

Relevant Legislation

Management of Health and Safety at Work Regulations 1999
Control of Vibration at Work Regulations 2005

General

Regulations on Hand-Arm Vibration Syndrome and Whole Body Vibration Syndrome came into effect in July 2005 and have enacted the requirements of the European Directive on Physical Agents.

Hand-arm vibration (HAV) is a widespread hazard for employees in many industries and occupations. HAV exposure at work can arise from the use of hand-held power tools (such as grinders or hammer drills), hand-guided machinery (such as lawnmowers and plate compactors) and hand-fed machines (such as pedestal grinders). It is now widely accepted that prolonged and regular exposure to vibration can have a detrimental affect on an operator's health. However, the risks from vibration can be effectively controlled and employees can be protected from ill health effects caused by vibration. Therefore the Council will assess the risks from vibration and put in place effective procedures in order to control them.

Exposure Limit Values and Action Values

The Exposure Limit Value (ELV) is the maximum amount of vibration an employee may be exposed to on any single day and which must not be exceeded. The EAV is the level of daily exposure to vibration above which Managers are required to take certain actions to reduce their employees' exposure. These will include health surveillance, providing tools which produce lower vibration levels or job rotation. It should be noted that practical control measures should always reduce exposure to a level which is 'as low as reasonably practicable' (ALARP). Simply working below the following levels on a continuous basis must not be regarded as safe exposure.

For hand-arm vibration:

- the daily exposure limit value (ELV) is $5 \text{ m/s}^2 \text{ A(8)}$
- the daily exposure action value (EAV) is $2.5 \text{ m/s}^2 \text{ A(8)}$

For whole-body vibration:

- the daily exposure limit value (ELV) is $1.15 \text{ m/s}^2 \text{ A(8)}$
- the daily exposure action value (EAV) is $0.5 \text{ m/s}^2 \text{ A(8)}$

If, through the risk assessment process, monitoring or by taking vibration measurements Managers discover that the ELV is being exceeded then they must:

- immediately reduce the employees exposure to vibration to below the ELV
- identify the reason why that limit is being exceeded, and
- modify the measures taken to prevent it from being exceeded again.

If an employee's exposure to vibration is usually below the EAV but varies markedly from time to time and may occasionally exceed the ELV, the above may not apply provided that:

- any exposure to vibration averaged over one week is less than the ELV
- there is evidence to show that the risk from the actual pattern of exposure is less than the corresponding risk from constant exposure at the ELV
- the risk is reduced to ALARP, taking into account the special circumstances and
- the employees concerned are subject to increased health surveillance

Risk Assessment

A suitable and sufficient risk assessment must be carried out to enable Managers to make a valid decision regarding the measures necessary to prevent or adequately control the exposure of their employees to HAV.

The risk assessment should consider:

- Magnitude, type and duration of exposure
- Employees whose health is at particular risk
- Any effects of vibration on the workplace and work equipment
- Information provided by the manufacturers of work equipment and the availability of replacement equipment designed to reduce exposure to vibration
- Specific working conditions, such as low temperatures
- Appropriate information obtained from health surveillance

However, some employees with existing health problems may still be at risk from exposures below the EAV and need to be protected by additional control measures.

Control Measures

Where it is not reasonably practicable to eliminate the risks at source, Managers should aim to reduce them to ALARP. Exposures below the EAV are not risk free, therefore, action should not stop at this level of exposure, if further reductions can be achieved at a reasonable cost. Managers must consider:

- using alternative methods of working which eliminate or reduce exposure to vibration
- the selection of work equipment taking into account ergonomic design, its intended use and ensuring it produces the least possible vibration
- the provision of auxiliary equipment which reduces the risk of injuries caused by vibration for example, using balanced driving wheels, or ensuring that drills or chisels are sharp
- using appropriate maintenance programmes for work equipment and the workplace
- the design and layout of workplaces, work stations and rest facilities
- suitable and sufficient information, instruction and training for employees, such that work equipment may be used correctly and safely, in order to minimise their exposure to vibration
- limiting the duration and magnitude of an employee's exposure to vibration
- introducing appropriate work schedules which have adequate rest periods; and include the provision of protective clothing in order to protect employees from cold and damp.

Health Surveillance

Health surveillance is a programme of systematic health checks the purpose of which is to identify early signs and symptoms of disease and allow action to be taken to prevent its progression. Health surveillance is also a useful tool for Managers in monitoring the effectiveness of their control measures. Managers must ensure that employees who are at risk from exposure to HAV are included in the health surveillance programme. Health surveillance must be provided not only for employees likely to be exposed to levels above the EAV but also for others whom

the risk assessment identifies may be at risk, such as employees who are particularly sensitive to vibration or who may have restrictions place upon them by the Occupational Health Unit (OHU). Health surveillance is not appropriate for individuals whose daily exposures exceed the EAV only on rare occasions and where the risk assessment identifies that the risk of ill health is consequently very low.

Health surveillance within the Authority will consist of pre-employment screening and current employment screening. Both forms of surveillance will require employees to complete a health questionnaire and, where necessary, attend the OHU for clinical assessment.

Once an employee has been referred to the OHU they will be seen by an Occupational Health Advisor and a diagnosis made. From this the OHU will explain the significance of the results to the employee and give advice on the risks of continuing with exposure to vibration. In addition, the OHU will then inform the relevant line Manager of their findings, in particular whether or not the employee is fit to continue work involving exposure to vibration. However, the OHU will not disclose medical-in-confidence information to Managers without the written consent of the employee.

Managers must then prevent further harm to the individual by acting on any advice from the OHU and, where necessary, removing the employee from tasks that expose him or her to HAV.

Information, Instruction & Training for Employees

Managers must inform employees who are exposed to HAV (including their union or employee safety representatives) about the results of the risk assessment. Employees must receive information and training to ensure that they fully understand the level of risk that they may be exposed to, how it is caused, the possible health effects and how these will be controlled, for example:

- which work equipment and processes cause risk from vibration risks and to what extent
- how their personal daily exposures compare with the exposure action and exposure limit values
- the control measures which must be applied to minimise exposure such as the correct selection, use and maintenance of equipment or by restricting exposure times

- what symptoms of ill health they should look out for, who they should report to and how they should report them.

Arrangements within Each Service

Controlling Hand-Arm Vibration at Work

All Services within the Council must devise and implement procedures to ensure the following objectives are achieved:

- Identify hand-arm vibration hazards
- Estimate each employee's likely exposure to hand-arm vibration
- Identify measures required to eliminate or reduce risks, control exposure and protect employees
- Identify through risk assessment any employees who should be referred to the OHU for health surveillance
- Draw up, implement and record an action plan

In order to achieve the above objectives the relevant Head of Service is responsible for ensuring that suitable and sufficient arrangements are made to fulfil the requirements detailed below:

1. Assign Responsibilities

Identify the relevant Managers/Supervisors responsible for controlling the work and ensure they are aware of their responsibilities in this regard and that they are competent to discharge them.

2. Assess the Risks

Managers/supervisors responsible for controlling employees' exposure to hand arm vibration must undertake a risk assessment which eliminates or reduces risks by implementing good practice, suitable control measures and management solutions. For the higher-risk cases, Managers/supervisors must plan and implement technical and organisational control measures for example:

- Design out the risk of hand-arm vibration
- Use machine mounted equipment instead of hand-held equipment

- Use actual measurements from power tools
- Use tools which produce the least possible vibration
- Use job rotation
- Purchase and maintain a database to control employees' exposure
- Ensure legal limits for exposure to hand arm vibration are not exceeded.

3. Training and Competence

Managers responsible for controlling employees' exposure to hand arm vibration must:

- Be competent to do so
- Ensure those supervising or completing the work are competent to do so
- Give employees information, instruction and training about the risks, control measures and safe working procedures. In addition, consult with employees and allow their participation in the risk assessment process.

4. Provision of Health Surveillance

Line Managers who are responsible for controlling employees' exposure to HAV must ensure that all members of staff who are deemed to be in scope of health surveillance are included in the health surveillance programme that the OHU provides and make certain that they attend their scheduled appointments. Line Managers should liaise with the OHU directly and implement any exposure restrictions or other requirements that the Occupational Health Physician imposes. They should also ensure that any employees who report symptoms of hand-arm vibration are referred immediately to the OHU.