

OH&S BULLETIN

May 2019

What Fish Harvesters need to know about Hearing Conservation

Noise is any sound that is loud or unpleasant or causes a disturbance. The combination of high noise levels and prolonged exposure to noise in the course of their work is thought to be responsible for noise-induced hearing loss amongst fish harvesters. Some of the adverse health effects of noise exposure include temporary hearing loss, ringing in the ears, and permanent hearing loss.

There are a number of indicators that workers may be exposed to potentially hazardous noise levels. Some of the more common ones are having to raise your voice to be heard by a person just one meter away, experiencing 'ringing in the ear' or having to increase the volume on the radio or television to a level that is too loud for others in the room.

It is important for fish harvesters to know when they are exposed to excessive noise levels that can cause hearing loss. In Newfoundland and Labrador under the Occupational Health and Safety Regulations, there are specific requirements pertaining to noise hazards. In this province, the average daily exposure to noise must not exceed 85 dBA over an eight hour workday, 40 hour work week.



According to the Occupational Health and Safety Regulations Section 68. When a worker is required to work in an area in which noise levels exceed the criteria for permissible noise exposure established by the ACGIH Noise Threshold Limit Values (TLV's) a) the employer shall first take appropriate action to implement control measures to reduce noise to acceptable levels; and b) where it is not practicable to reduce the noise to acceptable levels to isolate workers from the noise, the workers shall wear personal protective equipment in accordance with CSA Z94.2 "Hearing Protection Devices – Performances, Selection, Care and Use".

HEARING CONSERVATION

STEP 1 - MEASURE NOISE LEVELS

The first step in preventing noise-induced hearing loss is to recognize if there are hazardous noise levels in the workplace. Noise level measurements will determine if a noise problem exists. Noise levels are measured using a sound level meter at a given location and time or by having workers wear a personal noise dosimeter. This device which is worn by the worker measures the noise levels for average duration of a shift or a work process. Because noise levels can vary from one location to another, it is important to identify sources of noises in the work environment and the locations where workers are exposed.. Where noise levels exceed 85 dBA, it is important that measures be taken to reduce the noise, at the source, along the transmission path and at the worker.

STEP 2 – MANAGE WORKPLACE NOISE

The engines on a fishing vessel are the most significant noise source and noise levels increase with an increase in engine RPM. Depending on the size of the vessel, other onboard noises are generated from auxiliary machinery such as generators, pumps, compressors, and gear boxes as well as propellers and HVAC and piping systems. Noise is transmitted from these sources in the form of sound waves which flow in all directions through the air and structural vibrations. Workers are at risk of hearing loss when they are in the path of the sound waves and are exposed to the noise levels exceeding 85 dBA.

Employers have a responsibility under the Occupational Health and Safety Regulations to take appropriate measures to reduce the noise intensity to approved levels, or isolate workers from the noise. Where this is not practical, workers must wear personal protective equipment which will effectively protect hearing.

The best way to combat a noise problem is to eliminate or reduce the noise at its source of generation.

AT THE SOURCE

Noise can be controlled at the source by selecting quiet engines and auxiliary equipment that generate minimal noise. As this is not always possible due to cost factors, it is important to maintain existing equipment in optimal

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When controlling noise at the source consider replacing or adjusting loose, worn out parts, lubricating moving parts, reducing impact forces with shock-absorbing material, and ensuring rotating and sliding parts are balanced,. Isolate areas where vibration can occur and reduce noise leakage through the use of mufflers.

ALONG THE PATH

The next line of defense to controlling noise along the transmission path is to block or reduce the flow of sound energy before it reaches the worker. This can be done by taking measures to absorb the sound along the path through the use of noise reducing materials and insulation. Noise can also be deflected in some other directions using reflective barriers or contained by placing the noise source inside a sound-insulating box or enclosure.

AT THE WORKER

The third line of defense is to protect the worker from noise-induced hearing loss when all other measures have been taken to reduce excessive noise exposure. These measures involve educating and training workers on hazardous noise sources and the risk of noise-induced hearing loss if the noise levels are not eliminated or reduced. Administrative controls are taken as a last resort to protect the worker and involve altering the worker's schedule to minimize exposure and the use of ear protection. Alteration of work schedules is not generally used in the fish harvesting industry given the nature of the work processes and the work environment and therefore is not a realistic option on board most vessels. Ear protection is a more feasible option and involves workers wearing commercially available ear plugs and other ear protectors. Ear protectors pending on the type and when worn correctly, may provide noise reductions ranging from 15 to 35 dB for ear plugs and ear muffs. Careful consideration must be given to the type of hearing protection worn as some devices interfere with speech communication and capability to hear warning signals and alarms. Hearing protection should be selected on the basis that it is adequate for the job, provides adequate protection and is comfortable enough to be worn throughout the duration of the noise exposure.

STEP 3 MONITOR HEARING

Workers who are exposed to noise levels exceeding 85 dBA should have their hearing tested by a qualified audiometric technician as monitoring is the only way to know if efforts to protect workers hearing are effective. Because occupational hearing loss happens gradually over time, workers often fail to notice changes in their hearing ability until a relatively large change occurs. By comparing audiometric tests from year to year, early changes can be detected and appropriate protective measures implemented to prevent further damage. Audiometric tests are conducted by a qualified audiometric technician.

Where a worker develops permanent hearing impairment which arises out of and in the course of the employment, there is entitlement to workers' compensation benefits based on certain conditions. These conditions include:

1. A full work history with actual or estimated noise level readings from one or more of the employments indicating that the worker has been exposed to hazardous noise levels.
2. Hazardous noise levels where there is evidence of: a) continuous noise exposure for two years or more at eight hours per day at 85 dB(A), or a threshold limit value with a 3 dB(A) exchange rate for levels other than 85 dB(A); or, b) intermittent noise exposure for a five year period at eight hours per day at 85 dB(A), or a threshold limit value with a 3 dB(A) exchange rate for levels other than 85 dB(A).

WorkplaceNL bases hearing loss entitlement decisions on an audiological assessment performed by an audiologist, using established standard reporting requirements. For those workers who are no longer exposed to hazardous noise levels in the workplace because they have either changed workplace locations or have left their employment, WorkplaceNL will consider an audiogram performed at the time of termination of exposure to hazardous noise levels or an audiological assessment performed within five (5) years of the last exposure to hazardous noise.

Refer to www.workplacenl.ca for further information relating to entitlement to benefits for noise-induced hearing loss that may be work-related.

