



# HEALTH AND SAFETY **FACT SHEET**

## Noise

### What is noise?

Noise is one of the most common health and safety hazards in the workplace. Noise is any sound that is unwanted, loud or harsh. Noise-induced hearing loss is a risk for many CUPE members. Hearing loss is gradual and can be hard for members to recognize until it is too late.

The intensity or loudness of noise is measured in decibel units, expressed as dB(A). The dB(A) unit corresponds to the way the human ear hears noise. For example the human ear can barely detect sound at 5 dB(A), while at 140 dB(A) the noise is loud enough to cause pain in the ears.

Noise can be continuous, intermittent or impulsive. Continuous noise is constant. For example, ventilation fans are a source of continuous noise. Intermittent noise is a mix of quiet and noisy periods. Most manufacturing noise is intermittent. Impulse noise is a short burst of loud noise that lasts for less than one second. Punch presses produce impulse noise.

### What causes noise?

Noise results from poor work organization. Improper workload, work

pace and workplace design lead to unnecessary and prolonged noise exposures.

Employers' ignorance about noise hazards creates an atmosphere in which members' concerns can be dismissed as trivial.

Causes of workplace noise hazards include:

- Poorly maintained equipment and tools.
- Purchasing equipment and tools without noise buffers and protection.
- Inadequate workplace design and workstation location.
- Absence of a hearing conservation program.
- Unavailability or improper hearing protection devices.

CUPE members are exposed to noises from a variety of sources, such as:

- Traffic noise from busy roadways, stationary vehicles and street noise.
- Compressors and pneumatic tools in garages, workshops and maintenance areas.
- Handheld power tools, heavy machinery and other equipment.
- Ventilation systems operating at substandard levels.

- Human sources such as children and co-workers
- Photocopiers, printers and other office equipment.

Your workplace creates too much noise if the following occurs:

- Members need to raise their voices to be heard.
- Members experience ringing in their ears at the end of a shift.
- Members have a hard time hearing conversations in crowds or where there are competing background noises.

### **What are the hazards?**

Noise affects the physical and psychological health of CUPE members. But it also spills out of the workplace, negatively affecting members' families. The cumulative effects of noise can be devastating.

Major outcomes of noise exposure are:

- Stress, depression and burnout.
- Ringing in the ears (tinnitus).
- Loss of hearing (noise-induced hearing loss is irreversible).
- Hearing loss being mistaken for incompetence or mental disability.
- Elevated speech levels.
- Prolonged exposure can decrease coordination and concentration.
- Social isolation due to frustration while communicating.

The sensitivity of the ear decreases following exposure to excessive noise. This decrease in sensitivity is known as a temporary threshold shift. This shift may be accompanied by a ringing in the ears. The temporary threshold shift will

wear off if the member is no longer exposed to the noise allowing the ear to recover. However, exposure over a long period of time causes the threshold shift to become permanent, resulting in serious hearing loss.

Industrial noise regulations set exposure limits of 85 to 90 dB(A) for an eight-hour workday. There are no noise regulations specific to offices. But there are provincial guidelines recommending noise limits in offices. Most provinces have guidelines that allow for a maximum exposure in offices of 75 to 90 dB(A) for an eight-hour workday.

### **Identify the problem**

A first step is recognizing that noise is a health and safety hazard in your workplace. Surveys and mapping techniques are excellent tools to identify noise hazards. A noise survey can be done in co-operation with the employer, in which case the union approves the survey and is involved in collecting and assessing the information generated by the survey. The union should conduct its own noise survey if the employer resists the idea or denies that noise is a problem. Body mapping, hazard mapping and your world mapping techniques can be used, in addition to surveys, to identify noise hazards.

Workplace inspections by CUPE members are an important tool in uncovering and identifying noise hazards, and should be carried out regularly. Sound level meters should be used to determine the level of noise hazards. A noise dosimeter should be used to determine the actual noise exposure over an entire shift. A dosimeter is a compact instrument that

collects sound level readings through a microphone.

## **Actions**

Noise hazards largely centre on issues of control over work. Taking action on noise involves members exercising control at work.

The following actions can help combat noise hazards:

- Refuse unsafe working conditions and unnecessary overtime.
- Report noise hazards.
- Conduct regular workplace inspections to uncover noise hazards.
- Put noise on the health and safety committee agenda.
- Demand employers take action on improving working conditions, tools and equipment that cause noise hazards.
- Insist employers manage work processes and organization so that noise hazards are eliminated.
- Institute a workplace hearing conservation program.

A hearing conservation program (HCP) involves members instituting their own changes to the workplace and demanding changes from employers.

### **A HCP involves:**

- Noise exposure survey with a noise map that identifies noisy locations.
- Retrofitting equipment, purchasing noise-reducing equipment and altering the workplace to minimize exposure.
- Educate members and employers about hearing loss, prevention and identification.

- Ensure proper hearing protection devices for all members for work and home use.
- Frequent noise measurement and testing of audiometric equipment.
- Consistent record keeping with exposure limits.
- Evaluation of the hearing conservation program.

Noise should be eliminated wherever possible. Where elimination is not possible, noise should be controlled.

Noise control should involve:

- Controlling noise at the source.
- Using machines with low noise emissions.
- Retrofitting machinery with silencers and damping material.
- Fixing or replacing vibrating or worn parts.
- Restricting access to noisy areas.
- Limiting time spent in noisy areas.
- Performing noisy work when the fewest number of members are exposed.
- Enforcing the use of personal hearing protection.
- Give members the choice of hearing protection that affords the most comfort and protection.
- Provide training for the proper use of hearing protection.

Remember, hearing protection should be the last resort in controlling noise exposure. Work organization, equipment modification and workplace redesign should take priority in controlling noise hazards.

## Strategies for change

The strategies outlined below complement the actions listed above. Noise can be eliminated through the following:

- Keep noise issues on the health and safety committee agenda until they are resolved.
- Demand regularly scheduled maintenance on equipment and tools.
- Ask for better workplace design to decrease noise hazards.
- Demand employers obey health and safety laws and regulations pertaining to noise hazards.
- Where legislation does not provide for specific noise controls, monitoring, or access to information about noise, the union can negotiate contract language that reflects the protection of members.
- Put the issue of noise on the bargaining table.
- Sponsor CUPE education around the issue of noise and its effects.
- Create a noise policy for CUPE workplaces starting with a statement acknowledging that noise is a health and safety hazard, and that all steps should be taken to prevent the hazard. A noise policy should include a hearing conservation program.
- Collective job action around the issue of noise.

Employers have the responsibility to provide a healthy and safe workplace. This responsibility is known as the general duty clause. Getting rid of noise hazards is an important part of a healthy workplace. Ending noise hazards

requires the participation of our membership. Through education and activism, noise can be eliminated from CUPE workplaces.

This fact sheet provides some information to address the hazard. Related information is presented in the CUPE Health and Safety Guidelines *Enough Workplace Stress: Organizing for Change*.

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