. For example, family practice check-ups, “aging at home” programs and “chronic disease management” strategies should continue to optimize integration of hearing healthcare into their procedures.

No need to feel society's stigma

Hearing aid technology has advanced incredibly as the world has evolved in the digital and wireless era of communication.

But despite engineers' innovations, will baby boomers feel any less stigma than their parents when they hear, “a hearing aid could help you hear better?”

Many people are reluctant to



Kathy Pichora-Fuller
Full Professor,
Department of Psychology,
University of Toronto

try a hearing aid because they are afraid of looking old. Some worry about the reactions of others, but this worry is likely needless. More often family and friends en-

courage and support the decision to get help for hearing loss because they want to reduce stress during communication. Many people struggle as they adjust to the realization that they have a hearing loss.

Debunking the stereotypes

Negative reactions and worries about coping with hearing loss can actually make it even harder. For-

tunately, education about hearing, hearing loss, and how to manage it can help to debunk the myths that surround hearing loss. In fact, getting help for hearing loss is one of the health-promoting steps that people should take if they want to age successfully. Baby boomers may be the first generation not to let hearing loss prevent them from staying mentally and socially active as they age.



NEWS IN BRIEF

Communicating with loved ones

Communicating with our loved ones is essential to our wellbeing, connecting us to something bigger.

We communicate in person, over the phone, via video or computer calls. We let people know that we love, accept and care about them.

When someone close to us loses the ability to hear, we quickly realize how difficult communication can become. Expressing terms of endearment is replaced with frustration from having to repeat ourselves. Calling at the end of the day quickly brings worry when the phone keeps ringing.

Soon it becomes easier not to communicate and before you realize it, your loved ones are disconnected from you.

What can you do to maintain the lines of communication with someone who can't hear you?

- Get the person's attention before you speak to them.
- Face the person and maintain eye contact.
- Speak clearly at a moderate pace.
- Use facial expressions.
- Give clues when changing the subject, for example, “let's talk about our weekend plans now.”
- Rephrase rather than repeat.
- Write down your message on a piece of paper or on an electronic device.
- Use a personal assistive listening device (ALD), such as the “Pocket Talker” that amplifies your speech.
- Purchase a telephone with amplified ringer and volume control.
- Contact The Canadian Hearing Society to learn about and purchase hearing aids, telephones, ALDs and signalling devices.
- Be patient and flexible.
- Ask for feedback about what works for the person with hearing loss.

SUSANNE GILLESPIE

Director,
Hearing Care Counselling Program,
The Canadian Hearing Society
editorial@mediaplanet.com

With more than 5,800 members, the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) is the national professional association representing speech-language pathologists, audiologists and supportive personnel.

To find a professional near you or for regular news, updates, articles and resources related to communication disorders, visit www.speechandhearing.ca, or follow @CASLPA on Twitter at <http://twitter.com/CASLPA> or on Facebook at <http://tinyurl.com/caslpaonfacebook>.

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CASLPO was created to regulate and support the professions, in the public interest, in accordance with the Regulated Health Professions Act, 1991, the Audiology and Speech-Language Pathology Act, 1991, and the regulations and by-laws adopted by the College.

INSIGHT

Peter Stelmacovich has suffered from hearing loss from an early age. By the time he entered university, it had become so severe that it affected his quality of life. Now sporting a **cochlear implant**, he takes full advantage of his restored sense—and works to ensure that everyone knows about the solutions available to them.

Refusing to fade away

Peter Stelmacovich's part-time band, In Denial, doesn't exactly pull in the big bucks.

"The most we've ever been paid is wings and beer," says Stelmacovich, who plays bass for In Denial but whose full time job is as FM product manager with Phonak Canada, a Switzerland-based global advanced hearing solutions company.

For Stelmacovich, who lives in Toronto with his wife and 16-year-old son, the wonder is that he's even playing music at all. Born with normal hearing, he suffered damage to his ears in early childhood—possibly as a result of ear infections—and began wearing hearing aids at the age of five.

Stelmacovich says he was fortunate in that, as he grew up and his hearing deteriorated, he was always fitted with the best possible technology available at the time. But when he entered university, his hearing loss had become so severe that he found it extremely difficult to hear lectures.

Fading out—and flunking out

His marks dropped from an A average in high school to a C average in his first year in university. A trend that may have followed had he not found out about a wireless FM listening system that lets instructors talk into a microphone, which then transmits the sound directly into a hearing aid.

"That resulted in a significant improvement in my ability to hear my professors again, so my marks went up again to an A average utilizing that instrument," says Stelmacovich.

"I wanted to make sure that everyone is fully aware of technology available to them and not suffer needlessly."



Peter Stelmacovich
FM Production Manager
Phonak Canada

After seeing first-hand how the right technology can make such a significant difference in the life of someone who is deaf or hard of hearing, Stelmacovich decided to become an audiologist.

He enrolled into the audiology program at the University of Western Ontario in London. When he graduated in 1990, he became the first Canadian-trained audiologist with hearing loss.

"I wanted to make sure that everyone is fully aware of technology available to them and not suffer needlessly," says Stelmacovich.

After working in various clinical settings—including several years as an educational audiologist at Robarts School for the Deaf in London, Ontario—Stelmacovich accepted a position with Phonak Canada where he has been for the past 11 years.

Making a difference

Today, as the FM product manager, he works directly with school boards, hearing instrument practitioners and audiologists. Peter is currently involved in the launch of Lyric, the world's first invisible, no hassle, 24/7 hearing aid.

He remains as committed today in the private sector to his goal of spreading the word about effective hearing technology.

Stelmacovich himself is well-equipped with some of the latest hearing technology. He has a Nucleus Freedom cochlear implant from Cochlear Ltd. in his right ear and a Naida hearing aid by Phonak in his left.

"The technology today is amazing and it continues to evolve," says Stelmacovich. "Today, there is a solution for practically every hearing complaint, so don't let hearing loss be a barrier."

GAEL'S STORY

Suffering from hearing loss these days? You're lucky.

Not that long ago, being hard of hearing was considered shameful, something to deny; "People will think I'm old, or not with it, or both!"



Gael Hannan
Hearing Health Consultant,
Director,
Canadian Hard of Hearing Association

Today hearing loss is coming out of the closet, and not only because people are getting older. It affects people of all ages, including one in five teenagers. The causes are many, but the key culprits are age-related (presbycusis) and overexposure to loud noise, which can lead to irreversible noise-induced hearing loss.

Regardless of the cause, a growing number of people are experiencing the challenges of hearing loss—the (suddenly) soft voices of family members, incomprehensible television unless the captioning is on, background noise that makes you crazy—and no one knows how to communicate with you.

Don't suffer in silence

But the good news is there's never been a better time to have hearing loss. Misery loves company and there are millions of people dealing with hearing issues. There's a whole new world of information available, and support organizations standing by to help. Most importantly, the technology explosion has produced powerful hearing aids and other assistive devices that are both effective and stylish. Everybody has something in their ears these days—Bluetooth devices, earbuds, hearing aids—what's the difference?

Defining deafness

But the toughest question facing a person with hearing difficulties is what do you call yourself? Is there a difference between "deaf", "hearing loss", "hard of hearing", "oral deaf", "Deaf" and "deafened"?

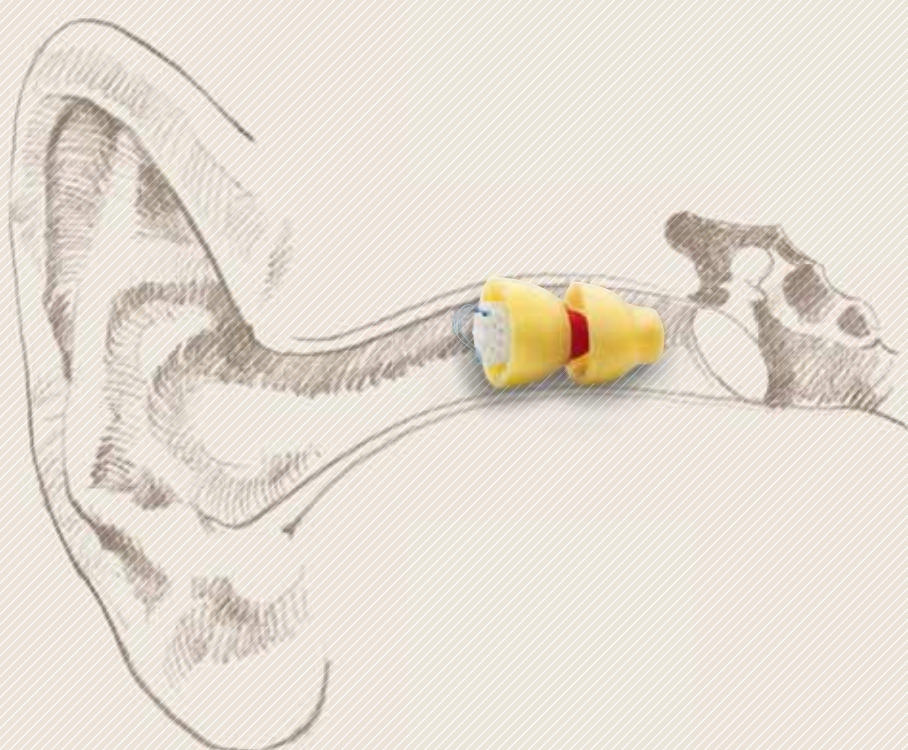
The answer is yes, but to the uninitiated, the boundaries can seem a little blurry. The distinctions per-

tain to the degree of hearing loss (mild, moderate, severe or profound) and amount of usable residual hearing, a person's communication choice (spoken language or a signed language), and how a person self-identifies. For example, persons who use speech to communicate might self-identify as "hard of hearing" or "having hearing loss" if they have some residual hearing, or as "deaf" or "oral deaf" if they have none. A "deafened" person has lost their residual hearing at some point after learning to speak, usually as an adult, but may identify as either "deaf" or "hard of hearing". A person who is "Deaf" identifies with Deaf Culture and uses a signed language. And if that's not clear enough, a Deaf person may also use hearing aids and a hard of hearing person may also use sign language.

Read my lips

But, statistically speaking, the majority of people with hearing loss use a spoken language, augmented by a variety of visual cues such as reading text and reading lips. Speechreading is not foolproof, as less than half of speech movements are visible on the lips and some people are more skilled than others. (I'm a crackerjack speechreader, although that doesn't explain why my husband chose to pop the question when my hearing aids were out. To this day, both of us wonder if I got the question right.)

Now is the best time in history to have hearing loss, because the old shame is disappearing, replaced with positive attitude, technology and access. People have the power to communicate successfully—and that's the goal.



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Jodi Ostroff, PhD
Audiology Manager, Hearing Solutions



Kate Dekok, M.Cl. Sc. Aud(C),
Chief Audiologist ListenUP! Canada



Question 1:
Why is it important that I get my hearing tested?

The majority of people do not like to admit that they may have a hearing loss. But to improve your quality of life, a hearing assessment may help you make some decisions regarding your hearing. Your hearing loss may effect you and the loved ones around you. Ever notice going out to a social event and not being able to hear clearly or correctly, constantly asking "Pardon, can you repeat that, please?" Booking a hearing test is just one step closer to getting your social life back again and many other assets that you have been missing.

A hearing test by a qualified audiologist or physician provides a baseline so that you will know if your hearing has deteriorated over time. Some types of hearing losses are medically treatable, and you can be referred to an otolaryngologist for management. Other hearing losses are preventable. Early detection means early intervention which can prevent further hearing damage. Finally, if a hearing test indicates permanent hearing loss, there are many things that can be done to ensure better communication and a good quality of life.

Over a million Canadians reported having a hearing loss (Stats-Can, 2002), and the true number is probably higher as the condition is often under-reported. A reduction in hearing ability is part of the normal aging process. Hearing loss associated with aging is called Presbycusis—a treatable condition that is diagnosed with a simple hearing test. Hearing aids can significantly enhance quality of life, interpersonal and work relationships and reduce stress. However, many seniors who could benefit from hearing aids often do not seek help or refuse treatment.

Hearing loss typically develops as we get older, happening gradually over time so people often don't realize it. Those who suffer from untreated hearing loss usually experience unneeded anxiety and depression, and also isolate themselves from family and friends. It's really a "quality of life" issue. It's important that everyone over the age of 45 have their hearing checked annually. The check-up itself only takes a few minutes.

Question 2:
What can I expect to occur if it turns out that I am experiencing hearing loss?

Having a hearing loss is not easy—people suffer by not being able to understand speech, they may have ringing in the ears (tinnitus) and also experience fatigue from trying to understand what people are saying to them. They also start to withdraw from social activities and become frustrated. By making the initial effort to book a consultation with your hearing professional most of these unpleasant experiences can be helped.

If you have hearing loss, your ENT doctor (otolaryngologist) may want to send you for additional tests. Once everything is complete, your physician will provide you with any medical or surgical options to improve or restore your hearing. If there are no effective medical or surgical treatments available to improve your hearing, then a hearing health care professional can provide you with other non-medical options such as hearing aids, assistive devices, and other communication strategies.

Does it seem like everyone's mumbling? Are you asking for repetition frequently? Do you have difficulty understanding conversations on the telephone? If you answered yes to any of these, you may have hearing loss. The first thing to do is to make an appointment with an audiologist. The audiologist is to ears what the optometrist is to eyes. The audiologist will do a comprehensive test of your hearing. If the test results indicate a hearing loss, the appropriate recommendation, particularly when caused by Presbycusis (as a result of the normal aging process) is hearing aids.

Depending on the hearing assessment, and after discussing with you what your lifestyle and communications needs are, a hearing healthcare professional will present you with a couple of treatment alternatives. This may involve monitoring your hearing loss over time or, if your hearing loss is more serious, the professional will discuss the benefits of wearing hearing aids, what your expectations should be, and provide you with alternatives that will suit your needs and budget. The decision to wear hearing aids is up to you.

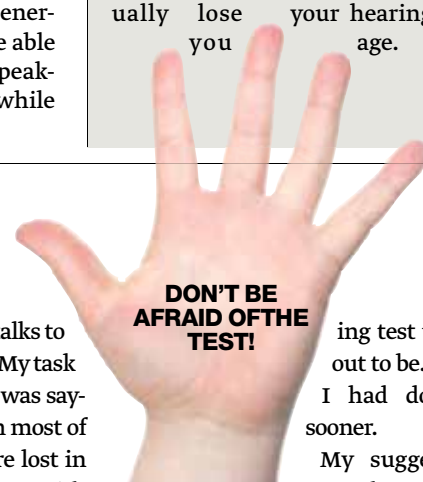
Question 3:
What can I do in my life to prevent hearing damage?

Try to limit your noise exposure. Wearing hearing protection such as ear plugs, foam or ear muffs will help you in noisy environments. While at home make sure that the television, iPod, video game, radio and stereo are at a comfortable listening level. When operating loud machinery, not only in the workplace but also at home, make sure you wear ear plugs or muffs to protect your hearing from any damaging loud noises. Ask your physician or pharmacist about medications that could be ototoxic (dangerous to your hearing).

Noise damage is one of the most common causes of hearing loss and it is completely preventable. If you work in a noisy place, you should consistently wear good ear protection, and use it properly. If you are exposed to high noise levels recreationally or in other aspects of your life (e.g., music, motorcycles, snow blowers, concerts) then consider using ear protection in these situations and give your ears plenty of time to rest before and after noise exposure.

Hearing loss to varying degrees is almost inevitable with age. However, there is concern that with all the mp3 players around, people are causing additional damage to their hearing. Noise-induced hearing loss results from the combination of the loudness of sound AND the length of time of exposure to the sound. Therefore, if you listen to your favourite song really loud, just turn the next song down to a softer, more comfortable level. A good general rule, is that you should be able to understand someone speaking to you at arm's length while listening to your music.

Exposure to loud noise is the leading preventable cause of hearing loss. So protect your ears from short bursts and extended exposure to noise levels exceeding 85 decibels (e.g. about the same noise level as a power lawnmower). If you must be around loud noise, wear well-fitting noise protection, limit your exposure, and take breaks when you can from exposure to the loud noise. Other than that, it is quite common to gradually lose your hearing as you age.



DON'T BE AFRAID OF THE TEST!

My suggestion: Go and get your hearing tested, it's pretty fun and nothing to fear.

MARJO JOHNE
editorial@mediaplanet.com

Getting tested: A first hand account

Mediaplanet sent their intrepid journalist, Marjo Johne, to find out first hand what taking a hearing test is like. Read on for her story:

Over the years, I've often wondered if I was losing my hearing. I got a definitive answer recently from Tracy Saunders, an audiologist with Hearing Solutions at Bathurst and Lawrence.

Entering isolation
Saunders invited me into her "spaceship"—a small insulated room designed to isolate sounds. After doing a preliminary check for ear wax and air pressure, she put in each of my ears foam-tipped plugs attached to thin wires that went around my neck. Speaking through a microphone outside the room, she instructed me to repeat a series of words: mushroom, hotdog,

airplane, sunset, workshop. Some words were too faint to hear so I simply said, "I don't know."

The beep test
To find out if I can hear sounds in different frequencies, Saunders handed me a beeper device, similar to the ones contestants use in TV game shows, and asked me to press the button whenever I heard a beep. She also put me through an audio simula-

tion of a party, where a man talks to me over a din of other voices. My task was to repeat what the man was saying. I was able to do this with most of his sentences, but a few were lost in the noise—a common problem with people who are hard of hearing. Saunders verdict: my hearing is normal. I was pleasantly surprised—and relieved—to hear this. But what I found even more surprising was how easy, painless and engaging the hear-

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