



Health surveillance for hand-arm vibration syndrome

Hand Arm Vibration Syndrome (HAVS) is the medical term for symptoms that may occur in the fingers, hands and arms, caused by prolonged use of vibrating tools or machinery. Most members of the industry will have heard of the condition and symptoms associated with HAVS, so the purpose of this article is to provide guidance on what is expected from employers in terms of employee protection.

Vibration Regulations require employers to consider the following:

- Ensure risks from vibration are controlled
- Provide information, instruction and training to employees at risk
- Provide suitable health surveillance

‘Health surveillance’ is another term familiar to a large part of the industry, and is pertinent to the management of HAVS. Health surveillance should be provided by employers, to employees, who meet the following criteria:

- Are likely to be regularly exposed above the exposure action value (EAV) threshold
- Are likely to be exposed occasionally above the action value, where there may be a health risk
- Already have a diagnosis of HAVS

Vibration Regulations stipulate specific, measurable limits are adhered to. These limits come in two forms:

1. Exposure action value (EAV) is a daily amount of vibration, above which employers are required to take action to control exposure. For hand-arm vibration, the EAV is set at 2.5m/s^2 (A8).
2. Exposure limit value (ELV) is the maximum amount of vibration that an employee may be exposed to on any single day. For hand-arm vibration, the ELV is set at 5 m/s^2 A(8).

Both limits are based on the vibration at the point of contact, as well as the time spent gripping the equipment. Manufacturers and suppliers of equipment are obliged to design equipment which will reduce vibration as much as possible, as well as publishing information relating to:

- Level of vibration produced by the equipment, or that the equipment has produced a vibration emission of less than the daily exposure action value of 2.5m/s^2 (A8)
- Information on safe use, maintenance requirements and warnings associated with vibration

In addition to the specific vibration level, many manufacturers also adopt a traffic light system, to highlight equipment that represents a low, medium or high risk of vibration.

The power tool manufacturer, Makita, provide extensive information relating to vibration on their website, as well as a tool for calculating vibration exposure: <http://www.makita.com/new-vibration-calculator.html>

The health and safety executive have produced a hand-arm vibration calculator which may be downloaded and used to calculate values associated with different types of equipment over a range of time scales: <http://www.hse.gov.uk/vibration/hav/vibrationcalc.htm>

Together with equipment vibration data supplied by manufacturers, hand-arm vibration calculators may be used to calculate exposure from equipment on a daily and longer-term basis, and ensure the levels that individuals are exposed to, do not exceed limits.

How to undertake health surveillance

A tiered system of health surveillance is a useful way of assessing new and existing employees alike, to ensure they are protected from the long term effects of using vibrating equipment.

1. Tier 1

This is an initial assessment for new or existing employees, to establish a baseline from which future assessments may be compared. A simple, pre-exposure assessment in the form of a self-administered questionnaire may be used, to capture information about an employee's medical history. Whilst employees with no symptoms of HAVS or medical history which may preclude them from using vibrating equipment, may be considered fit for work with exposure to HAV, employees who **do** show symptoms should be identified at this stage, and referred to a medical professional. Individuals who suffer from specific vascular or neurological disorders must not be exposed to vibration at work.

In addition, a free leaflet, produced by the Health and Safety Executive (HSE) may be given to employees, to alert them to the risks and consequences of using vibrating equipment. The leaflet also educates employees on the practical measures they can take, to reduce risks arising from transmission of vibration. Link to leaflet: <http://www.hse.gov.uk/pubns/indg296.pdf>

2. Tier 2

This is an annual questionnaire which, similar to the tier 1 assessment, can be self-administered by individuals who are at risk from HAVS, but have not reported any symptoms in the interim. An individual within the company may be nominated to remind and communicate with colleagues about the risks and symptoms associated with HAVS. This person need not be qualified, but should have received training from an occupational professional, and understand the symptoms, health surveillance procedures and need for confidentiality.

For most operatives, tiers 1 and 2 should cover all necessary health surveillance. However, if symptoms appear for the first time or progress, workers should be encourage to report symptoms, which will trigger further assessment via tiers 3 and 4.

3. Tier 3: Assessment by qualified person

4. Tier 4: Formal diagnosis

Record keeping

Employers are encouraged to keep health records for as long as employees are under health surveillance.

Additional information

HSE advice for employers: <http://www.hse.gov.uk/vibration/hav/advicetoemployers/index.htm>