LONDON METROPOLITAN UNIVERSITY

Control of Risk of Vibration Exposure Policy

Document Control Information	
Version control	3.0
Owned by:	Health and Safety Team
Latest amendment on:	April 2026
Approved by:	Health and Safety Committee
Approved on:	18/05/2026
Coming into effect on:	18/05/2026
Review date:	May 2029

Contents

Introduction

London Metropolitan University aims to reduce, or where possible eliminate the exposure of staff and others to risks of health from vibration in the course of work or on University Premisses. Persons whose hands are regularly exposed to vibration may experience from symptoms due to pathological effects on the muscles, circulatory and nervous system, and other tissues of the hand and arm.

The aim of this Policy is to ensure that all activities which may lead to vibration exposure are risk assessed, controlled and monitored with the implementation of a suitable Health Surveillance scheme, in accordance with the Control of Vibration and Work Regulations 2005 and other associated legislation.

Scope

This policy applies to all staff, students and others who may be exposed to risks of occupational diseases or injury because of exposure to hand-arm vibration during work/research/study. It provides information on:

- work activities that have the potential to cause hand-arm vibration syndrome,
- the level of risk associated with such activities and suggested ways of reducing any significant risks to an acceptable level

Definitions

What is hand-arm vibration?

Hand-arm vibration syndrome (HAVS) is a general term embracing various kinds of damage, which can be subdivided into three components including:

Vascular component

- generally known as ‘vibration-induced white finger’ (VWF) causing impaired blood circulation and blanching of affected fingers and parts of the hand.

Sensorineural component

- damage to the nerves that causes sensory symptoms, (example tingling and/or numbness)

Musculoskeletal component

- damage leading to reduced grip strength and dexterity, and reduced sensitivity both of touch and to temperature

Roles and responsibilities

1. **Deans of Schools and Professional Service Directors**

Deans of Schools and Professional Service Directors are responsible for ensuring appropriate arrangements are in place in their areas of control to ensure compliance with this policy and that these arrangements are communicated to staff.

2. Responsible Managers

Responsible managers (area/local managers) are those individuals in control of one or more work area and the activities which are undertaken in the area. These individuals have a responsibility to:

- Understand the scope and content of this Policy and the vibration regulations where this is relevant to work in their area.
- Ensure that necessary vibration risk assessments have been undertaken for any equipment used by those in their charge. See Appendix 1 for quick guide.
- Provide staff and students with information on the associated health risks and the control measures to be followed;
- Look for ways of working that avoid or reduce the need to hold vibrating equipment or workpieces (e.g. alternative work methods or different tools).
- Ensure vibration factors are considered when hiring or purchasing new equipment.
- Avoid types with high vibration when there are suitable lower vibration alternatives.
- Keep an inventory of equipment and its vibration emission.
- Implement and enforce vibration control measures.
- Maintain regimes for tools and equipment.
- Plan work schedules to minimise vibration exposures.
- Organise work and design workstations to avoid uncomfortable postures and the need for high manual effort to grip, push or pull equipment.
- Ensure employees maintain good blood circulation and wear appropriate clothing to help them keep warm and dry.
- Ensure employees are suitably trained in all aspects of operating equipment, including vibration control.
- Referring staff to Occupational Health formally (with details of risk assessment).
- Keep records of results of initial and annual screening records.

3. Users of Vibrating Equipment

- Use all equipment in accordance with the safety operating instruction
- Ensure all equipment is well maintained
- Report any defects or difficulties with vibrating equipment
- Co-operate with any programme of health surveillance which is identified as necessary following risk assessment
- Understand the early symptoms and reporting these to allow action to be taken to prevent it becoming more serious.

4. **Occupational Health Service**

- If the risk assessment indicated that there is a risk to health, or likely to be, or exposure above EAV value then the Occupational Health Service will be responsible for the provision of a suitable health surveillance scheme with a qualified physician.

5. **Health & Safety Team**

The Health & Safety Team is responsible for ensuring:

- Provision of advice regarding the mitigation strategies and risk management for vibration hazards.
- Consultation with Trade union safety representative(s) or employee representative(s) during proposals for controlling vibration risks and provision of health surveillance.
- Reporting diagnosed cases of carpal tunnel syndrome and hand-arm vibration syndrome to the HSE under RIDDOR where the condition is linked to occupational exposure.

Procedures

Potential sources of high vibration at the University

The following is not an exhaustive list of the types of equipment found in the University that may give raise to a vibration hazard:

- Workshop equipment, e.g. grinding tools, rotary burring tools, powered hammers, concrete breakers, sanders, and drills
- Grinders and other rotary tools
- Timber and wood machining tools
- Percussive tools

See Appendix 2 – Identifying Hazardous Work and Assessing Risk

Effects of vibration injury/disease



- Hand-arm vibration is vibration transmitted into workers' hands and arms. This can come from use of hand-held power tools (such as grinders or road breakers), hand guided equipment (such as pedestrian controlled floor saws) or by holding materials being worked by hand-fed machines (such as pedestal grinders or forge hammers).

- The hazard associated with regular and repeated exposure to hand-arm vibration includes the potential development of occupational diseases such as Hand-Arm Vibration Syndrome (HAVS) and Carpal Tunnel Syndrome (CTS).

- Symptoms of both may come and go, but with continued exposure to vibration they may become prolonged or permanent and cause pain, distress, and sleep disturbance. This can happen after only a few months of exposure, but in most cases, it will happen over a few years.

Symptoms and effects of HAVS include:

- tingling and numbness in the fingers which can result in an inability to do fine work (for example, assembling small components) or everyday tasks (for example, fastening buttons).
- loss of strength in the hands which might affect the ability to do work safely.
- The fingers going white (blanching) (Fig. 1) and becoming red and painful on recovery, reducing ability to work in cold or damp conditions, (e.g. outdoors).

Symptoms and effects of CTS can also occur and include:

Tingling, numbness, pain, and weakness in the hand which can interfere with work and everyday tasks and might affect the ability to do work safely.

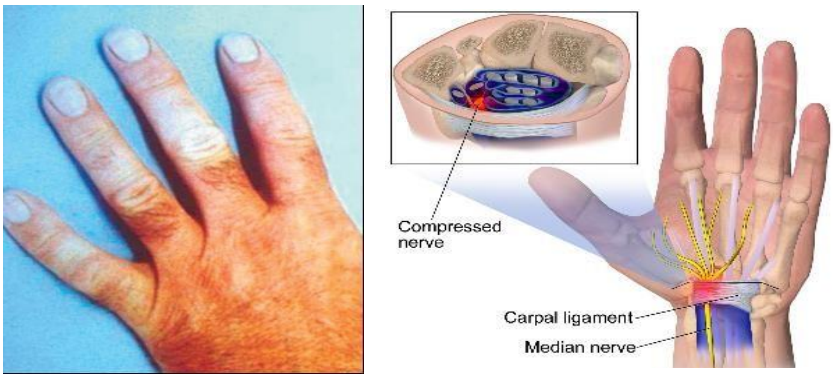


Fig. 1. Symptom of HAVS (blanching) and schematic representation of the CTS.

Managing risks from vibration exposure

Exposure Limits
The Control of vibration at work regulations 2005, include an exposure action value (EAV) and an exposure limit value (ELV) based on a combination of the vibration at the grip point(s) on the equipment or workpiece and the time spent gripping it. The exposure action and limit values are **average vibration magnitude values over the course of a 8-hour workday (A(8))**:

- A daily EAV of 2.5 m/s^2 that represents a clear risk requiring management; and
- A daily ELV of 5 m/s^2 that represents a high risk above which employees

should not be exposed.

The type of equipment, duration of use and reported signs or symptoms of HAVS or CTS are all good guides to the likelihood of vibration risk. Once the likelihood of risk is established, relevant Responsible Managers must:

- Look more closely at which workers, or groups of workers, are likely to be at risk and what can be done to reduce those risks.
- Ask if any users of equipment already have HAVS or CTS. If they do, take steps to stop symptoms getting worse, even if they are exposed below the EAV.
- Estimate the time workers spend holding the equipment or workpiece while it is vibrating. Very short periods may not be a problem, however the longer the equipment or workpiece is held the higher the exposure will be, so it is more important that the vibration is low.
- Ask users of equipment if they feel tingling or numbness during or after exposure to vibration. If they do, their exposure to vibration could be causing them harm.

Hazard context and assessing risk

It is essential to document the assessment of activities which may involve exposure to vibration. For example, the use of the following would prompt a risk assessment:

- grinders (all types and sizes (e.g. angle, die, straight, vertical etc));
- hand-fed equipment, (e.g. pedestal finishers, grinders);
- impact drills;
- chainsaws;
- sanders and polishers.

Damaged and very old models of equipment may be hazardous even when used for very short periods, and this effect should be taken into consideration during the activity risk assessment.

The risk assessment must be documented and must include:

- The persons at risk, and any relevant individual factors (i.e. pre-existing health conditions).
- Description of the activity – including the operating time and frequency of exposure, to ensure the EAV has not been exceeded.
- The vibration magnitude from each piece of equipment used (this must be provided by the manufacturer).
- Calculation of vibration exposure for each individual exposed. The HSE provides an Hand-arm vibration calculator, or alternatively, use the HSE's Ready Reckoner tool available in Appendix 3 to determine the daily vibration exposure;
- Identification of other risk factors, such as cold/wet environments (these increase the health risks when combined with vibration exposure).
- Any actions included in the action plan must be added to the existing controls section in the risk assessment once they have been actioned.

- The risk assessment should be reviewed whenever there is a change in vibration exposure or otherwise at least every 2 years.

Information, Instruction and Training

Most types of hand-held, hand-guided, or hand-fed powered equipment can cause ill health from vibration if used incorrectly.

Staff who may be exposed to vibration hazards whilst in the course of work at London Met, must receive instructions/information regarding, and complete training which will provide them with an understanding of:

- the health effects of hand-arm vibration.
- the sources of hand-arm vibration and how the vibration has been minimised, (e.g. the choice of process or equipment).
- whether they are at risk, including how their exposure compares with the exposure action and limit values.
- how to recognise and report symptoms.
- how health surveillance can help them remain at work and what LMU's arrangements are for health surveillance (see Health Surveillance below).
- the steps taken to minimise the risk.
- Where necessary, training in how to use equipment to minimise vibration and how to reduce grip force etc.

New staff who are likely to be exposed to vibration levels more than the EAV, should be made aware of the risks of vibration prior to first exposure, or at least within the first week of employment. This can be done at the same time as asking them to complete the H&S Induction checklist for staff.

Records and Monitoring

Records are included within the Roles and Responsibilities section.

Health Surveillance

Some people will develop early signs and symptoms of HAVS or CTS even at low exposures (for example, if they are susceptible to vibration injury and are regularly exposed to vibration at around the exposure action value, usually for some years). Through effective risk management and with a health surveillance scheme in place, we can identify any harm early on, so that appropriate action by stakeholders will prevent disability.

Health surveillance is carried out when exposures are at or above the EAV and in other circumstances where there is risk, for example, after diagnosis of HAVS and exposure continues but below the EAV. Managers must identify and make a formal referral to OH of those at risk for screening initially and then annually. Managers need to keep records of results of health surveillance on file as per Health Surveillance Policy.

Legislation and Standards.

In addition to the Control of Vibration at Work Regulations 2005, a number of other codes of practice and guidance notes are applicable to the control of risk from hand-arm vibration, as follows:

- Hand Arm Vibration: The Control of Vibration at Work Regulations, 2005 (HSE, L140)
- Hand Arm Vibration: A guide for employees, INDG296, 2014 (Rev 2), HSE
- Hand-arm vibration at work: a brief guide, INDG175, 2012 (Rev 3), HSE
- Management of Health and Safety at Work Regulations 1999
- Supply of Machinery (Safety) Regulations 2008
- Provision and Use of Work Equipment Regulations 1998
- Providing Health Surveillance, HSE
- Health Surveillance for HAVS: a guide for employers, HSE

The hyper-links give access to the most up to date version of these documents directly from the HSE website.

Appendix 1 – Vibration Risk Assessment Quick Reference Guide

1. Identify the equipment that vibrates and find out about the levels of vibration - information should be available from suppliers/manufacturers (they have a duty to supply it). Staff are likely to have a subjective opinion from using the equipment. Consider vibration monitoring.
2. Rank equipment in terms of hazard contribution, i.e. the level of vibration and how much they are used.
3. Discuss with staff whether they have noticed any problems with certain types of equipment or individual machines.
4. Check the workload of individuals who use vibration tools and at least estimate the exposure they may be receiving.

To reduce the risk:

1. Check whether it is necessary to use the current types of tool or whether a task may be achieved a different way.
2. Minimise the need for operations and tools that expose workers to hazardous vibration.
3. Minimise the forces needed to control tools.
4. Consider the maintenance of the equipment and whether there is likely to be deterioration in anti-vibration mountings, etc. Ageing and/or poorly maintained equipment is likely to give worse levels of vibration.
5. Reduce exposure times, e.g. by breaking up activities to minimise prolonged exposure.
6. It is important that operators can maintain good blood circulation, gloves can be helpful although alone, and they are not the solution to a vibration problem.
7. Heated handles, warm, weatherproof clothing, heating pads are amongst the other aids that can be considered.

Appendix 2 – Identifying Hazardous Work and Assessing Risk

Common tools and processes likely to create hazardous levels of vibration are listed below. They will not always cause injury because the risk also depends on many other factors (see factors contributing to risk below).

Powered percussive metal working tools/Powered hammers used for:

- riveting.
- hammering.
- clinching.
- flanging.

Percussive tools used in stone working, quarrying, construction etc.

- Percussive hammers
- Vibratory compactors
- Concrete breakers.

Pokers

- Sanders
- Drills used in demolition or road construction

Grinders and other rotary tools

- Pedestal grinders.
- Hand-held portable grinders; flex-driven grinders and polishers.
- Rotary burring tools.

Timber and wood machining tools

- Chainsaws.
- Bush cutters (clearing saws).
- Hand-held or hand-fed circular saws.
- Electrical screwdrivers.
- Mowers and shears.
- Hardwood cutting machines; barking machines; strimmers.

Other processes and tools

- Drain suction machines.
- Nut runners.
- Concrete vibro-thickeners; concrete levelling vibro-tables
- buffers/polishers.

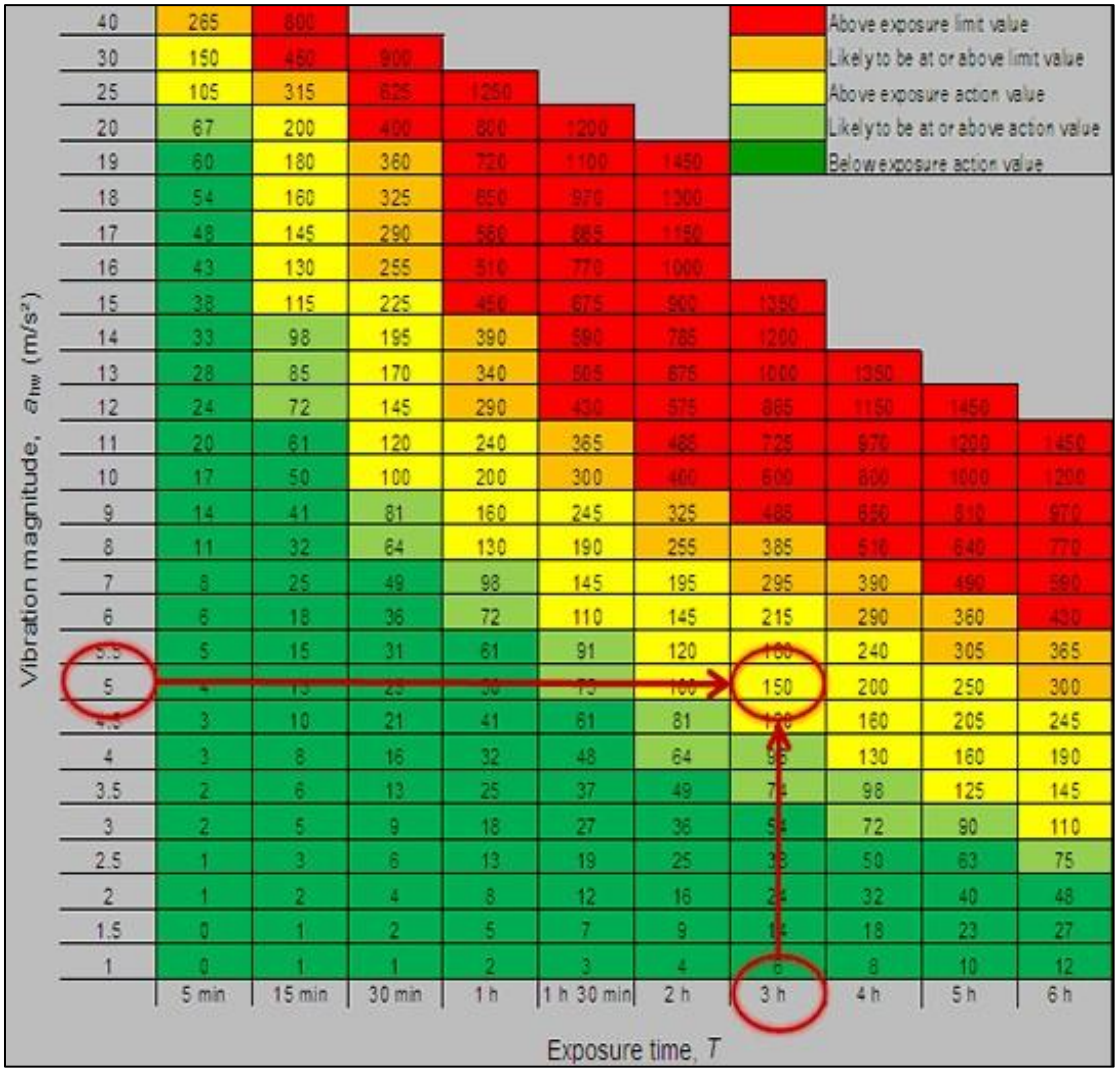
This list is not exhaustive.

It is safer to regard regular prolonged use of any high vibration tool or machine as suspect, especially if it causes tingling or numbness in the user's fingers after about 5 to 10 minutes of continuous operation.

Appendix 3 – HSE Exposure points system and ready-reckoner

The table below is a 'ready reckoner' for calculating daily vibration exposures. All you need is the vibration magnitude (level) and exposure time. The ready reckoner covers a range of vibration magnitudes up to 40 m/s^2 and a range of exposure times up to 10 hours.
The exposures for different combinations of vibration magnitude and exposure time are given in exposure points instead of values in m/s^2 A(8). You may find the exposure points easier to work with than the A(8) values:

- 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/s^2 A(8)) is equal to 100 points;
- the exposure limit value (5 m/s^2 A (8)) is equal to 400 points.



Using the ready reckoner

- Find the vibration magnitude (level) for the tool or process (or the nearest

value) on the grey scale on the left of the table.

- Find the exposure time (or the nearest value) on the grey scale across the bottom of the table.
- Find the value in the table that lines up with the magnitude and time. The illustration shows how it works for a magnitude of 5 m/s^2 and an exposure time of 3 hours: in this case the exposure corresponds to 150 points.
- Compare the points value with the exposure action and limit values (100 and 400 points respectively). In this example the score of 150 points lies above the exposure action value.
- The colour of the square showing the exposure points value indicates whether exposure exceeds, or is likely to exceed, the exposure action or limit value:

	Above limit value
	Likely to be above limit value
	Above action value
	Likely to be above action value
	Below action value

- If a worker is exposed to more than one tool or process during the day, repeat steps 1 – 3 for each one, add the points, and compare the total with the exposure action value (100) and the exposure limit value (400).