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# Canadian Audiologist

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## Message from the Editor

### What is Normal Hearing?

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This editorial begins with a common clinical occurrence: “A 63-year-old woman scheduled an appointment for an audiological evaluation because she has observed hearing difficulty in noisy environments.... The audiological exam revealed normal hearing sensitivity through 4000 Hz, dropping to a mild sensorineural hearing loss at 6000-8000 Hz bilaterally. Word recognition ability was excellent bilaterally. She was told that she has normal hearing and that everyone has trouble hearing in noisy backgrounds. No recommendations for management were provided”... because she has normal hearing. (Adapted from this issue’s *Mysteries of the Hearing Brain* “What is normal hearing?”)

We have all seen this, and I must admit that I feel badly as my client walks out the door. But, in some sense, I would have felt better professionally if the person had a measurable hearing loss that could be addressed or at least, “validate” the client’s comments.

Of course, when we assess hearing loss, we use vague and sometimes meaningless phrases such as “sensory neural hearing loss.” Is the loss sensory? Is it neural? ... perhaps a mixture of the two? We just don’t have those tools at our disposal in a typical clinical environment. In Samira Anderson’s “Mysteries of the hearing brain” series, she addresses this issue and examines the possibility of neural involvement despite having normal audiometric pure tone sensitivity.

And our cover feature for this issue of *CanadianAudiologist.ca* is from Dr. Stéphane F. Maison, an associate professor at the Eaton-Peabody Laboratories, Harvard Medical School, who examines the possible neural sequelae of chronic conductive hearing loss; specifically permanent efferent neurological dysfunction.

And this brings up the more general question of categorizing hearing loss based on its etiology- the outer ear, middle ear, inner ear, central as if these locations were separate and functionally independent of each other in all cases. They are indeed independent for some cases, and in other cases, not as much. And even in cases of purely sensory hearing loss, auditory function and hearing aid rehabilitation success can be quite different for those with hearing losses better than 50 dB HL where there is perhaps little if any inner hair cell damage, and for those with a greater sensory loss that involves substantial inner hair cell involvement. Cochlear dead regions, severe difficulties hearing in noise, and more bothersome tinnitus are hallmarks of significant inner hair cell damage, and comments such as “I can hear you OK if you just spoke a bit louder” are hallmarks of primarily outer hair cell dysfunction.

The pair of articles by Dr. Stéphane F. Maison and Dr. Samira Anderson (Mysteries of the Hearing Brain) provide us with an excellent overview of this situation. Perhaps, a very mild high-frequency gain hearing aid may be an important rehabilitative tool to replace a malfunctioning cochlear amplifier for soft levels sounds such as the obstruents?

Other articles are: The Importance of balance screening in persons with diabetes, under the Striking the Right Balance banner; Sign Languages of Canada, from The Canadian Language Museum’s newest travelling exhibit, Realizing the benefits of group aural rehabilitation Newfoundland; and labelling COVID-19’s long term effects.

I hope you have all had a restful and healthy holiday season and wish you well in the coming months.