



Hardfacts

Norwich Union Risk Services

Ref No 6021 (v5)

June 2006

Hand Arm Vibration Syndrome (HAVS)

Introduction

Hand Arm Vibration Syndrome (HAVS) will often affect the people who regularly use high vibration equipment such as hand tools. One of the most common types of HAVS is Vibration White Finger. The vibration of the tool or any material being vibrated is transmitted to the hands where it could cause a range of problems such as bone and joint disorders, damage to the nerves and muscles, but most characteristically, whitening of the fingers as a result of disruption to the blood flow.

The early symptoms of HAVS are often only the whitening of the finger tips but the area affected will gradually increase and extend down the finger, even after exposure to the vibration. The attacks can often be set off by cold. During the attack, the fingers will turn white and may be numb or a tingling sensation may be felt. They can last up to half an hour and be very painful, especially as the blood returns to the fingers and the colour turns red.

Identifying HAVS Risks

Many common tools and processes produce high levels of vibration. Pneumatic drills or jackhammers, grinders, riveting and chipping hammers are all good examples.

The degree of risk will depend on many factors. The amount of vibration, how long the tools are used for, the working posture and how cold it is will all make a difference. Consult with employees, safety reps. and supervisors on the subject and what measures need to be put in place.

Legal Requirements

Regulations dealing with vibration risks were introduced in 2005, though some of the requirements do not come fully into effect immediately.

The Control of Vibration at Work Regulations require employers to:

- Assess the risks from vibration to employees and decide if the levels are likely to exceed
 - the daily exposure action value (EAV) or
 - the daily exposure limit values (ELV)
- If above the EAV-
 - to eliminate or reduce the risks to as low as reasonably practical
 - provide health surveillance
- If above the EAV-
 - Reduce the exposure to below ELV
- Provide information and training to exposed employees and the steps to control them

Exposure Action Values (EAV) and Exposure Limit Values (ELV)

The EAV is a daily amount of vibration above which employers are required to take action to control exposure. The EAV for hand-arm vibration is a daily exposure of $2.5 \text{ m/s}^2 \text{ (A)}_8$ (a value averaged over an 8-hour exposure period).

The ELV is the maximum level of exposure permitted by the regulations. The ELV is a daily exposure of $5 \text{ m/s}^2 \text{ (A)}_8$. Exposure levels must be reduced to below this level.

Risk Assessments

The purpose of the assessment is to determine whether or not the EAV or ELV are exceeded, and if so to determine what needs to be done to reduce the risks.

- Make a list of equipment that may cause vibration
- Collect information about the equipment on vibration risks (from manufacturer)
- Identify the employees who use the equipment
- Note for how long the employees are actually in contact with the machinery when vibrating. (this "trigger time" may only be a few minutes in several hours of working time)

- Ask about other problems such as weight and awkward postures

If information on the vibration is not available, you can estimate it from the figures in INDG 175 (see references).

Risk Control

When the risks have been identified, they can then be reduced by measures such as-

- Using alternative work methods
- Replacing old equipment with new
- Improving the maintenance on the equipment
- Providing clothing to keep employees warm and dry (this helps to improve blood supply to the hands)
- Some tools might be modified by adding anti-vibration handles or plastic vibration reducing materials on the handles.
- The number of tasks where vibrating tools need to be used could be reduced. Improving quality standards and eliminating the need for excess material to be removed by grinding etc.
- Reducing exposure times by job sharing or job rotation.

Health Surveillance

If there are any employees who exposed to vibration levels above the EAV or are otherwise thought to be at risk, then their health should be regularly checked to identify any employees who may be at special risk (because of any existing medical conditions); detect any early signs of vibration-related disease; check the effectiveness of controls. Basic health surveillance consists of seeking information about early symptoms, possibly using a questionnaire. As an alternative, health surveillance can be provided by an occupation health service provider.

Training and Information

Employees should be provided with information on-

- The effects of hand-arm vibration
- Sources of hand-arm vibration
- The findings of the risk assessment
- The symptoms and how to report them
- Ways of reducing the risks

INDG 296 (see references) can help in providing this information and training.

Key Action Steps

- Undertake a risk assessment to identify if the EAV or ELV are exceeded.
- Consider measures required to reduce the risks from Hand Arm Vibration.
- Decide upon any health surveillance
- Implement and maintain a stringent policy for purchasing new power tools.

References

- INDG 175 Control the risks from hand-arm vibration- Advice for employers on the Control of Vibration at Work Regulations 2005
- INDG 296 Hand Arm Vibration- Advice for employees
- INDG 338 Power tools: How to reduce vibration health risks

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Norwich Union Risk Services operates a Risk Helpline during normal business hours for the cost of a local telephone call. The telephone number is:
0845 366 66 66
www.nu-riskservices.co.uk