Do anti-vibration gloves prevent vibration-related injuries?

- Anti-vibration gloves are inefficient at reducing vibration hazard to the hands and arms.
- ANSI/ISO certified gloves are tested in a lab under specific conditions. Testing of these gloves under realistic working conditions shows mixed results.
- Materials used in anti-vibration gloves usually filter out high frequency vibrations, but not the low frequency vibrations that are more hazardous.
- There are better ways of reducing the risk of vibration-related injuries to the hands and arms.

Injuries can result from long-term use of vibrating tools and equipment

Vibration that passes into the hands and arms can damage nerves, blood vessels, muscles, bones and joints. Over time, this can lead to serious injuries, known as hand-arm vibration syndrome, vibration white finger, or Raynaud's disease. The most common sources of vibration to the hands and arms are handheld power tools.

Anti-vibration gloves only work on some types of vibration

Anti-vibration gloves are best at reducing high frequency vibration from tools like grinders, sanders, and saws. They don't work well with tools that vibrate at lower frequencies, such as tampers, chisels, and pavement breakers.

Anti-vibration gloves only protect some parts of the hands

These gloves are better at protecting the palm than the fingers. In some cases, material in the gloves can increase the amount of vibration that passes into the fingers. Vibration-related injuries often start in the fingers, so it's important to protect them.

Stiff or bulky gloves can increase the risk for hand and arm injuries

Thicker gloves can increase the amount of grip force needed. This can increase the risk for injuries such as carpal tunnel syndrome. Gripping a tool more tightly also results in more vibration passing into the hands and arms. In some field testing, anti-vibration gloves were no more effective than regular gloves when workers used a tighter grip on the tools.

Reducing vibration levels and time using tools are better approaches

The risk of injury from vibrating tools depends on how much vibration passes into the hands, and for how long. To better protect workers from vibration-related injuries:

- Choose work methods that don't require hand-held tool use, such as parts tumblers to replace grinding.
- Use low-vibration tools.
- Maintain tools and attachments to minimize vibration.
- Change out pads, bits, and blades so that tools get the job done quickly.
- Limit "trigger time" with tools that have higher vibration levels.
- Keep hands warm and dry. This is one way that gloves can help, as long as they fit well.
- Regularly check for symptoms among employees who use vibrating tools as part of a medical surveillance system.

We can help you find the right solution for your workplace

We have consultants who can work with you to find practical solutions to reduce injury risk. We've also outlined a process that you can use to find and fix the hazards that cause sprains and strains (link to new process).