



Risks of exposure to HAND-ARM SYSTEM vibrations

Quebec occupational health and safety regulations do not set standards for vibration exposure. However, the European guidelines provide best practices in the field and these recommendations are derived from them.

Since vibrations represent a health risk, employers must take measures to identify, correct and control the risks, in compliance with section 51 of the *Act respecting occupational health and safety*.

Here are a few points to consider when identifying potential hazards in the workplace. The risk to your health will increase with exposure to vibrations (equipment operating time) and in situations with aggravating factors.

IF YOU USE VIBRATORY OR PERCUSSIVE TOOLS, INCLUDING

- ☐ Chain or gang saw
- ☐ Brush cutter
- ☐ Grinder, sander
- ☐ Nail gun, riveter
- ☐ Router
- ☐ Jackhammer (concrete breaker)
- ☐ Perforator
- ☐ Scraper
- ☐ Plate compactor (vibrator-compactor)
- ☐ Percussive tools (e.g.: drill, impact wrench)

IF CRITICAL OPERATING TIMES ARE REACHED

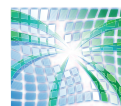
This time varies, depending on the type of tool and its features. Some indications of daily operating times are listed below.

- ☐ Jackhammer: 15 minutes
- ☐ Orbital sander: 1 hour
- ☐ Chain saw: 1 h 30
- ☐ Angle grinder: 1 h 30
- ☐ Straight grinder: 2 h 30
- ☐ Brush cutter: 3 h 30

IF THE FOLLOWING AGGRAVATING FACTORS ARE PRESENT

- ☐ Presence of cold and humidity
- ☐ Need to apply force to the tool
- ☐ Irregular tool maintenance
- ☐ Use of tools at arm's length
- ☐ Use of the tool for any purpose other than that intended by the manufacturer
- ☐ Daily use of vibrating tools

**THE SAFETY THRESHOLD FOR VIBRATING TOOLS
MAY HAVE BEEN EXCEEDED!**



WHAT ARE THE BEST-KNOWN HEALTH EFFECTS?

Vibratory syndrome includes three types of hand injuries, which can occur alone or together:

- Nerve: numbness and tingling, clumsiness of small movements
- Musculoskeletal: pain, stiffness, weakness
- Circulatory: white hand disease or Raynaud's phenomenon, ulcers on the fingertips

At a consultation, be sure to inform the doctor that you have been exposed to hand-arm vibrations. However, Raynaud's phenomenon may be caused by many other factors that the doctor must evaluate.

RECOMMENDATIONS TO ELIMINATE OR REDUCE RISK

USING VIBRATING EQUIPMENT

- ☐ Make sure that the work absolutely requires the use of a vibrating tool.
- ☐ Always choose the appropriate tool for the task at hand (tool performance, posture, etc.).
- ☐ Follow the manufacturer's instructions for use of the tool.
- ☐ Use accessories appropriate for the tool (e.g.: rotation speed) and the task at hand.
- ☐ Inspect the vibratory tool before each use to ensure it has been properly maintained and repaired, if necessary.
- ☐ Change or request that accessories be replaced (e.g.: grinding wheel, chisel) when they become less efficient.
- ☐ Ensure that cutting accessories are properly sharpened.
- ☐ Minimize the use of continuous vibrating tools by alternating with tasks where these tools are not required.

WORKING METHODS

- ☐ Place your hands where specified by the manufacturer.
- ☐ Let the tool do the work as much as possible; apply only the necessary gripping and pushing force to hold and guide the tool.
- ☐ Use good working posture; avoid working at arm's length, in an unstable or uncomfortable position or with bent wrists.

OTHER RECOMMENDATIONS

- ☐ Keep hands warm and dry.
- ☐ Avoid smoking.
- ☐ Learn to identify the signs and symptoms of vibration syndrome and report them to your health and safety committee, your representative or your employer immediately.

For more information, contact your occupational health team:

www.santeautravail.qc.ca

