



Health & Safety Executive  
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# Hand-arm Vibration & Recent Developments

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# What we are going to talk about

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- HAV Refresh
  - Issues
  - What are we looking for
  - Good / bad practise
- What's coming
  - Civil claims increases
  - HSE LA Control project
- **Aim:** To feel comfortable dealing with N & V

# Controlling the Risks from Hand-arm Vibration

HSE guidance and expectations

# Why ?



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- Regulations
    - Control of Vibration at Work Regulations 2005
    - Not new (HSG88)
    - HSE Topic
  - Industrial Injuries
    - 1.7M workers exposed above EAV
    - 1M workers exposed above ELV

# Who is exposed to HAV?

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- Greatest numbers in construction industry and related trades
- Highest levels of exposure in fabrication, foundry fitters, stone masons, MVR
- Significant progress has been made in construction – still a long way to go.

# Causes of HAVS

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- HAVS covers a range of issues
- Caused by or aggravated by hand vibration
- Influenced by
  - Cold / wet hands
  - Lack of regular breaks
  - Ergonomics / grip loads

# Effects of Hand-arm Vibration Syndrome (HAVS)



- Numbness, tingling, poor sense of touch/temperature  
– **Disabling in advanced cases**
- “Vibration white finger”  
– typically cold-induced attacks
- Pain, weak grip, etc
- Lifestyle impact
- **Avoidable**

# The Vibration Regulations – in Brief

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- Exposure Action Value (EAV) **2.5 m/s<sup>2</sup> A(8)**
- Exposure Limit Value (ELV) **5 m/s<sup>2</sup> A(8)**

***Exposure not Emission***

# Duties of employers (at any exposure level)



- **Assess** vibration risks to health and safety
- **Eliminate** vibration *risk* at source, or reduce to lowest reasonably practicable level
- Provide **information and training** for employees on vibration risks and control measures



# Duties of employers if the EAV is *likely* to be exceeded:



- Reduce *exposure* as low as reasonably practicable
- Introduce health surveillance



# Duties of employers: the exposure limit value

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- Ensure employees are **not** exposed above the ELV
  
- If they are, take action

# Issues We See....Management

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- Management Issues
  - Policy issues
  - Lack of support / direction / knowledge sharing
  - Over reliance on ‘system’
- Management of contractors
  - No management!
- Vibration not considered at planning / design stage (CDM)

## Issues We See....Application

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- Majority of effort spent quantifying exposure
- Poor or minimal
  - Planning of project / job
  - Maintenance
  - Training
  - Health Surveillance
    - Inadequate
    - Not acted upon

***How do we move forward ?***

# Where Do We Start.... Suitable & Sufficient RA Identifies....

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- Where there may be a risk from HAV
- **A soundly based estimate of exposure and comparison with EAV / ELV**
- Available risk controls
- Identification of individuals at more risk
- Steps to control & monitor risks

***Can Be Done At Planning Stage***

***Emphasis On Action***

# What we usually see....



# Our Challenge

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## Away from...

- HAV assessment as an end in itself
- Excessive effort on the quantification of exposure

## Towards...

- Prepare an action plan to reduce risks (Risk assessment)
- Keep it simple
- Focus on controls

**Integrated Approach to Health & Safety**  
**Look for links with noise, dust control etc**

## What does vibration control look like?



- 
- Look for alternative processes, equipment, methods when planning jobs
  - Keep up with good industry practice
  - Consider vibration & efficiency when selecting tools and machinery
  - Consider people – Rotation, time limits, training
  - Maintenance & repair
  - Links with noise policy etc

***Consider at the planning / design stage - CDM***

# Mechanisation removes the risk

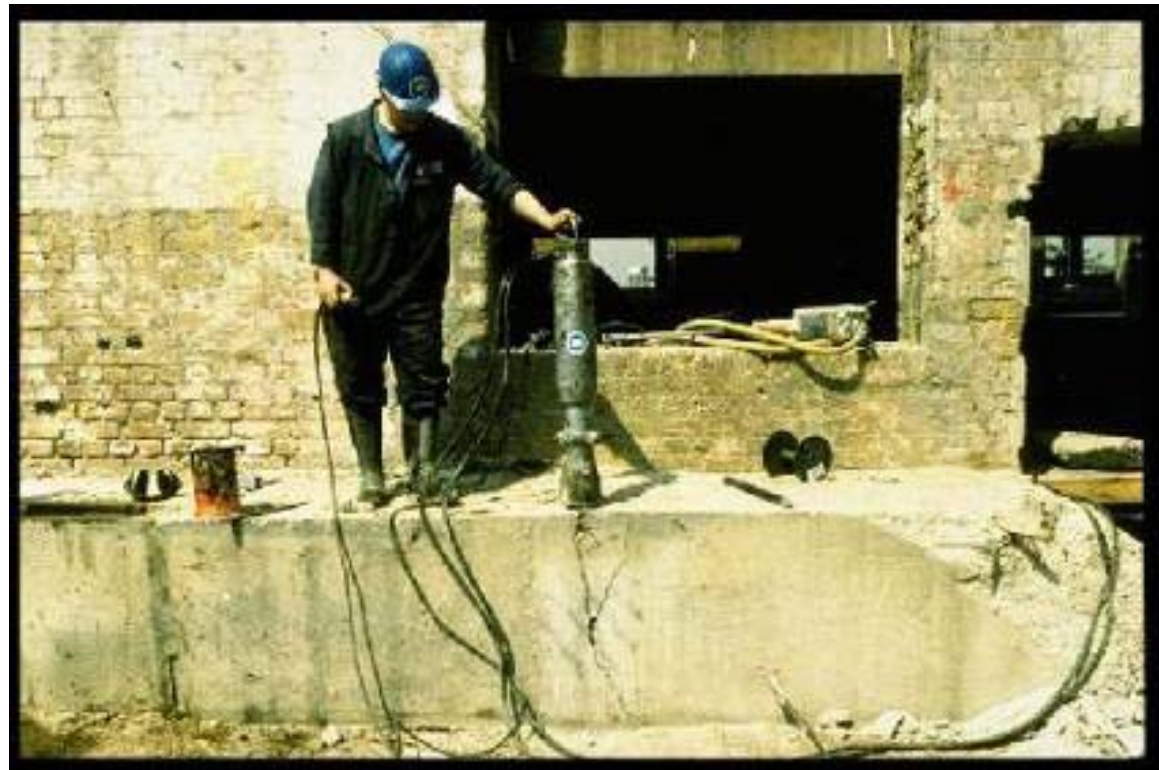


Reduces Risks From:  
HAV / Noise / Ergonomics /  
Debris / Traffic....



# Hydraulic bursting

- Some drilling is required
  - Efficient drills are lower risk than breakers
- Bursting has low noise and vibration
- Noise and vibration exposures are reduced



# Demolition without noise/vibration



- Use hydraulic crushers instead of demolition hammers
- Reduced HAV / Noise / Dust / Annoyance / Project risk etc

# Example – Operator Training / Maintenance

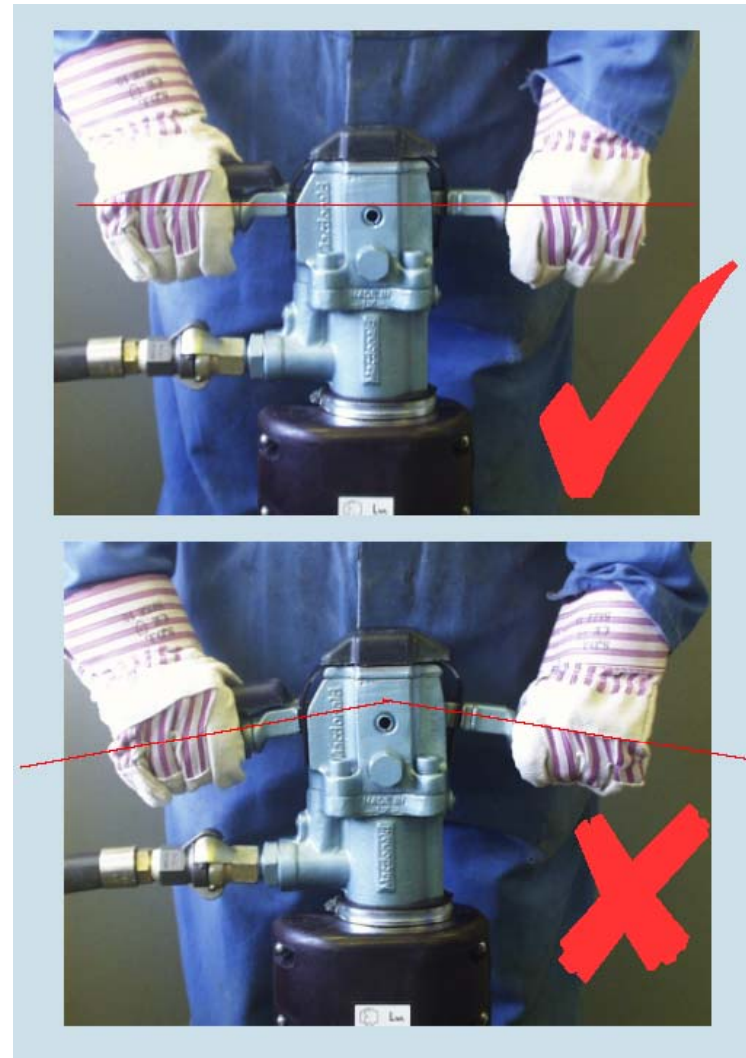


## Anti-Vibration Features

- Do operators know how to use features

## Maintenance

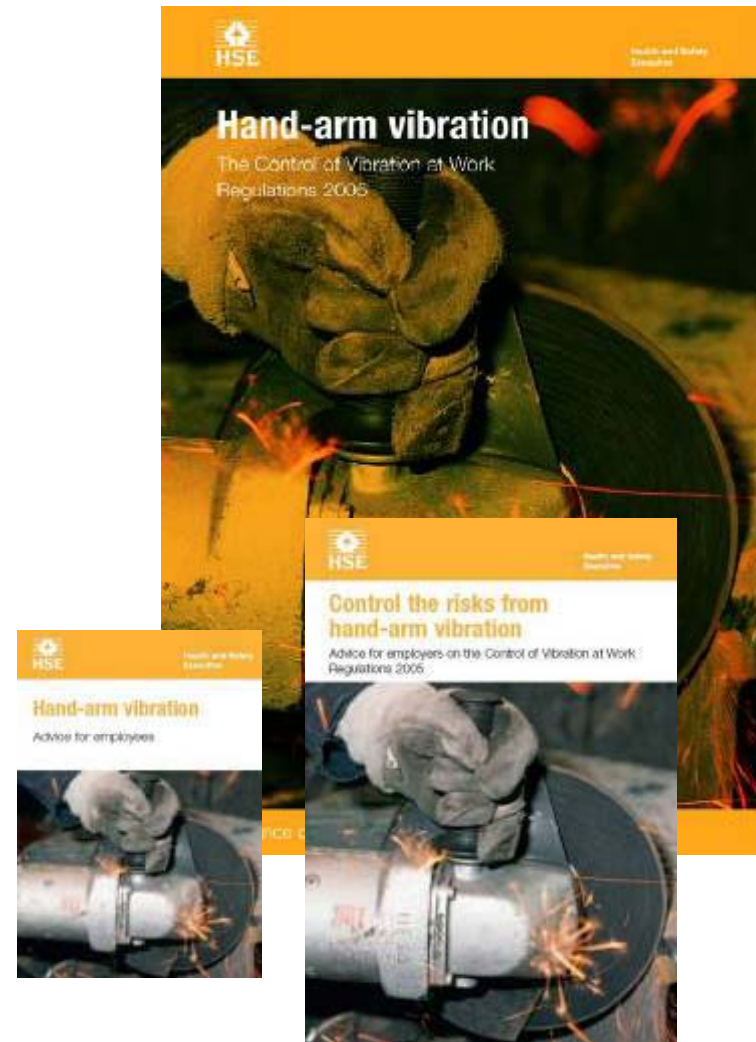
- Is equipment maintained as per manufacturer guidance
- Do operators carry out daily checks / know how to check equipment



# HSE's guidance on HAV



- Guidance book (L140)
- Employers' leaflet
- Employees' pocket card
- Vibration web site
- [www.operc.com](http://www.operc.com)
- HAV Topic pack





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# HAV

## What's Coming



# Civil Claims Increase...



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Claim culture is rapidly developing for HAVS:

- Norfolk Council 2008
  - £200k
- Liverpool Council 2007
  - £100k
- First Bus 2007
  - £100k
- **How will this impact approach?**

# HSE / LA Control Project.....



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- Why ?
    - LA's large employers
    - Volume of injury reports
    - Do we need more than Riddor investigations
  - Phase 1 - Approach
    - Policy / RA's / Basic Controls / Health Surv
  - Phase 2 – The detail
    - Progress / Acting on RA / Controls / Training / Consistency.....

# What have we found.....

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- The Good...
  - Policy and knowledge good
  - Some good examples of controls
  - Some good examples of training
  - Good communication through working groups
- The Could Be Better...
  - Lack of consistency across divisions
  - **Too much measuring**
  - Slow to react
  - Health surveillance variable

# What next.....



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- How should we move forward ?

## Further Help

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- N&V Specialists:
  - Bruce Appleton (Aber / Inver / Glas)
  - Stuart McGregor (Edin / N. England)
- Health & Safety Executive
  - [www.hse.gov.uk/noise](http://www.hse.gov.uk/noise)
  - [www.hse.gov.uk/vibration](http://www.hse.gov.uk/vibration)
  - Infoline : 0845 345 0055
- [www.operc.com](http://www.operc.com)