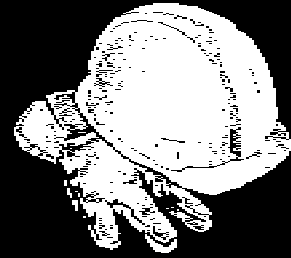



TRAINING GUIDE

HAND - ARM VIBRATION



2001

Before you begin the meeting...

- Does this topic relate to the work the crew is doing? If not, choose another topic.*
- Did you read this Training Guide and fill in the blanks where the  appears? (To find the information you need, look over the Safety Walkaround Checklist for this topic.)*
- Did you bring a vibrating tool used on the site to demonstrate at the meeting?*

Begin: This meeting is about preventing injuries from hand and arm vibration. You may think that the tingling, pain, or numbness you feel when you use vibrating tools is just part of your job. But vibrating tools (like drills, jackhammers, grinders, and chainsaws) can cause serious health problems—so serious that you could be forced to leave your trade. Millions of U.S. workers use vibrating tools. More than half of them will get some kind of injury.

Whether or not you get injured partly depends on:

- the amount of vibration the tool produces (“acceleration level”)
- how long you use the tool each day
- how many total hours, months, and years you use vibrating tools
- the way you hold and use these tools.

Some workers may have symptoms just a few months after they start using vibrating tools, but others may not have any trouble for a long time.

It’s important to know that once you fully develop hand-arm vibration syndrome (HAVS), it may be **too late** to reverse it. You may never recover full use of your fingers. The only cure is prevention. So we’ll talk today about how to work safely with vibrating tools.

You or a crew member may want to add a personal story about vibration.

Next, discuss with the crew which tools used at this particular job site produce vibration that may be hazardous:



ASK THE CREW THESE QUESTIONS:

Show the tool you brought and point out any safety features After each question, give the crew time to suggest possible answers. Use the information following each question to add points that no one mentions.

- 1. Vibration from tools can damage the blood vessels in your hands and fingers. The reduced blood supply can then harm the skin, nerves, and muscles. You lose feeling in your hands and fingers, and can't control them. This is called *hand-arm vibration syndrome (HAVS)*, and is also known as "white finger," "dead finger," or "Raynaud's Syndrome."**

It's very important to watch for early symptoms and report them. What are the signs to watch for?

- Tingling fingers
- Numbness
- Fingertips turn white or blue
- Clumsiness with hands
- Trouble picking up small objects
- Trouble buttoning and zipping clothes
- Reduced sense of heat, cold, and pain in hands.

- 2. Vibration isn't the only thing that can reduce the blood supply to your hands and fingers. Your chance of getting HAVS goes up if you're exposed to vibration combined with other risk factors that also cut down the blood supply. Do you know what some of those risk factors are?**

- Cold
- Loud noise
- Tobacco smoke.

- 3. Is there any protective gear you can wear to prevent exposure to vibration?**

- Not really. There are gloves with vibration-damping material built into the palms and fingers. But they haven't been proven effective. If they fit well and don't cause you to grip tighter, it doesn't hurt to try them.
- Regular work gloves and warm clothing are important in cold weather to avoid getting your hands cold or wet. Remember that cold increases your risk.
- Hearing protection is important in noisy environments, and many vibrating tools are very loud. Remember that noise increases your risk.
- Always wear safety glasses or other eye/face protection when you work with any tool.

- 4. Are there tools that reduce your exposure to vibration?**

- Yes. The best solution is to do the work with a non-vibrating tool instead of a vibrating one if you can. For example, sometimes you can mill or machine a part instead of using a grinder.
- If you do use a vibrating tool, use one that has anti-vibration features built in whenever possible. Some new designs can reduce tool vibration over 50%. But tool suppliers should be asked for real evidence that their equipment reduces vibration.

- Vibration is reduced when tools are well maintained. Tools that are worn, blunt, or misaligned vibrate more. Immediately report any tool that is functioning poorly.

5. Are there any other ways to reduce exposure to vibration?

- Limit the amount of time you use vibrating tools.
- Take a 10-minute break for every hour that you spend working with a vibrating tool. Or alternate work with vibrating and non-vibrating tools.
- Let the tool do the work. Keep your grip as loose as possible while still keeping control of the tool. A tight grip restricts blood flow, and also allows more vibration to pass from the tool to the body.
- Don't use full throttle unless you need to.

6. Do you need any special medical exams if you work with vibrating tools?

- No exams are presently required by law, but it's a good idea for anyone exposed to hand-arm vibration on a regular basis to have an annual exam for signs of HAVS. You should be examined by a doctor with special training in occupational health, who will know exactly what to look for.
- Also, you should inform your employer and request a medical evaluation if you experience symptoms of HAVS (such as tingling or numbness).

CAL/OSHA REGULATIONS

Explain: Cal/OSHA does not have specific rules on vibration at this time. However, Cal/OSHA did recently adopt a new ergonomics standard which relates to these issues. On any construction job, if there has been more than one ergonomic injury within a year to workers doing the same task, the company must take steps to identify and correct these hazards. We must also provide relevant training. Also, the National Institute for Occupational Safety and Health has issued recommendations on vibrating tools. Most of the safety measures we've talked about are included in these recommendations. They are also part of this company's Injury and Illness Prevention Program, which is required by Cal/OSHA. I have a Checklist of the precautions to take when using vibrating tools. If you'd like to know more, see me after the meeting.

COMPANY RULES

(Only if applicable.) We have some additional company rules about vibration.

Discuss company rules: _____



COMMENTS FROM THE CREW

*Ask: Do you have any other concerns about vibration? Do you see any problems on our job?
(Let the steward answer first, if there is one.)*

What about other jobs you've worked on? Have you had any experience with vibration that might help us work safer on this job?

