HSE Pack

May

HAVS

Empowering Safety Interventions 2026

Hand Arm Vibration Syndrome

Two Hands, One Standard

Hands = our contact with the world
(inside & outside of work)

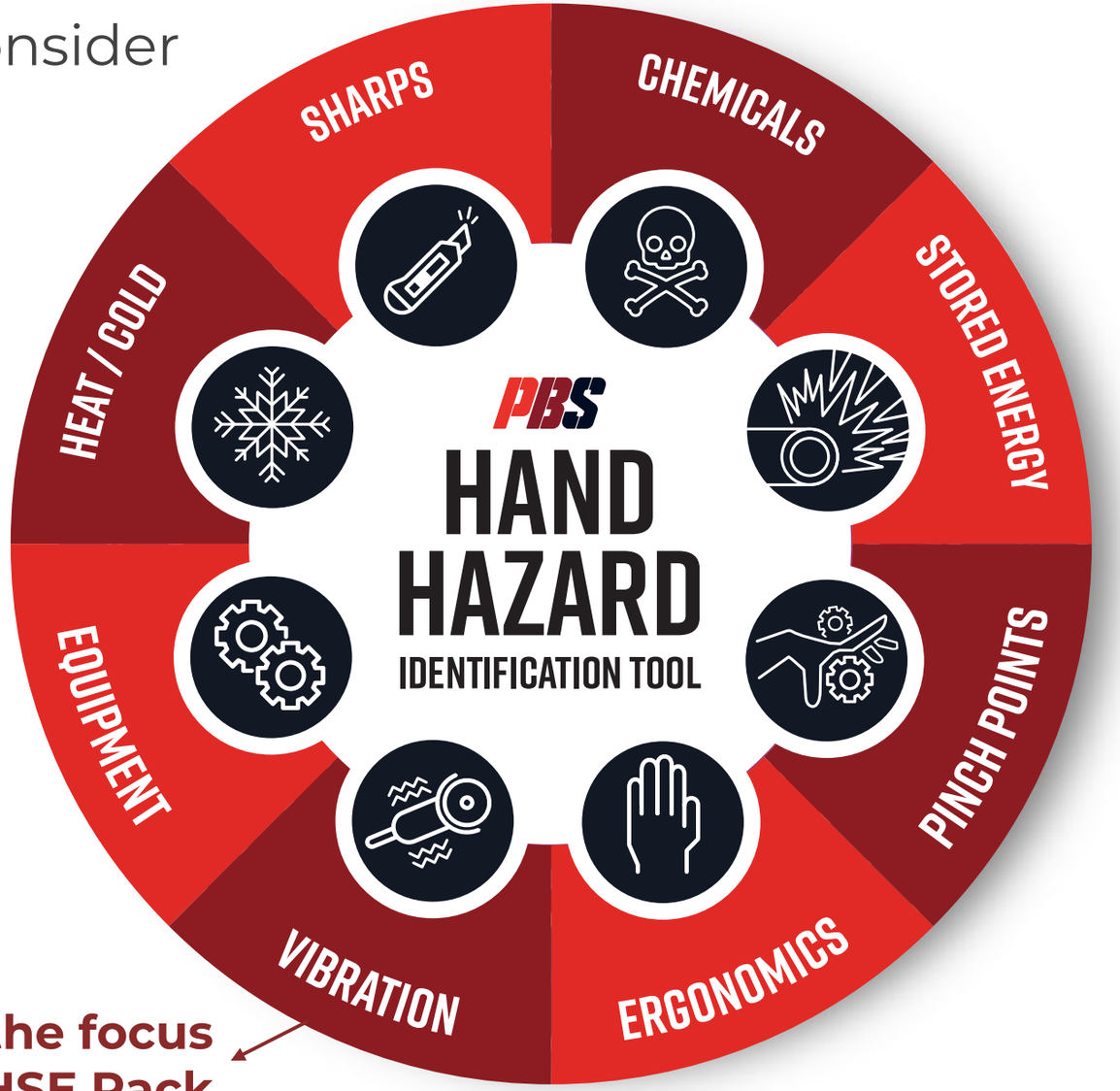
IMCA: Watch YOUR Hands

https://youtu.be/HvQ6FhU3DXI?si=OfmFceEcx9LGFrJw

HAND SAFETY

Hand Hazards – Danger Zones

Key hazards to consider for any task



VIBRATION: the focus hazard of this HSE Pack

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What is HAVS?

Hand-Arm Vibration Syndrome: A disorder resulting from prolonged exposure to vibration, specifically to the hands and forearms while using vibrating tools.

Symptoms include:

- Numbness
- Tingling
- Loss of nerve sensitivity.

The hand-arm vibration syndrome (HAVS) is a painful and potentially disabling condition of the fingers, hands, and arms due to vibration.

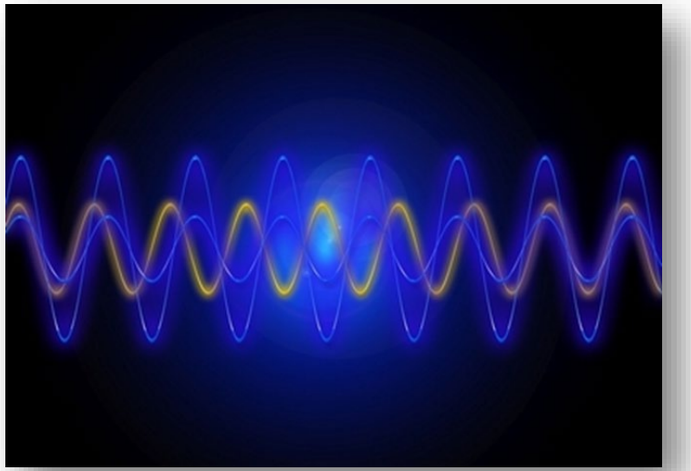
HAVS was first widely recognised as a potential occupational hazard in the mid-1980s. It was first known as "vibration white finger“ or Raynards Disease.

Sources of Vibration

The sources of vibration that can cause HAVS are very varied and include all sorts of tooling or equipment that create vibration.

- **These can be everyday tools at work like;**
  - Drills
  - Grinders
  - Saws
  - Needle guns
  - Sanders etc

- **And when off shift at home;**
  - Chain saws
  - Drills
  - Strimmers
  - Lawn mowers
  - Hedge trimmers
  - Pressure washers
  - Basically, any tooling that creates vibration and even electronic games in which the hand controls vibrate have been reported to cause HAVS.



Check for HAVS

The onset of Hand-Arm Vibration Syndrome (HAVS) typically begins with occasional numbness or tingling in the fingers, which may be dismissed or go unnoticed. Over time, with continued exposure to vibration, these symptoms become more pronounced, leading to loss of nerve sensitivity and loss of grip strength. Picking up objects such as pins or nails becomes difficult as the feeling and sensitivity in the fingers diminishes.

Eventually, individuals may experience episodes where their fingers turn white, especially in cold conditions, due to restricted blood flow. In severe cases, it may become difficult to do buttons and simple tasks like dress yourself. The pain, tingling, and numbness in the arms, wrists and hands can be severe and potentially interfere with sleep. **Early identification and intervention are crucial to prevent the condition from worsening.**

Ask yourself the following:

- Have you ever used powered tools and felt your hands tingle when you put the tool down?
    - *This is probably because you have used the tool for too long or this tool has a very high vibration frequency*
- Do you regularly experience tingling in your hands ?
- Do you regularly experience numbness in your hands?
- Do you notice a loss of grip strength?
- Do your hands hurt in the cold and wet?
- Have you seen your fingers blanched like this?
- In the cold and wet do you see the tips of your fingers going white, and red when recovering and feel pain as the circulation returns?

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What are the consequences?

With excessive vibration exposure it creates irreversible damage.

- The blood vessels become damaged and so do the nerves in the hand. These are what give us control, dexterity, temperature sensations.
- With blood vessel damage and nerve damage we lose grip strength.
- Ultimately, in cases of overexposure we lose the strength, sensitivity, and circulation in our hands and this can be painful and make using our hands difficult.

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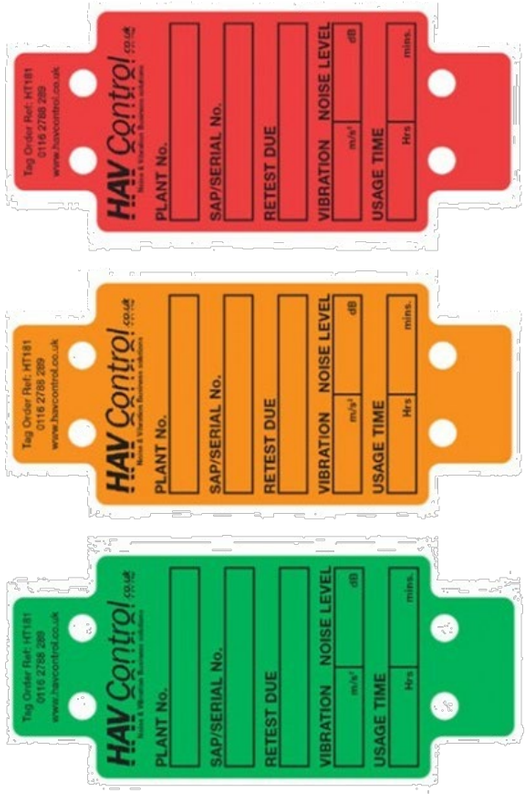
How do we control it?

- **All tools should have a HAVS label**, this should tell you, as a minimum:
  - When it was tested
  - The vibration frequency in m/s2 (Action Value is 2.5m/s2)
  - Maximum use duration (these are calculated to keep your exposure below accepted limits)
- Sometimes these are colour coded to give an indication of severity.
- Some tools may only be used for minutes, some for hours and some low vibration tools may be used all day – Check the Label !
- **No Label – No Use**
- Record the Trigger time on the sheets provided and submit to the medic, this will help create a record of your vibration exposure and help identify any overexposure and enforce a vibration exclusion.
- **NOTE: The Usage Time is a daily limit.**
- You cannot use one tool for the daily limit, put it down and pick up another tool as this may double your daily dose.
- Tools are serviced and tested on a frequent basis to ensure that vibration levels do not increase with wear and tear.



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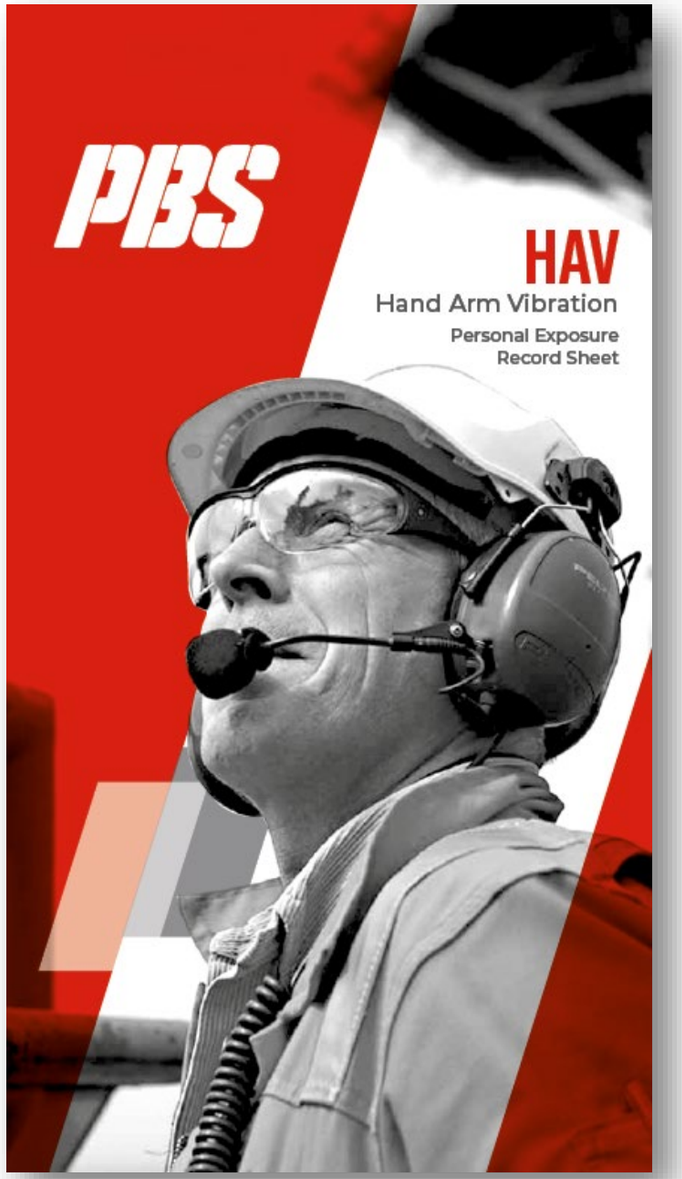
Record Trigger Time (exposure)



HAV EXPOSURE – HSE POINTS SYSTEM

Figure A5-1 above is the HSE 'ready reckoner' for calculating daily vibration exposures. To use the ready reckoner you need the vibration magnitude (level) and daily exposure time (trigger time) for each tool.

The ready-reckoner covers a range of vibration magnitudes up to 40 m/s² and a range of exposure times up to 10 hours.

The respective 'points' exposure for combinations of vibration magnitude and exposure time are given.

- exposure points change simply with time: twice the exposure time, twice the number of points;
- exposure points can be added together, for example where a worker is exposed to two or more different sources of vibration in a day;
- the exposure action value [2.5 m/s2 A(8)] is equal to 100 points;
- the exposure limit value [5 m/s² A(8)] is equal to 400 points;

The table is colour coded based relative to CoVAWR requirements.

HAND ARM VIBRATION

Daily Personal Exposure Record Sheet

			Date	
Name				
Location to site				
Note: Tool use must be planned using the Ready Reckoner				
	TOOL DATA			
	Tool ID No.	Vibration Level of Tool	Trigger Time	Exposure Points
PLANNED				
ACTUAL				
PLANNED				
ACTUAL				
PLANNED				
ACTUAL				
PLANNED				
ACTUAL				
PLANNED				
ACTUAL				
Total Planned				
Total Actual				

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The Limits

All vibration exposure should be managed to 'As Low As Reasonably Practical' (ALARP).

- The daily **Exposure Action Value** (EAV) (**100 Points)** is the level of daily exposure to vibration, at or above, where there is a requirement to provide health surveillance and the employer is required to reduce risks and exposures. *(Exposures above 100 points will require risk assessments and planning of the work activities)*
- The daily **Exposure Limit Value** (ELV) (**400 Points**) is the absolute maximum amount of vibration an employee may be exposed to on any single day. *(You should not consider reduction below the ELV to be a target – you must reduce exposure as low as you reasonably can, and below the EAV if this is reasonably practicable)*

For hand-arm vibration

a) the daily **exposure limit value** is 5 m/s2 A(8); This equates to **100 Points for an 8-hour day**

b) the daily **exposure action value** is 2.5 m/s2 A(8), This equates to **400 Points for an 8-hour day**

'Employees whose health is at particular risk' may require reductions in the normal EAV & ELV. Employees who are particularly sensitive to vibration include:

a) Employees with existing HAVS or other diseases of the hands, arms, wrists or shoulders;

b) Employees with diseases affecting blood circulation, e.g. primary Raynaud's, or nerve disorders affecting the hands or arms, e.g. carpal tunnel syndrome.

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http://www.hse.gov.uk/pubns/priced/l140.pdf

Risk Assessment & Planning

Planning:

- Assess vibration exposures
- Plan for vibration control
- Apply the hierarchy of control
- Choice of tools
- Schedule for work completion
- Capabilities of personnel

Risk Reduction:

- Eliminate vibration exposure by changing the work processes
- Reduce exposure by mechanisation
- Reduce exposure by good process control
- Avoid high-vibration tools, machines and accessories
- Maintain machines and accessories
- Reduce the transmission of vibration into the hand
- Reduce the durations of exposure (including job rotation)
- Keep warm and dry

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Over-Exposure

Over the Exposure Value Limit (400 Points)

If you have identified an Over-Exposure:

- Personnel must stop using HAVS tooling immediately
- Report to Line Supervision.
- Determine the level of over-exposure
- Contact your HSSE support and Occupational Health for specific actions.
- Personnel should not use HAVS tooling until a plan of action has been developed.

Specific actions, can vary due to level of over exposure, but may include:

- HAVS rest days, no use of vibration tooling
- Health surveillance assessments
- Interview and investigation into how we failed to control trigger time
- Restricted tool use, etc.

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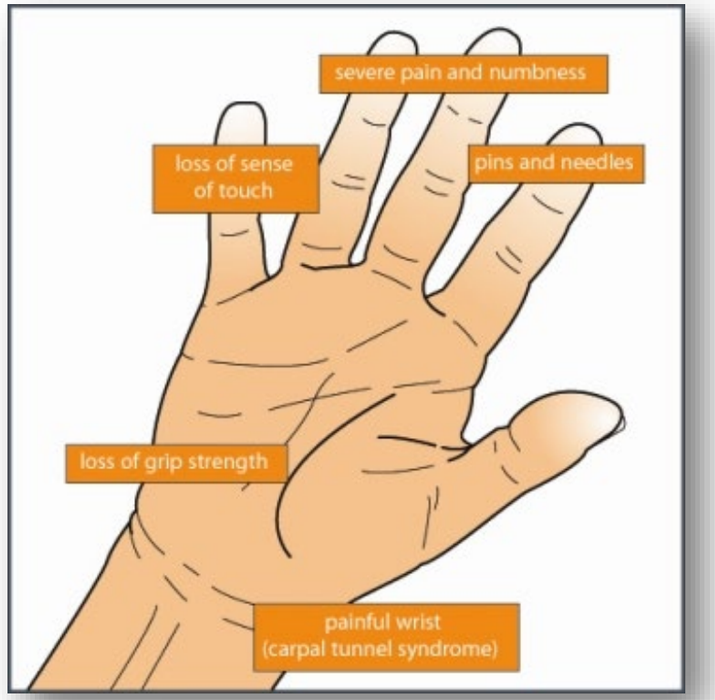
Health Surveillance

We complete annual health surveillance annually for HAVs tool Users, as identified from our Similar Exposure Group *(SEG)* Matrix

- Health surveillance questionnaires can involve just a short set of questions, for example, looking for any signs or symptoms are reported.
- These are reviewed by our Occupational Health Service Provider and may result in a requirement for further consultation.
- Be informed of new or deteriorating cases of HAVS that are being diagnosed *(with the consent of the affected person)*.
- You must report cases of HAVS and CTS *(Carpal Tunnel Syndrome)* under RIDDOR.
- When finding new cases or worsening conditions of existing cases – we will prepare a Personal Risk Assessment to mitigate exposure and reduce worsening of any identified condition.



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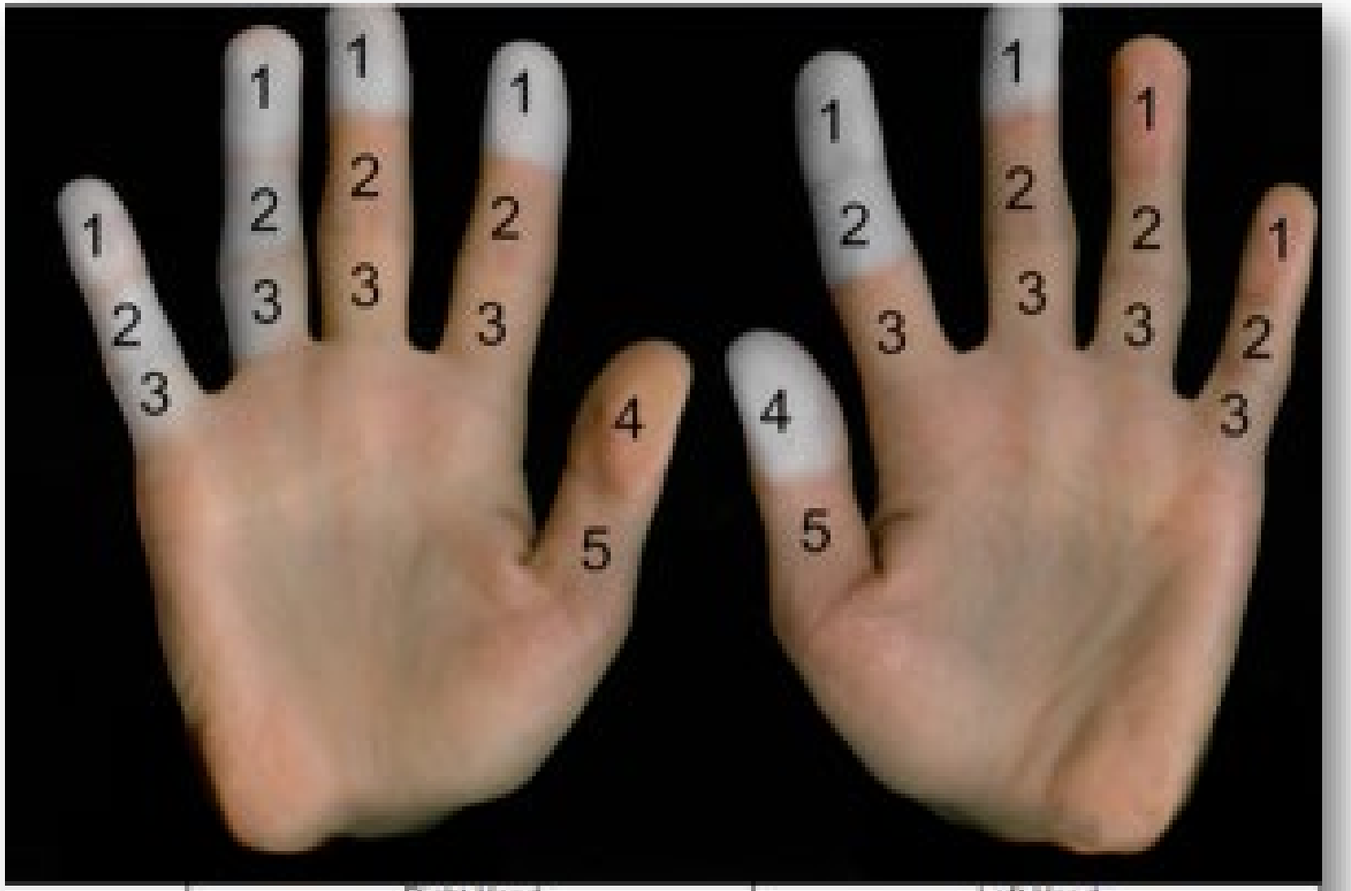
HAVS Damage Measurement



	Right Hand					Left Hand				
Finger	5	4	3	2	Th.	Th.	2	3	4	5
Possible Score	1+2 +3	1+2+3	1+2+3	1+2+3	4+5	4+5	1+2+3	1+2+3	1+2+3	1+2 +3
Exemplary score	6	6	1	1	0	4	3	1	0	0
Sum	14					8				

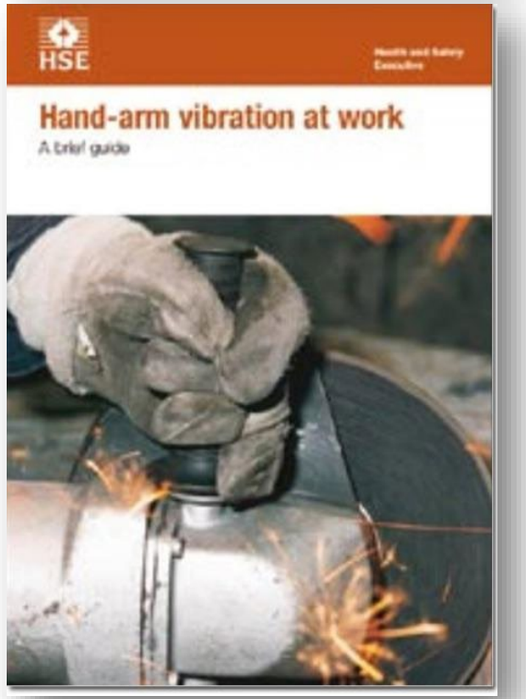
We measure the vibration damage on the **Stockholm scale** – it may affect more than one finger and more than one hand. As the damage gets worse it will progress up the finger.

Remember that HAVS Damage is irreversible.

What I must do…..

- Look for ways of working that avoid or reduce the need to hold vibrating equipment or work-pieces
- Plan your work to allow your hands to recover, e.g. not always complete daily dose in one
- Learn to recognise the early signs and symptoms of HAVS.
- Report any symptoms promptly to your Supervisor or the person who does your health checks.
- Use any control measures your employer has put in place to reduce the risk of HAVS.
- Inspect your tools, stop using them if they are not running smoothly
- Keep your hands warm
- Don’t use untagged tools
- Do not exceed your daily trigger time *(Usage Time or points)*
- Complete the Exposure Record Forms
- Ask your Supervisor or Safety Rep for advice, should you have a concern.

Remember – You may own and use HAVS Tooling at home – this can affect your health also



Further reading: https://www.hse.gov.uk/pubns/indg296.htm

HAND SAFETY

THINK SAFE - STAY SAFE – HOME SAFE

Hand Hazard Control

What can we do differently to reduce risk?

Consider the **Hierarchy of Controls** 👉 to minimise exposure to your Hands

HAND SAFETY

5 Key Behaviours for Safe Hands

1. **Think** about your task and your hand exposures: *Bring into Toolbox Talks*
2. **Assess** the hazards to your hands: *20s Scan at site*
3. **Mitigate Hazards:** Hierarchy of control, Isolations
4. **Select** effective mitigation and protection
5. **Protect:** PPE

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Think Hands

One Pair For Life

Hands for work and home – look after them always