

DoD Ergonomics Working Group NEWS



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Guidance for Users of Anti-Vibration Gloves

Evidence has shown that daily occupational exposure from some types of pneumatic, electric, hydraulic, or gasoline powered vibrating hand tools is linked to hand arm vibration syndrome (HAVS)—an *irreversible* medical condition of the fingers and hands.

Common signs and symptoms include numbness and tingling, loss of sensation and dexterity and painful fingers and hands during sleep. Advanced symptoms include pain in your hands, typically during cold weather, lasting 5 to 15 minutes where one or more fingers turn white or “blanch.”

If you are one of the millions of workers who are exposed to HAV, you need to follow these standards for anti-vibration gloves.

STANDARDS FOR ANTI-VIBRATION GLOVES

Ensure that the gloves you use are labeled “Meets ANSI S2.73/-ISO 10819.” Only full-finger protected gloves are tested since HAVS always begins at the finger tips and moves toward the palm; finger exposed gloves are not recommended. Gloves that meet or exceed ISO 10819 are certified and recommended. Products described as “half finger” gloves do not meet the ISO/ANSI standard for anti-vibration products and should not be used as anti-vibration gloves.

GLOVE LIMITATIONS

Gloves that meet or exceed ISO 10819 are tested to ensure there is at least a 60% reduction in transmitted vibration at the key frequency range of 200 to 1250 cycles per second. Since evaluation is done on people using tools in a laboratory setting, actual workplace exposures and glove effectiveness may vary.

COMING SOON!

The Defense Logistics Agency now has National Stock Numbers for certified anti-vibration gloves!

The Defense Safety Oversight Council is preparing a detailed brochure to guide you in your selection. We will let you know as soon as it is available. In the mean time, bring yourself up-to-speed with our guidance for anti-vibration gloves.

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WORK PRACTICES FOR PERSONNEL WITH HAV EXPOSURE

Using certified anti-vibration gloves alone will not solve the HAV problem. Anti-vibration gloves should be used with low-vibration tools and you should follow these work practices:

- Keep fingers, hands, and body warm.
- Do not use tobacco.
- Let the tool do the work, grasping it as lightly as possible consistent with safe work practices.
- Do not use the tool unnecessarily and keep it well maintained.
- For pneumatic tools, keep the cold exhaust air away from fingers and hands.
- Ensure breaks from tool use for at least 10 minutes per hour to allow circulation to recover.
- Depending upon the intensity of exposure, it may be necessary to have exposures evaluated and to limit the daily duration of work with certain types of power hand tools. European Union standards limit such exposures to a time weighted average of 5 m/s².

If signs and symptoms of HAVS appear, seek medical help.

FOR MORE INFORMATION

- NIOSH recently released a Power Tool Database that can be used to find information such as sound power levels, sound pressure levels, and downloadable exposure and wave files related to commonly used power tools: <http://wwwn.cdc.gov/niosh-sound-vibration>
- The DoD Ergonomics Working Group published a newsletter on HAV threshold limits and exposure measurement: <http://www.ergoworkinggroup.org/ewgweb/SubPages/ProgramTools/Publications/2005Pubs/55DoDEWGNNews.pdf>
- The Naval Safety Center Website addresses acquisition safety and vibration: <http://www.safetycenter.navy.mil/acquisition/vibration/index.asp>
- The DoD Ergonomics Working Group and General Services Administration are collaborating to manage power hand tool procurement by providing guidelines for low vibration and other ergonomic characteristics for product selection. Currently, three low-vibration power hand tools have been introduced into the supply system. Others will be available as products are updated.