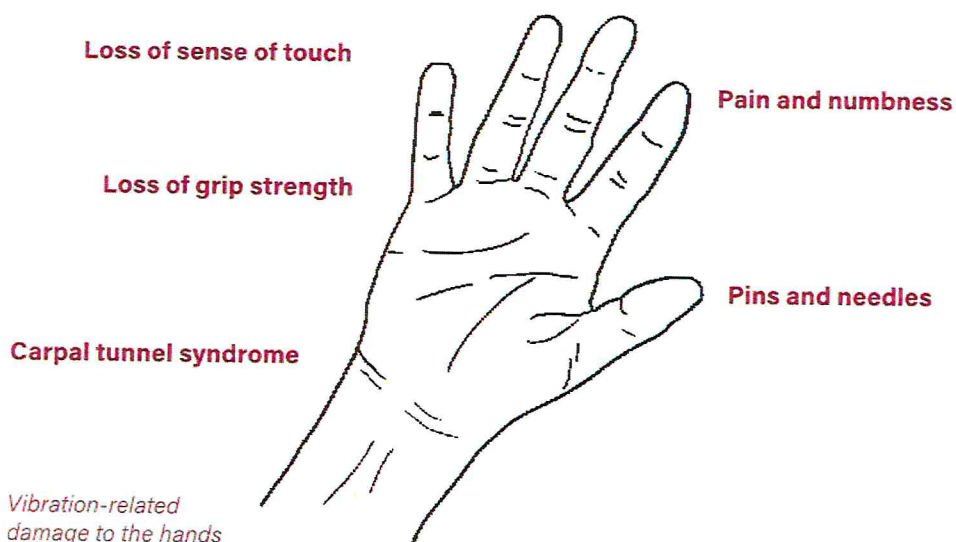


Hand-arm vibration

Reason	Workers need to be protected against excessive exposure to hand-arm vibration. Prolonged exposure to hand-arm vibration can cause a range of symptoms, known as hand-arm vibration syndrome (HAVS).
Outline	This talk covers the sources of hand-arm vibration in construction, and the steps that can be taken to reduce the risk.



Examples of tools that could cause hand-arm vibration if control measures are not implemented and followed



The long-term effects of exposure to vibration can be permanent and disabling. Don't let it happen to you.

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Effects of hand-arm vibration

1. Prolonged exposure to hand-arm vibration can cause damage to blood vessels, nerves, tendons, ligaments, muscles and bones.
2. Symptoms include tingling, pins and needles, loss of feeling in the fingers, pain and throbbing in the fingers, loss of manual dexterity, painful joints and, in particular, pain when the hands warm up after getting cold.
3. Carpal tunnel syndrome (CTS) is also caused by hand-arm vibration and causes severe nerve pains in the palm of the hands, which is often worse at night.
4. The effects of hand-arm vibration are often irreversible, causing sufferers pain and affecting their quality of life.
5. People with HAVS are often unable to undertake simple, everyday tasks (such as doing up buttons or shoelaces).
6. The symptoms may start as tingling in the hands, but will develop and worsen with continued exposure to vibration.

Sources of hand-arm vibration

1. Hand-arm vibration is generated by both rotating and percussive hand-held tools. Some tools (such as hammer drills) are both rotary and percussive.
2. Construction tools that generate significant levels of vibration include:
 - road and concrete breakers
 - cut-off saws or disc cutters
 - power drills and chisels
 - plate vibrators and scabblers
 - concrete poker vibrators
 - hammer drills
 - chainsaws
 - needle guns
 - angle grinders
 - riveters.

How to avoid excessive vibration exposure

1. Employers should try to avoid the use of hand-held tools that generate vibration (for example, by using an excavator-mounted or remote-controlled breaker rather than hand-held breakers).
2. If it is not possible to avoid using hand-held tools, then select low-vibration or vibration-reduced tools.
3. Calculate trigger time limits for using vibrating tools and do not exceed them.
4. When using vibrating tools, it is important to take regular breaks. If working in a cold environment, warm your hands up and exercise your fingers during breaks.
5. Use a good technique when using hand-held tools – do not grip too tightly or apply excessive force; let the tool do the work.
6. Keep hands warm and dry by wearing gloves. However, do not rely on anti-vibration gloves as they have little effect on vibration.
7. If you experience any symptoms (such as pins and needles), tell your supervisor.



What vibrating hand-held tools have you used on sites you have worked on?

What should you do during breaks to reduce your risk of HAVS?

How can your exposure to hand-arm vibration be reduced?

What must you do if you think you are experiencing early symptoms of HAVS?