Research Symposium: Latest Developments in Hearing Rehabilitation Research
Friday, June 28, 2013
Oregon Convention Center
Portland Ballroom 254/255

Sponsored by

Presented by research audiologists from the National Center for Rehabilitative Auditory Research (NCRAR) located at the Portland VA Medical Center

Moderated by Dr. Joseph J. Montano, Ed.D., an associate professor of audiology in Clinical Otolaryngology and director of Audiology and Speech-Language Pathology at Weill Cornell Medical College, New York Presbyterian Hospital. Dr. Montano’s clinical expertise is in the area of audiologic rehabilitation, with particular interest in adjustment to adult onset hearing loss, hearing assistive technology systems and hearing aids. He is a former member of the HLAA Board of Trustees.

Diabetes and Hearing Loss: Current Findings and Thoughts
Presenter:
Tina Penman, Au.D. is an audiologist at NCRAR and attends local HLAA Portland Chapter meetings. She received a BS in Behavioral Neuroscience (2006) and Clinical Doctorate in Audiology (2010) from Northeastern University. Current projects include the investigation of the relationship between auditory evoked potentials and behavioral measures. Other research interests include the effects of military, recreational, and occupational noise exposure on the auditory system, particularly skydiving noise exposure. Her long-term goal as an audiologist is to better serve populations through the application of research findings to clinical practices and the real world.

Summary:
As we age, hearing function declines for a variety of reasons, making it more difficult to understand speech. Recent evidence shows that diabetes, a common disorder among older adults, causes further deterioration in auditory function. These tend to be most noticeable when a talker speaks quickly and when a listener must pick out a single talker in a background of noise. Age and diabetes also cause changes to vision and manual dexterity. Together these
changes affect the ability to communicate and can affect an individual’s ability to use hearing aids. In this presentation we will describe the effects that diabetes can have on hearing and understanding speech and will discuss how these can impact rehabilitation. Original research and case studies will be reviewed which illustrate the importance of knowing your numbers (blood sugar levels) and having your hearing screened regularly if you think you may have diabetes.

Approaches to Tinnitus Management

(a) Transcranial Magnetic Stimulation
Presenter: Sarah Theodoroff received her M.S. in speech and hearing science from Wayne State University in 1998 and her Ph.D. in audiology from the University of Illinois at Urbana-Champaign in 2006. Currently she is a research audiologist at NCRAR. She has a strong background performing both clinical and research audiology and has worked with tinnitus patients for over 10 years. Currently, she is also a co-investigator on a VA RR&D-funded Phase II clinical trial of repetitive TMS for treatment of chronic tinnitus being conducted at NCRAR.

Summary:
Currently there is no “cure” for tinnitus. Different management strategies exist, but to varying degrees of success. Transcranial magnetic stimulation (TMS) has the potential to reduce the perception and severity of tinnitus. TMS is non-invasive and works by delivering electromagnetic energy to a person’s scalp. Some of the energy is transmitted through the skull to the brain. Research using TMS to treat tinnitus show promising results. This presentation will review how TMS works and why it might help people who suffer from tinnitus.

(b) Progressive Tinnitus Management
Presenter: Tara Zaugg, Au.D. is a licensed, certified, and clinically-privileged research audiologist employed at NCRAR. Through her involvement in tinnitus clinical trials at the NCRAR, she has 12 years of experience with tinnitus assessment and management, and in the training of audiologists to perform tinnitus management

Summary:
Progressive Tinnitus Management (PTM) is a method for managing reactions to tinnitus that was developed at NCRAR. PTM involves the use therapeutic sound, and psychological techniques to help people feel better without changing the sound of their tinnitus. This presentation will include an overview of the many tools within PTM that can be used to help people manage their reactions to tinnitus.

Approaches to Auditory Rehabilitation
(a) **Computerized Auditory Training**  
**Presenter:**  
Melissa Frederick received her Au.D. from the University of Iowa in 2008. She completed an externship at the University of Iowa Hospitals and Clinics, where she worked in the diagnostics, hearing aid, and cochlear implant departments. She was also a trainee in the Leadership Education in Neurodevelopmental Disabilities (LEND) program, and spent time working in pediatric audiology at the Center for Disabilities and Development in Iowa City, IA. She has since worked as a research audiologist at NCRAR where she has taken part in studies that have examined the perception of vowel sounds in noise, auditory training in hearing impaired adults, and auditory rehabilitation in a blast-exposed population. Her interests include rehabilitative audiology, specifically counseling and hearing aids.

**Summary:**  
Auditory training can be used as a supplement for patients who would like more benefit from their hearing aids. Currently there are a number of auditory training program available commercially, however few independent studies that have examined their effectiveness. This presentation will provide listeners with a basic understanding of auditory training and how it is used, some recent findings from a clinical trial examining the effectiveness of one program, and strategies to help decide whether auditory training might be helpful for you.

(b) **Group Aural Rehabilitation**  
**Presenter:**  
Mitch Turbin, Ph.D. is a counseling psychologist who has been a research investigator at NCRAR since 2002. He has also been teaching in the deafness rehabilitation department at Western Oregon University since 1984. Dr. Turbin has collaborated on VA and NIH funded projects, most notably as principal investigator on “Randomized Trial of a Brief Patient-Centered Aural Rehabilitation Model” and “Pilot Study: Self Management Groups for Veterans with Dual Sensory Loss.” Dr. Turbin’s primary research interest lies in the psychosocial adjustment of persons with adult onset sensory disabilities, with a particular emphasis on teaching skills to compensate for the limitations of even the most advanced assistive technology. Dr. Turbin himself experiences Usher Syndrome 3, a genetic progressive loss of vision and hearing, and is active in advocating for improved quality of life for persons with disabilities, serving on numerous panels and boards.

**Summary:**  
Dr. Turbin’s presentation, *Group Auditory Rehabilitation*, will describe two VA research projects which developed and evaluated new approaches to group education for older veterans with hearing loss, or hearing and vision loss. For both projects, national teams of experts collaborated with Dr. Turbin to develop the workshops and later data was collected from veterans in Oregon, Florida and Georgia to see if we had evidence that the workshops made any difference. The first study focused on older hard of hearing veterans who had received new advanced hearing aids from the VA, half of whom participated in the single two hour interactive multi-media workshop. The second study was a pilot project with older veterans who had
recently received rehabilitation services from VA vision clinics and hearing clinics, who participated in six two hour workshops. We will talk about the content of these workshops and what our data show. Some of our results may surprise you.