

NOVEMBER *Safety Talk*

Topic: Hearing Conservation Program

Personal Protective Equipment (PPE) is the last in the “hierarchy of controls”, and is often used in conjunction with Engineering and Administrative Controls.

In noisy environments, it isn't always possible to have Engineering Controls – such as separating the worker from the noise by placing the machine, or the worker, in a booth, or putting mufflers on the equipment. In those instances, if the noise level is above 85dB(A), or if there is a risk of a peak sound level of 140dB(A), hearing protection must be worn.

Review the risk assessment for your job. If your employer has conducted noise exposure studies, these results should be included in the risk assessment. It is also acceptable for the employer to simply identify that you will be exposed to high noise levels, requiring hearing protection.



There are two types of hearing protection: ear muffs and ear plugs.

Ear muffs are simple to use, can be hard-hat mounted or head-band style. Some come with communication systems installed; it is against WorkSafeBC OH&S Regulation to alter hearing protection so don't drill into them to listen to your music!

There are three types of ear plugs currently available:

1. Re-usable Plugs are made of soft rubber or plastic and may be custom molded or have flanges to seal off the ear canal. They should be washed for re-use.
2. Disposable Plugs may be self-moulding foam plastic or glass down. These are thrown out when they get dirty. Dirty plugs may cause external ear infections.
3. Canal Caps are earplugs held together with a headband. Some simply cover the ear canal opening while others insert into the ear canal. They are re-usable.

Disposable ear plugs must be inserted properly to be effective: compress the plug between your thumb and fingers, hold your ear flap back and up, insert the ear plug and hold it in place while it expands. If someone can see most of the plug sticking out of your ear, it's not inserted properly and won't protect your hearing. You



can also test by cupping your hands over your ears in a noisy environment; if it changes the sound level, the ear plugs are probably not being effective.

Gently twist the ear plug to remove it so you don't damage your ear drums.

Refit the earplugs throughout the day as head movements, talking and chewing can all dislodge the plugs.

Any worker exposed to noise levels of 85dBA or higher, or peak levels of 140dBA, must be provided with an annual hearing test. The Audiometric Technician will review your hearing test results, including a comparison with your last hearing test. He/she should also review the type and style of hearing protection you use.

Just how loud is it? Here's a few samples of noise levels:

ENVIRONMENTAL NOISE	
Weakest sound heard	0dB
Whisper quiet library at 6'	30dB
Normal conversation at 3'	60-65dB
Telephone dial tone	80dB
City traffic (inside car)	85dB
Train whistle at 500', truck traffic	90dB
Jackhammer at 50'	95dB
Subway train at 200'	95dB
Level at which sustained exposure may result in hearing loss	90-95dB
Hand drill	98dB
Power mower at 3'	107dB
Snowmobile, Motorcycle	100dB
Power saw at 3'	110dB
Sandblasting, loud rock concert	115dB
Pain begins	125dB
Pneumatic riveter at 4'	125dB
Even short term exposure can cause permanent damage - loudest recommended exposure WITH hearing protection	140dB
Jet engine at 100'	140dB
12 gauge shotgun blast	165dB
Death of hearing tissue	180dB
Loudest sound possible	194dB