

# CPH News and Views

*A semi-monthly column on emerging topics related to healthy workplaces*

## **Issue #48: Total Hearing Health – Protecting your hearing at work and at home**

**Contributed By: Jennifer Cavallari, ScD, CIH, COHC and Jackie DiFrancesco, BA, COHC**

### **Hearing loss is common and effects more than just your ears.**

About 20 percent of Americans, 48 million, report some degree of hearing loss. By age 65, one out of three people has a hearing loss (HLAA, 2016). The effects of hearing loss can diminish one's quality of life. People with untreated hearing loss may experience anger, stress and frustration; fatigue; isolation and depression; strained relationships; reduced alertness; increased risk to personal safety; impaired memory and cognitive function; reduced job performance and earning power; diminished psychological and overall health; higher risk of dementia; and tinnitus (ringing in the ears) (BHI, 2016).

### **How can I protect my hearing health?**

The aging process and noise exposure can cause sensorineural hearing loss, which is a permanent condition. However, there are several other health factors that can contribute to hearing loss or tinnitus including exposure to solvents, some medications, smoking, poor nutrition, and heart disease. With education and awareness, these factors can be controlled to better preserve your hearing on the job and at home. Read on to learn more about how to protect against common risk factors for hearing loss.

### **Limit your noise exposure.**

Noise-induced hearing loss may happen slowly over time or suddenly. Exposure to everyday noises at high levels can eventually lead to hearing loss. Sudden, noise-induced hearing loss may result from a short, but very loud, sound like gunfire.

- As a general rule, if you have to raise your voice to be heard over the noise, then you are in an environment that may be loud enough to cause damage.
- At home, common sources of noise are the lawnmower, power tools, concerts, sporting events, hunting and earbuds.

### **Protect your ears at work and at home.**

- Always wear hearing protection – earplugs or earmuffs – when participating in loud activities.
- Earbuds are another common source of noise. Use “The 60 Rule”: Limit your use of MP3 players to 60 minutes a day, at 60% volume.
- Give your ears time to rest between noise exposures. Recovery time will help limit cumulative damage from noise

### **Avoid heavy metals and solvents.**

Research suggests that exposure to cadmium and lead can increase one's risk of hearing loss (Vyskocil et al., 2012). Exposure to solvents like styrene and toluene may also contribute to hearing loss (Vyskocil et al., 2012). These and other solvents are common in certain manufacturing processes. Workers' who use solvents should be monitored closely and proper safety equipment should be worn whenever there is a risk of exposure.

### **Use medications wisely.**

Antibiotics, diuretics, salicylates and chemotherapy drugs have all been shown to cause hearing loss (Ghent, 2013). Some over-the-counter medications, such as ibuprofen and acetaminophen, may also contribute to hearing loss when used regularly. Medications can also trigger tinnitus. Use medications as needed and under the supervision of a physician. If you have concerns about your hearing, tell your doctor. They may be able to offer you an alternative product or dose.

### **Stop smoking!**

Smoking is a common risk factor for hearing loss. The risk is even greater when smoking is

combined with other health issues like diabetes or heart disease. The best thing you can do for your hearing and overall health, is to quit smoking. Your employer may have an assistance program to help you.

### **Be heart healthy!**

What's good for the heart is good for the ears. Heart problems like cardiovascular disease and atherosclerosis have been linked to hearing loss. Taking care of your heart by preventing and treating disease may also benefit your hearing. Hearing loss is also more prevalent in those with metabolic syndrome, diabetes and high cholesterol. Proper nutrition and appropriate use of medications can improve these illnesses while also protecting your hearing.

### **Exercise and eat right!**

Exercises like walking, running, or bicycling get the blood pumping to all parts of your body, including the ears. Good circulation is important for your ears to work optimally. A diet high in nutrients and low in saturated fat can help keep your ears healthy.

### **Promote Total Hearing Health at work.**

A hearing conservation program which monitors hearing status and prevents noise exposure is the cornerstone of protecting workers hearing. Noise should be reduced when it can be, and hearing protection should be available to workers at all times. Workplaces can also contribute to hearing health by educating employees about ways to protect their hearing both on the job and at home. A holistic approach to hearing health includes being aware of your environment and taking steps to protect yourself from harmful noise and other hazards to hearing. Lifestyle changes like proper diet and exercise benefit your whole body, which includes the health of your ears.

### **References**

Better Hearing Institute (BHI). (n.d.) Consequences of hearing loss. Retrieved August 19, 2016 from <http://www.betterhearing.org/hearingpedia/consequences-hearing-loss>.

Ghent, Robert M., Jr. (2013). Medications and hearing loss. *Safety & Health*,188(6), 68.

Hearing Loss Association of America (HLAA). (n.d.). Basics facts about hearing loss. Retrieved August 19, 2016, from <http://www.hearingloss.org/content/basic-facts-about-hearing-loss>.

Vyskocil A, Truchon G, Leroux T, Lemay F, Gendron M, Gagnon F, Majidi NE, Boudjerida A, Lim S, Emond C, Viau C. A weight of evidence approach for the assessment of the ototoxic potential of industrial chemicals. *Toxicol Ind Health*. 2012 Oct;28(9):796-819.

*Jennifer Cavallari is an Assistant Professor of Community Medicine at UConn Health and a Certified Industrial Hygienist and Certified Occupational Hearing Conservationist. She studies how to translate occupational health research into workplace practice.*

*Jackie DiFrancesco is an AuD/PhD candidate in the Hearing Conservation Lab at the University of Connecticut. She is also a Certified Occupational Hearing Conservationist by CAOHC (Council for Accreditation in Occupational Hearing Conservation).*



*CPH-NEW is a Center for Excellence to Promote a Healthier Workforce of the National Institute for Occupational Safety and Health. CPH-News & Views is a semi-monthly column written by Center researchers on emerging topics related to healthy workplaces. These comments reflect thoughts of the individual researchers and do not represent conclusive research summaries, nor do they necessarily reflect a consensus among all Center personnel.*

*We welcome your responses and discussion. Please send all questions and comments to [CPHNEW@uml.edu](mailto:CPHNEW@uml.edu).*