Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

HHS Public Access

Author manuscript

Int J Audiol. Author manuscript; available in PMC 2015 September 04.

Published in final edited form as:

Int J Audiol. 2015 February ; 54(0 1): S1–S2. doi:10.3109/14992027.2014.980522.

Stop Gambling with your Hearing

William J. Murphy[1] and **Marjorie A. M. Grantham**[2]

[1]National Institute for Occupational Safety and Health, Cincinnati, Ohio, USA

[2]Carl R. Darnall Army Medical Center, Department of Preventive Medicine, Fort Hood, Texas, USA

Keywords

Hearing Loss Prevention; Hearing Conservation; Hearing Protection; Speech Intelligibility; Noise

In 2014, the National Hearing Conservation Association took its chances and held its 39th annual conference, titled *Stop Gambling with your Hearing*, in Las Vegas. The authors who contributed to this issue of the International Journal of Audiology demonstrated that they could be relied upon to deliver a royal flush when it comes to advancing research and knowledge for worker hearing loss prevention. The papers that we were privileged to shepherd through the review process share common themes: epidemiologic and workplace assessments of hearing and new methods to better assess hearing and the effects of wearing hearing protection upon the speech intelligibility and localization.

Hearing loss prevention starts with education and testing. The study by Flamme et al. has expanded the work from last year's supplement, considering how audiometric testing may be changed. Will pure-tone audiometry become passé? The potential to integrate hearing testing with hearing protector fit-testing seems natural, and combining testing with training in the use of personal protection technology makes sense. Without question, occupational hearing conservation programs must begin with engineering noise controls to reduce exposures for at risk workers. Cantley et al. explored the relationship between hearing loss and tinnitus and workplace injury. They found an increased risk of acute injury among workers with tinnitus and high-frequency hearing loss. Although their research does not draw strong correlations between tinnitus and increased incidence of workplace injury, the communication needs of hearing impaired workers cannot be overlooked. Helleman et al. considered the effects of interrupted exposures to loud music at night clubs - often cited as a potential cause of hearing loss. Their research suggests that quiet zones within clubs little effect on the hearing of the subjects they evaluated. However, providing club patrons a place to get out of the noise was still thought to be important because high noise levels present a risk in and of themselves. Hong et al. investigated the relationships between occupational exposures and hearing among elderly Latino Americans. They concluded that a reduction of occupational exposure to noise and chemicals will have a positive impact on better hearing later in life.

Correspondence: William J. Murphy, National Institute for Occupational Safety and Health, 1150 Tusculum Ave., Mailstop C-27, Cincinnati, 45226-1998 OH, USA. wjm4@cdc.gov.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Worker adoption of hearing protection use is challenged by the effect of attenuation on communication. When passive hearing protection is worn properly, it further degrades the ability of a hearing impaired worker to communicate. Giguere et al. investigated the effect of hearing protection on communication for persons with various degrees of hearing impairment. Sound restoration hearing protection had positive benefits for both impaired and normal hearing persons. Whereas Giguere used the Hearing in Noise Test (HINT) to estimate Speech Reception Threshold, Hiselius et al. utilized the Call-sign Acquisition Test (CAT) to determine the effect of different amounts of hearing protection on communication ability. Hiselius' approach proved to be an efficient means of assessing several products. Both methods are useful for determining worker communication needs and abilities with a system that could be implemented in conjunction with hearing protection fit testing. In addition to affecting speech intelligibility, hearing protection use can critically impact localization ability. Casali and Robinette investigated the performance of different electronic hearing protectors on localization for groups who received varying amounts of training. They demonstrate that localization ability improved after listeners acclimated to hearing the world through a new set of filters.

Finally, we consider the effect of diet and dietary supplements on hearing. Rosenhall provides evidence that high quality diet is associated with better hearing and high frequency hearing. Although establishing such correlations is complex and not conclusive, good dietary habits appear to be important to maintaining hearing health.

We invite you to read this special supplement and consider how you may implement new techniques within your practice of hearing loss prevention. We wish to highlight and thank our sponsors who contributed to the supplement: National Hearing Conservation Association, National Institute for Occupational Safety and Health, and Safe-in-Sound Excellence in Hearing Loss Prevention Award™ along with Roger Angelelli, Council for Accreditation in Occupational Hearing Conservation (CAOHC), Honeywell Inc., and HTI Inc..

Biographies

William J. Murphy

Marjorie A. M. Grantham

Author Manuscript Author Manuscript Author Manuscript Author Manuscript