The “Make Listening Safe” Campaign by the World Health Organization (WHO): Considerations and Recommendations

Friday • 1:20 PM
Presenters: Rick Neitzel, Brian Fligor, Deanna Meinke
Facilitator: Colleen G. Le Prell

A subset of teenagers and young adults are at risk of developing noise-induced hearing loss as a consequence of recreational sound exposure, with one of the major components being personal audio system use. The World Health Organization (WHO) and the International Telecommunication Union (ITU) have therefore initiated a multi-faceted global campaign to “Make Listening Safe”. Working group participants include experts in the fields of audiology, otology, public health, epidemiology, acoustics, sound engineering, many of whom are members of the NHCA. In addition member organizations of the ITU, standardization organizations, non-governmental organizations, professional bodies such as the NHCA, and consumer groups, have been invited to send representatives to participate in the working group. This session will include a short overview of the different areas of the campaign, followed by expert review and recommendations to WHO/ITU regarding evidence-based strategies to promote safe listening habits. The session includes time for the panel to respond to audience questions.

Ambient Noise in the Sound Booth During Audiometry

Friday • 2:40 PM
Presenter: Gregory A. Flamme
Co-Presenter: Douglas Wilson

Audiometric threshold testing requires a test environment that is sufficiently quiet to permit measurement of unmasked thresholds. The conventional approach to determining the suitability of a test environment is the annual comparison of observed ambient noise levels with standard maximum permissible ambient noise levels for testing to 0 dB HL (higher if the limits of 29 CFR 1910.95 are used). We logged sound levels every 200 ms in a set of three audiometric booths over a period of 20 days using a Larson-Davis System 831 (~ 8.6M logged samples, parsed into 11 hours of testing). Substantial differences with annual tests were observed, and the generalizability of annual measurements to individual tests will be discussed.

Loudness in the Occluded Ear Canal: Are We Still Missing 6dB?

Friday • 2:20 PM
Presenter: Fabien Bonnet
Co-Authors Not Presenting: Jérémie Voix, Hugues Nélisse

Over the last century, a large number of studies were reported as related to the "case of the missing 6 dB". Initially, this research dealt with the loudness comparison between noise induced by headphones versus that induced by a free-field loudspeaker. It was said headphones had to generate more sound pressure in the ear canal to equal the loudness that a loudspeaker would provide. Some recent work has since provided several explanations for this observed discrepancy. Three main changing parameters were identified to describe this large amount of data that may or may not have been influenced by the same factors: nature of the source (loudspeaker, headphones, in-ear monitors), characteristics of the sound stimuli (spectral and temporal features, excitation level), and the mechanical load applied to the external ear (ear covered with ear-cups, occluded ear canal). In this presentation, we intend to combine the thoughts of several decades of research to help providing the full picture on this issue for the occluded ear case. Based on our own experimental results and those from other inquisitive studies, focus will be made on the factors that should be regarded as most likely to explain the observed differences for the occluded ear to perceive the same loudness as the open ear.