

# Hand-Arm Vibration (HAV)

Hand-arm vibration is transmitted into the worker's hands and arms through the palms and fingers, and can lead to MSD including hand arm vibration syndrome (HAVS). This typically happens by holding a vibrating tool, equipment, or piece of machinery.

## Exposures

High levels of vibration exposure paired with highly repetitive tasks increases risk of HAVS.

### Construction trades

Common tools used:

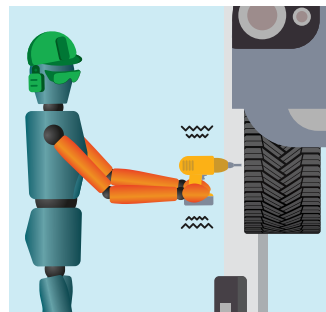
- Jackhammers, pneumatic hammers, grinders



### Manufacturing

Common tools used:

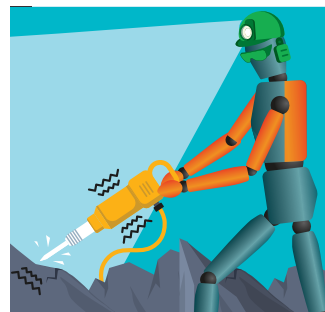
- Vibrating equipment, power tools



### Mining

Common tools used:

- Jacklegs, jumbo drills, and specialized drills



### Agriculture, forestry

Common tools used:

- Chainsaws, other



● Exposure   ● Primary contact point and at risk area   ● Personal Protective Equipment   ⚡ Vibration

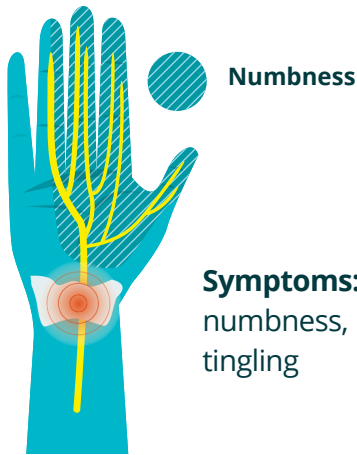
## Acceleration of hand tools

Daily use of tools that generate high levels of vibration can lead to increased risk of HAVS if the duration of use exceeds the exposure limit. Exposure limits for hand-arm vibration are provided by the American Conference of Governmental Industrial Hygienists (ACGIH) and the International Organization for Standardization (ISO).

# Symptoms and Monitoring

## Nerve Damage

Carpal tunnel syndrome



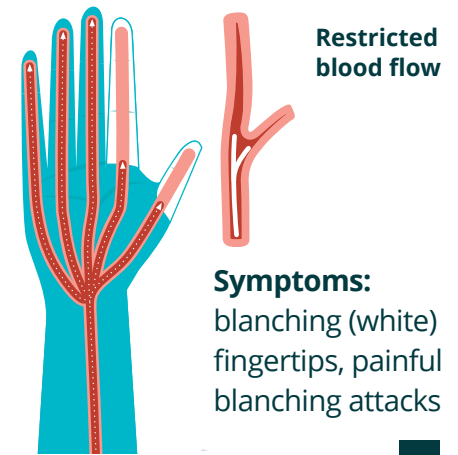
## Musculoskeletal Damage

Tendonitis, contractures



## Blood Vessel Damage

Vibration-Induced white finger

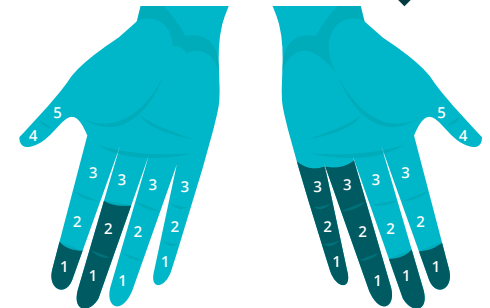


**!** If you are experiencing these symptoms, notify your supervisor as soon as possible to prevent them from getting worse.

## White Finger (blanching) Monitoring

### Modified Stockholm Sensorineural Staging System

The Stockholm Sensorineural Scale is a tool that may be used by your healthcare provider to assess the severity of your symptoms.



## What can workers do to prevent injury?

To control exposure and reduce risk of HAVS:

- Avoid using excessive grip force
- Tell supervisor about tools and tasks that cause high vibration
- Take regular breaks from vibrating equipment
- Use the right tool for the job
- Ensure equipment is regularly maintained as outlined in preventative maintenance schedule found in the equipment/tool owner manual



Visit [msdprevention.com/vibration](https://msdprevention.com/vibration) for more information