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Hear this

A recent study suggests many employers should be relying more heavily on engineered noise controls to prevent auditory damage among workers in manufacturing.

By Ryan Parton



Each year, WorkSafeBC processes approximately 3,000 claims for noise-induced hearing loss. The estimated health care costs of those claims total more than \$20 million.

Despite those figures – and the fact that occupational noise has been linked to not just hearing loss but also life-threatening conditions like heart disease – some B.C. manufacturers have been reluctant to adopt measures to eliminate noise at its source. A WorkSafeBC-funded study from the University of British Columbia (UBC) offers some insight into why that might be.

The study, which examined eight B.C. food and beverage manufacturers, identified several barriers to the implementation of Engineered Noise Controls (ENCs) in the workplace. (An ENC is essentially an engineered solution for eliminating or reducing

noise at its source. Examples include installing noise-dampening devices, enclosing equipment in sound-proof booths, or simply servicing old equipment to reduce vibrational noise.)

“There’s an issue with risk perception,” says Dr. Hugh Davies, an associate professor with UBC’s School of Population and Public Health and the study’s principal investigator. “It seems to come from a culture of people who’ve grown accustomed to noise, and think there’s very little that can be done about it.”

Noise controls offer first line of defence

The Occupational Health and Safety Regulation, part of B.C.’s *Workers Compensation Act*, mandates companies to implement a noise control and hearing conservation program if noise

◀ SunRype packaging operator Don Biro (left) and maintenance supervisor Steve Oliver protect themselves against hearing loss while working on the juice production line at the Kelowna plant.

exposure exceeds a certain threshold. That program must cover seven elements: noise measurement, education, ENCs, personal hearing protection (such as earplugs and muffs), warning signs, regular hearing tests, and an annual program review.

“It’s a very well-crafted piece of policy and regulation,” Davies says. “What it says is that if you identify a noise problem, the onus is on the employer to reduce the noise as far as is practicable. The intent is that the first measure should be to reduce noise.”

Of the eight companies that participated in the study; however, none had fully implemented more than three of the seven components. More to the point, only one had fully implemented ENCs.

“Hearing protection is the simplest solution,” Davies says. “But all elements of the program are critical, and hearing protection is supposed to be one part of a systematic approach to reducing noise and noise-induced hearing loss.”

Davies says over-reliance on “last-resort safety devices” has two main drawbacks. First, personal hearing protection devices often don’t provide as much protection as their wearers think they do. The second drawback, he says, is that minimal controls become an entrenched practice.

Davies says that part of the reason employers might be less inclined to use ENCs relates to the wording of the Regulation, which directs employers to implement ENCs “as practicable.”

According to Davies, “One of the tests for practicability is ‘what is the industry standard?’ Well, if no one in the industry is making any effort, then the industry standard remains very poor and the test for practicality does not work. We’re not improving, because no standard is being set.”

Culture shift on the horizon

Although Davies stresses his team’s findings were specific to the workplaces under study, he indicates other researchers have made similar observations. And now, some manufacturing employers say attitudes about occupational noise are starting to change.

“I think there was a big shift in the approach toward hearing protection in the late ’90s,” says Jane Williams, environment, health and safety manager for Kelowna-based SunRype Products Ltd. Williams credits the company’s progressive approach toward equipment purchases (much of it state-of-the-art), annual noise-level reviews, and employee buy-in for boosting the results of SunRype’s annual hearing tests.

“Having the joint health and safety committee and our employees communicate positively about the program has helped the education piece of it,” she says. “It’s not just something SunRype is telling employees to do; they really understand the benefits of the program.”

Any shift toward a broader acknowledgement of the dangers of excessive workplace noise is considered a step in the right direction. However, low perception of risk and a culture of complacency were only two of eight barriers to implementing ENCs identified by the study. Others included poor knowledge of regulatory requirements, over-reliance on employees to identify and report noise hazards (coupled with limitations on communication channels with management), and a weak understanding of ENCs themselves.

Noise controls protect more than hearing

The study’s recommendations range from increasing employee education to strengthening regulatory oversight. The onus, however, rests on employers to become aware of noise control options and how best to implement them. A good start for any company, Davies says, is to meet with a professional acoustic consultant.

“Just a change of three decibels halves the risk of hearing loss,” he says. “So if you identify the noisiest piece of equipment in your plant and get an expert in to help you engineer a three-decibel reduction, you’ve done a major service to your workers.”

And the benefits go well beyond preventing hearing loss. Davies cites studies that have shown a correlation between noise exposure and several other conditions, including stress, hypertension, and even heart disease.

“The stakes are higher than they’ve ever been,” he says. “Ideally, what we want in the end is to get levels down to where we can get rid of hearing conservation programs.”

You can view the full report at www.worksafefbc.com/contact_us/research/research_results/res_60_10_650.asp.

If you have access to an iPad, you can also download the comprehensive new *Hearing Loss Prevention* ebook at www.worksafefbc.com/innovations. 