Reference Number: UHB 466 **Version Number:** 1	**Date of Next Review:** September 2022 **Previous Trust/LHB Reference Number:** N/A

CONTROL OF HAND ARM VIBRATION EXPOSURE AT WORK PROCEDURE

Introduction and Aim

Hand transmitted vibration is usually associated with the use of hand held equipment where the vibration energy is transferred to the subject as a result of them holding the equipment. According to the Control of Vibration at Work Regulations 2005, 'hand-arm vibration' means mechanical vibration which is transmitted into the hands and arms during a work activity.

Hand Arm Vibration can cause a range of conditions collectively known as Hand Arm Vibration Syndrome (HAVS), as well as specific diseases such as carpal tunnel syndrome.

Possible soft tissue damage may lead to pain and stiffness in the hands and joints of the wrists, elbows and shoulders. Vibration exposure can give rise to vascular disorders commonly known as 'vibration-induced white finger' (VWF) which causes impaired blood circulation and blanching (whitening) of affected finger segments and parts of the hand. Neurological and muscular damage may also occur which may lead to numbness and tingling in the fingers and hands, reduced grip strength and dexterity, and reduced sensitivity both of touch and to temperature.

Hand Arm Vibration Syndrome, is reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) where the person's work involves regular use of percussive or vibrating tools, or the holding of materials which are subject to percussive processes, or processes causing vibration.

Cardiff and Vale University Health Board will, as far as reasonably practicable, eliminate vibration at source and ensure that control measures are implemented to reduce vibration exposure. These measures will follow the 'hierarchy of controls' as set out in the Management of Health & Safety at Work Regulations 1999 and the Control of Vibration at Work Regulations 2005.

Objectives

- To prevent injury to staff and any other relevant parties by preventing exposure to vibration or limiting exposure if this is not possible.
- To inform Managers of the risks to staff from vibration and what action they need to take.
- To ensure employees are safe to work with vibrating equipment through pre-employment screening, periodic assessment and specific awareness training.
- To detect evidence of ill-health and/or vibration-induced injury and to ascertain if they are related to vibration exposure at work.
- To take action where exposure to hand/arm vibration is likely to exceed a value of 2.5m/s2 A(8).
- To prevent daily exposures to hand/arm vibration that exceed 5m/s2 A(8).
- To comply with legislation and HSE guidance.
- To inform, instruct and train employees on the risks from vibration, control measures, protection and safe working practices.

- To identify the need to conduct vibration assessments in areas where vibration is

experienced

- To ensure control strategies are implemented to minimise vibration exposure levels to within those mentioned in the definitions below.

Scope

This procedure applies to all of our staff in all locations including those with honorary contracts. This procedure applies to vibration exposure. The regulatory approach to vibration makes use of action levels and exposure limits to regulate the risks. This procedure particularly applies where occupational exposure to vibration is equal to or exceeds the statutory action values or exposure limits.

Equality Health Impact Assessment	An Equality Impact Assessment has not been completed. This is because the procedure has been written to support implementation of the Health and Safety Policy. The Equality Impact Assessment completed for the Policy found there to be no impact.
Documents to read alongside this Procedure	Health & Safety Policy Risk Assessment and Risk Register Procedure Occupational Health Policy
Approved by	UHB Health and Safety Operational Group
Accountable Executive or Clinical Board Director	Executive Director of Workforce and Organisational Development
Author(s)	Head of Health and Safety / Health and Safety Adviser

Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**
1	04/09/2019	06/09/2019	New document

NOTE

Wherever the designation “manager” is used throughout this policy, it is taken to mean Head of Service, Line Manager, Supervisor and the Person in charge or anyone who has responsibilities for employees in the course of their work.

1. DEFINITION

The Control of Vibration at Work Regulations set action values and exposure limit values (that trigger specific requirements) as follows:

- Action value for hand arm vibration 2.5 m/s2 A(8), average exposure
- Exposure limit for hand arm vibration 5 m/s2 A(8), average exposure

The average exposures are expressed as a time weighted average (TWA) which takes into account both duration and level of exposure.

2. POLICY STATEMENT

Cardiff and Vale University Health Board will manage, so far as reasonably practicable, vibration hazards falling under its control. The Health Board will aim to achieve this policy by putting measures in place as to control vibration exposure so far as is reasonably practicable - When selecting controls to manage exposure to vibration risks, the Health Board will apply the hierarchy of controls as set out in the Management of Health & Safety at Work Regulations 1999 and the Control of Vibration at Work Regulations 2005 The Health Board will, as far as reasonably practicable eliminate vibration at source. Where elimination is not practical, the Health Board will, as far as reasonably practicable, reduce vibration exposure to as low a level as is reasonably practicable.

- Where employees are likely to be exposed to a risk from vibration, the Health Board shall make and keep up to date a suitable & sufficient vibration risk assessment.
- The Health Board will provide employees with suitable information, instruction & training
- Where an assessment indicates that vibration exposure is a risk to the health of employees then health surveillance shall be carried out in line with the Health Boards' Occupational Health Policy and associated procedures.

3. RESPONSIBILITIES

Senior Managers have a responsibility to:

- Identify vibration risk activities and reduce vibration at source where practicable;
- Ensure all vibration exposed employees have sufficient information, instruction and training to protect themselves from the exposure to vibration;
- Ensure suitable control measures are provided as identified by risk assessment and facilities are provided for dry and clean storage of Personal Protective Equipment;

- Ensure that all vibration exposed employees attend routine health surveillance as required;
- Ensure that this procedure is enforced
- Ensure new reported symptoms are referred to the Occupational Health Service

Managers have a responsibility to:

- Ensure suitable control measures are provided as identified by risk assessment and facilities are provided for dry and clean storage of Personal Protective Equipment;
- Ensure that all vibration exposed employees attend routine health surveillance as required;
- Take appropriate action where employees do not manage vibration exposure where identified as a requirement
- Ensure that this policy is enforced
- Report any symptoms identified by employees

All employees have a duty to:

- Ensure vibration control measures are used as identified by risk assessment;
- Attend routine health surveillance as required;
- Not to tamper or modify anything provided for their health, safety or welfare;
- Report any deficiencies in the work procedures or Personal Protective Equipment to their line manager
- Ensure lost or damaged PPE is replaced before exposure to vibration
- Report any deficiencies in control measures or faulty equipment to their line manager
- Report any new vibration related symptoms to their line manager.

Occupational health department have a responsibility to:

- Provide a confidential service to all staff and deliver specialist advice on the effects of health on work and the effects of work on health.
- Work closely with managers and provide advice, when requested on the suitability, availability and appropriateness of health surveillance.
- Undertake appropriate health surveillance and keep suitable records.
- Give feedback and guidance on risk to individuals following health surveillance
- Feedback group results from health surveillance to the appropriate manager and operational safety group
- Advise the appropriate manager if there are restrictions on an individuals ability to work due to health risks

Corporate Health Safety department have a responsibility to:

- Enforce this policy during inspection and audit;
- Report to management deficiencies in risk control measures;
- Assist with vibration risk assessment when requested

- Carry out / arrange vibration measurement where appropriate
- Advise on vibration control measures where appropriate
- In conjunction with the occupational health department advise whether health surveillance is appropriate

4. ARRANGEMENTS

This document sets out the corporate management arrangements for implementing the Corporate Control of Hand Arm Vibration Procedure.

Background

Hand arm vibration (HAV) exposure typically occurs during the use of hand-held power tools or holding items that vibrate and can cause significant injury, in particular;

- Tingling and numbness in the fingers (which can cause sleep disturbance).
- Not being able to feel things with your fingers (including sharp edges, heat and sense of gripping an object).
- Loss of strength in your hands (you may be less able to pick up or hold objects).
- In the cold and wet, the tips of your fingers going white then red and being painful on recovery (vibration white finger).
- If you continue to use high-vibration tools these symptoms will probably get worse, for example:
  - The numbness in your hands could become permanent and you won't be able to feel things at all;
  - You will have difficulty picking up small objects such as screws or nails;
  - The vibration white finger could happen more frequently and affect more of your fingers

The risk of injury must be assessed, and action taken to either prevent hand arm vibration exposure completely (wherever it is reasonably practicable to do so) or reduce it to a minimum.

Actions may include changing working methods, equipment or processes to eliminate or reduce vibration exposure.

5. RISK ASSESSMENT

Step 1 - Identifying hand arm vibration problems
A full risk assessment is only necessary where work is carried out which is liable to exposure employees to the risk from vibration.

To help Managers decide if their work is exposing staff above the daily Exposures Action Value, (EVA), an 'indicative risk tool'' is provided in **Appendix 1** which should be completed by the manager and forwarded to the health and safety department so a joint risk assessment can be completed where required.

Step 2 – Risk Assessment
The purpose of the risk assessment is to:

- Identify where there is risk to employees, so that an action plan for controlling exposure and managing the risk in accordance with the Regulations can be produced;
- Determine employees' daily vibration exposures, with enough accuracy to establish who is likely to be exposed at or above the exposure action value or exposure limit value
- Identify any additional information needed for the action plan, including how the tools / equipment or work process may be replaced or modified to control vibration exposures, whether any special training is required, who should receive health surveillance and how it will be provided.

The Regulations require careful consideration of employees whose health may be at particular risk from vibration due, for example, to circulatory problems, joint or muscular problems.

The risk assessment shall be carried out by the manager and a competent person from the health and safety department; i.e.; someone who is familiar with the Control of Vibration at Work Regulations 2005. The person should have received adequate training in the use of vibration measuring equipment and/or interpretation of vibration data supplied by manufacturers and obtained from the internet. The person should be able to provide practical advice on appropriate measures to reduce the risk of vibration injury.

A *suitable and sufficient* risk assessment must address the actual work practices and tools being used and:

- Identify all employees who are likely to be exposed to vibration;
- Where exposure is likely to be at or above the exposure limit value, contain information on vibration exposure derived from measurements (vibration surveys) or where applicable vibration data supplied by manufacturers and obtained from the internet (HSE or other credible sources), supported by information on duration and type of exposure;

- Identify measures necessary to eliminate risks or reduce to a minimum.

To help Managers record the risk assessment and the measures necessary to eliminate risks, or reduce them to a minimum, a Risk Assessment form is provided in **Appendix 2**.

6. MAINTENANCE

Vibration emissions can be dramatically reduced by good tool maintenance. Managers will ensure that equipment is properly cared for and any damage reported immediately. Power tools and other work equipment will be serviced and maintained in accordance with the manufacturers' maintenance schedules to prevent unnecessarily high vibration levels and ensure efficient operation.

Staff will be reminded to report any tools perceived to be giving rise to excessive vibration to their supervisors. The supervisors will subsequently arrange for such tools to be examined and repaired where necessary.

Maintenance schedules will, where appropriate, make specific reference to inspection and repair of any anti vibration measures.

7. PROCUREMENT

Cardiff and Vale UHB will maintain a procurement policy that prioritises low vibration tools and processes. Procurement staff engaged in the purchase of low vibration tools must be familiar with Control of Vibration at Work Regulations Practical guidance for employers Part 4: "Information from Manufacturers and Suppliers of Machinery". See Appendix 5

Managers will ensure that procurement requests are clearly accompanied by advice that low vibration characteristics are a priority in selecting tools and equipment.

Procurement will respond positively to requests for low vibration tools and equipment, even though cheaper alternatives may be available. Selection of such tools and equipment shall be carried out in consultation with / or at the request of a competent person, e.g. line manager of persons who will be exposed to vibration during their work activities and appropriate Corporate Health and Safety Adviser.

As far as possible, Cardiff and Vale UHB will standardise the tools used for various tasks i.e.; minimise the range of tool brands and models in use.

8. HEALTH SURVEILLANCE

Health surveillance shall be carried out where:

- A risk assessment indicates there is a risk to health of employees who are likely to be exposed to vibration; or
- **Employees are likely to be exposed at or above an exposure action value;**
- A direct link can be established between an exposure and an identifiable disease or adverse health effect;
- It is probable that the disease or adverse health effect may occur under the conditions of work;
- Valid techniques are available for detecting the disease or adverse health effect.

Evidence of all employees undergoing health surveillance shall be recorded and maintained for at least 40 years.

To identify employees with symptoms that require further investigation, while avoiding unnecessary use of specialist resources, a tiered approach to health surveillance will be implemented.

Tier 1 Initial or baseline assessment.
Before any employee is exposed to Hand Arm Vibration, Occupational Health will undertake an initial assessment, upon notification of such by the manager or as part of the pre-employment process. Initial screening questionnaire, **Appendix 3**, will be carried out using a self-administered questionnaire that includes questions about the person's medical history and is to be returned in confidence to the health professionals.

Tier 2 Annual (screening) questionnaire.
Managers of operatives working with vibrating tools that pose a risk will ensure on an annual basis, their employees complete a Hand Arm Vibration screening questionnaire, **Appendix 4**. and returned to Occupational Health. This will form the routine health surveillance for employees who are at risk but have not reported any symptoms suggestive of HAVS.

Tier 3 Assessment by qualified person
If any symptoms are reported at Tier 2 stage the operative may be required to be assessed by the Occupational Health Advisor who will then decide whether the operative is referred to the Occupational Health Physician for further assessment.

Tier 4 Formal Diagnosis
Any formal diagnosis is made by the doctor who may also wish to refer the operative to a vascular consultant.

Occupational Health will write to the operative's manager and the health and safety department advising on fitness for continuing work involving vibrating tools and any specific measures that need to be implemented.

Temporary (agency) staff,
Agency staff required to work in service areas where the use of vibratory equipment is required, shall complete a hand arm vibration Initial pre-exposure assessment questionnaire prior employment. The 'agency' must ensure the questionnaire is completed and should the questionnaire identify any health concerns the 'agency' must discuss with the service area manager prior to agency worker being approved for Cardiff and Vale UHB employment.

The manager shall immediately refer any employee reporting any symptoms associated with exposure to vibration to Occupational Health for assessment. Where an employee is showing symptoms associated with exposure to vibration, that employee must be removed from using vibrating equipment until the occupational assessment is completed.

9. CONFIRMED CASES OF HAND ARM VIBRATION SYNDROME & RESTRICTIONS

Where occupational health has diagnosed an employee with hand arm vibration syndrome or where a restriction has been placed on the employee, health and safety in conjunction with the Manager will carry out a risk assessment detailing the controls required to comply with the recommendations / restrictions of occupational health.

10. TRAINING, INFORMATION AND INSTRUCTION; SUPERVISION

Where identified by risk assessment, persons who have to use vibratory equipment must receive suitable instruction, information, training and supervision in how to operate such equipment.

Information, instruction and training will include:

- The health effects of vibration
- Sources of vibration
- The level of risk, where identified, whether the risk is high (above the ELV), medium (above the EAV) or low (below the EAV);
- The risk factors (e.g. the levels of vibration, daily exposure duration, regularity of exposure over weeks, months and years);
- How to recognise and report symptoms;
- The need for health surveillance, how it can help them remain fit for work, how it is provided, how the results will be used and the confidentiality of the results;
- Ways to minimise risk to health, including:
    - Changes to working practices to reduce vibration exposure;
    - Correct selection, use and maintenance of equipment;

- Correct techniques for equipment use, how to reduce grip force etc;
- Maintenance of good blood circulation at work by keeping warm, massaging fingers and where relevant, cutting down on smoking.

Training records will include copy of training course notes and a signed and dated declaration of attendance by operators.

Refresher training will be provided to ensure that members of staff having received initial training have retained their competencies.

11. AUDIT

Managers and supervisors are required to audit compliance with the arrangements and correct employees' practice in the workplace to ensure vibration exposure control measures are properly implemented.

It is the responsibility of the Manager to oversee the completion and review of risk assessments and action plans for control of vibration exposure.

12. SUPPORTING DOCUMENTS

L140 'Hand-Arm Vibration – The Control of Vibration at Work 2005 Regulations: Guidance on Regulations,'

HSG170 'Vibration Solutions: Practical Ways to Reduce the Risk of Hand-Arm Vibration Injury',

INDG175 'Control the Risks From Hand-Arm Vibration,'

INDG296 'Hand-Arm Vibration: Advice for Employees,'

Health and Safety Executive (HSE) website: www.hse.gov.uk/vibration

The Control of Vibration at Work Regulations 2005

Appendix 1

The Control of vibration at work – Indicative Risk

The Health Board has a duty to complete vibration risk assessments for prolonged and regular use of hand held power tools (such as grinders or hammer drills), hand guided machinery (such as lawn mowers and plate compactors) and hand-fed machines (such as pedestal grinders).
In order for the H&S Department to prioritise areas for risk assessment, can you please complete the following form if your department uses hand held power tools, hand guided machinery or hand fed machinery.

Name:	
Email:	
Telephone:	
Hospital	
Department / ward:	
Location:	
Date :	

Does your department use any of the following hand-held power tools, hand guided machinery or hand fed machinery.

Industry	Tool type	Tick if use this type of tool	Approximate number of tools	Indicate an approximate worst case daily usage duration in minutes	Approximate number of people using these hand tools	Frequency of use : Daily, Weekly, Monthly, or Yearly
General	Hammer drill					
	Hand-held grinder					
	Nail gun					
	Needle scaler					
	Cut-off saw					
	Powered sander					
Engineering	Impact wrench					
	Pedestal grinder					
	Polishers – angle (hand –held)					
	Power chisel					
Other (specify)						

Which of the above tools are likely to be used in combination with each other eg by the same employee in the same shift	

As far as you are aware, have people in your department reported experiencing any of the following?	Yes	No
Tingling and numbness in the fingers (which can result in the inability to do fine work eg fastening buttons or cause sleep disturbance)		
Not being able to feel things with their fingers		
Loss of strength in the hands (may be less able to pick up or hold heavy objects)		
In the cold & wet do tips of fingers go white then red and are painful on recovery		

When complete please return this form to: Health & Safety Department, 4th Floor Denbigh House, UHW or email to coshh.helpdesk@wales.nhs.uk

Appendix 2

General Risk Assessment Form – Part 2

Reference Numbers		
UHB	Division	Directorate

Premises/ Location (if applicable)		**Division/ Department**		**Exact Location (if applicable)**	

Description of Activity/Risk Area:

Risk/Issued (Including Impact) to UHB due to shortfalls:

Risk Domain (See Table 1 – Risk Matrix)*

Impact on the Safety of Patients, staff or Public.	☐	Quality/Complaints/Audit.	☐
Human Resources/Organisational Development etc…	☐	Statutory Duty/Inspections.	☐
Adverse Publicity/ Reputation.	☐	Business Objectives/Projects.	☐
Finance Including Claims.	☐	Service Business Interruption.	☐
Environmental Impact	☐		

Number of people exposed to the Hazard/Risk during the work activity (if applicable)

Staff / Students / Contractors – list job roles	Service / Patient Users

Frequency of Exposure (if applicable)

Infrequently ☐ Annually ☐ Monthly ☐ Weekly ☐ Daily ☐ Hourly ☐ Constantly ☐

* Risk Matrix Tables 1-4

Control Measures already taken to reduce risk:

Adequacy of existing control measures:

No Controls in Place	Inadequate Controls in Place	Adequate but more action required	Optimum Controls No further action required
☐	☐	☐	☐

Current Risk Rating	Consequence (score from Table 1)*		X	Likelihood (score from Table 2)*		=	Risk Rating (see Table 3)*	

Risk Grading (see Table 4)* Moderate ☐ High ☐ Extreme ☐

Additional control measures required:

With the above action implemented the risk rating figure would be reduced to:

Target Risk Rating	Consequence (score from Table 1)*		X	Likelihood (score from Table 2)*		=	Risk Rating (see Table 3)*	

Risk Grading (see Table 4)* Moderate ☐ High ☐ Extreme ☐

Assessors Name(s)	Signature(s)	Position(s)

Date of Assessment		**Review Period**	

Dates of Review

Progress Report:	**Date:**	**Signature:**

Appendix 3

CARDIFF AND VALE UHB
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Occupational Health Service: Hand Arm Vibration Screening Questionnaire

This questionnaire is **CONFIDENTIAL** and is designed to monitor the on-going surveillance

Name:	D.O.B.
Home Address:	Work Address:
Home telephone No.:	Work telephone No.:
Mobile No.:	Work Email:
Job Title:	
Department:	Start Date:
Line Manager:	

Questions	Please Tick		Please Give Details if answered Yes
Have you been using handheld vibrating tools, machines or hand-fed processes in your job? Or if this is a review since your last assessment?	☐ No	☐ Yes	
Have any of your fingers gone white on cold exposure? White means a clear discolouration of the fingers with a sharp edge usually followed by a red flush. See image 	☐ No	☐ Yes	
Do you have any numbness or tingling of the fingers lasting more than 20 minutes after using vibrating equipment?	☐ No	☐ Yes	
Do you have any numbness or tingling of the fingers at any other time?	☐ No	☐ Yes	
Do you wake at night with pain, tingling or numbness in your hands or wrist?	☐ No	☐ Yes	

Have you noticed any change in your response to your tolerance of working outdoors in the cold?	☐ No	☐ Yes	
Are you experiencing any other problems in your hands or arms?	☐ No	☐ Yes	
Do you have difficulty picking up very small objects e.g. screws or buttons or opening tight jars?	☐ No	☐ Yes	
Has anything changed about your health since last assessment?	☐ No	☐ Yes	

I certify the answers given above are correct to the best of my knowledge and I will notify Occupational Health if there is any change to my health.

I understand that a workplace risk assessment has identified that a health surveillance programme is required in my current employment. I also understand that I will be given a copy of the results and my manager will be given advice about my fitness for work and any adjustments/precautions necessary which will form part of my occupational health record.

Signature:_____Date:_____

Print:_____Designation_____

_____

For Occupational Health use only:

Outcome	**Please tick**
No further action required, review in: 12 mont	
Refer to Occupational Physician	

Signature of OHN	
Print name	
Designation	
Date	

1. Personal Details

Occupational Health Service: Hand Arm Vibration Health Surveillance: Tier 3 and 4

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CAERDYDD A'R FRO

Name:	D.O.B.
Home Address: Post code:	Work Address:
Home telephone No.:	Work telephone No.:
Mobile No.:	Work Email:
Job Title:	
Department:	Start Date:
Line Manager:	
GP Name and Address:	

2. Employment History: Starting with current employment

Employer	**Nature of Work**	**Vibration exposure Y/N** **(If yes provide details)**	**Start Date**	**End Date**

3. Vibration Exposure:

When did you first start using vibration tools?		
If you no longer use them, when did you stop?		
List the tools you use in your current job	**Years Used**	**Hours per day**
List the tools used in previous jobs	**Years Used**	**Hours per day**

Have you ever been exposed to chemicals at work? If yes please give details	**Yes/No**	

4. Medical History

Do you have problems with your hands, fingers or thumbs? If yes please provide details	**Yes / No**
Have you ever been told that you suffer from Reynaud's Phenomenon, Reynaud's disease, Vibration White Finger, Hand Arm vibration Syndrome or Carpel Tunnel Syndrome? If yes please provide details	**Yes / No**
Have you ever suffered any serious injury to your neck, shoulders, arms, wrists, hands or fingers? If yes please provide details	**Yes / No**
Do you suffer from any medical condition? If yes please provide details	**Yes / No**
Do any of your immediate family suffer from Reynaud's Phenomenon, Reynaud's disease, Vibration White Finger, Hand Arm vibration Syndrome or Carpel Tunnel Syndrome? If yes please provide details	**Yes / No**
Do you take regular medication? If yes please provide details	**Yes / No**

5 Social History

What are your hobbies? Please give details below	
Do any of your hobbies or non-work activities expose you to hand arm vibration? If yes please give details below	**Yes / No**
Are you a smoker or have you ever smoked? If yes please give details below	**Yes / No**

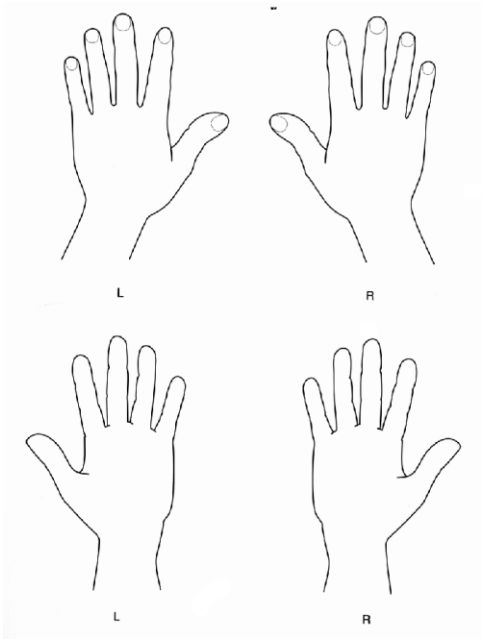
Do you consume alcohol? If yes please specify average weekly intake in units	Yes / No

5. **Symptoms**

a. **Colour Changes:**

Have you ever seen your fingers go white? If no please go to section 5b Tingling	Yes / No
If yes, does it occur in episodes or is it permanent?	Episodes/ permanent
If episodic, how long does each episode last?	
Is there a clear edge to the whiteness or does it tend to fade gradually along the length of the affected finger?	Clear edge/fade gradually
Does the whiteness occur on exposure to cold?	Yes / No
Does it occur while working?	Yes / No
Does it occur under any other circumstances? If yes please give details below	Yes / No
When did you first notice the Whiteness?	
Does it still occur?	Yes / No
How often does it happen? Please tick the most appropriate answer	Several times per day Daily Several times per week Several times per month Several times per year
Does it occur in the winter only or all year round	Winter/all year
Do you experience any whiteness of your feet/ears or nose? If yes please give details below	Yes / No

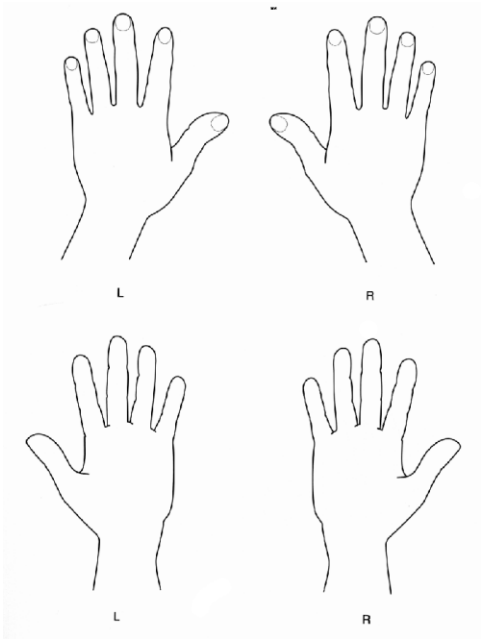
Please circle the diagram where the whiteness occurs:



b. Tingling

Do you experience tingling of the fingers after using vibratory tools? If yes how long does this last? Please give details below	**Yes / No**
Do you experience tingling with colour changes?	**Yes / No**
Do you experience tingling at other times? If yes please give details below	**Yes / No**
When did you first notice the tingling?	
Do you experience any tingling elsewhere? If yes please give details below	**Yes / No**

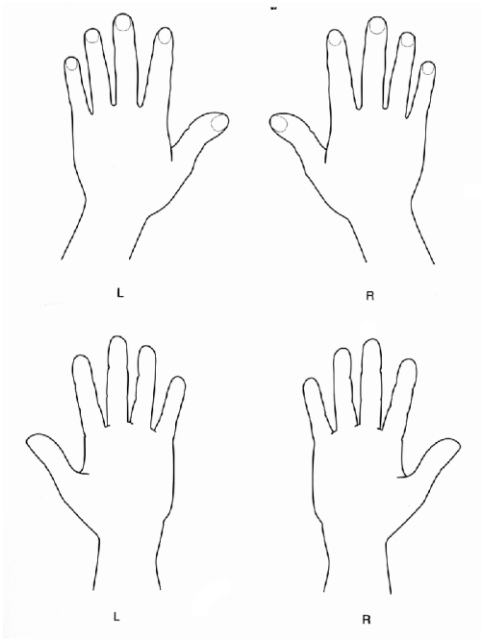
Please circle on the diagram where the tingling occurs:



c. Numbness

Do you experience numbness of the fingers after using vibratory tools? If yes how long does this last? Please give details below	**Yes / No**
Do you experience Numbness with colour changes?	**Yes / No**
Do you experience numbness at other times? If yes please give details below	**Yes / No**
When did you first notice the numbness?	
Do you experience numbness elsewhere? If yes please give details below	**Yes / No**
Do you experience any difficulty handling small or fine objects? If yes please give details below	**Yes / No**

Please circle the diagram where the numbness occurs



d. Musculoskeletal

Do you experience any problems with the muscles or joints of the neck, shoulders, arms, wrists, hands or fingers? If yes please give details below	**Yes / No**
Do any of the symptoms above interfere with your work, home or leisure activities? If yes please give details below	**Yes / No**

Thank you for taking your time to complete this questionnaire
Declaration: I declare that the answers given in this questionnaire are true to the best of my knowledge and belief.
I consent / do not consent (please delete as appropriate) to the results of this surveillance being shared with my employer

Employee Signature	**Date**

To be completed by Occupational Health Clinician

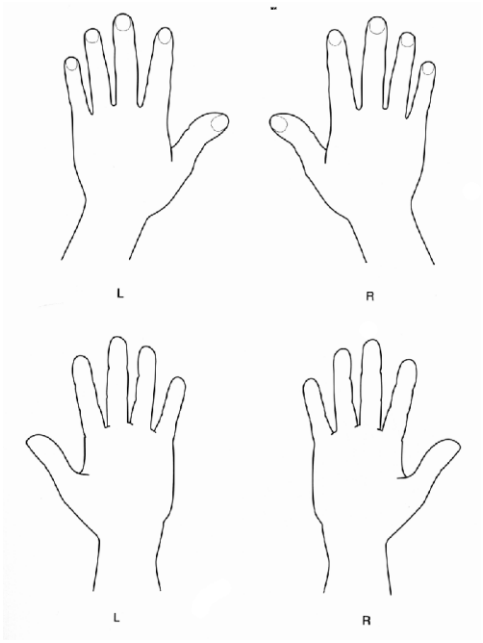
6 Examination

Temperature of the examination room	

a. Appearance of hands:

Please note:

- **Colour**
- **Temperature**
- **Callosities**
- **Thickened skin**
- **Scars**
- **Deformities**
- **Dupuyten's Disease**
- **Muscle wasting**



b. Vascular assessment

Pulse Rate		**Regular?**	**Yes / No**

	Right	**Left**	**Comments**
BP			
Radial Pulse	**Felt/ Not Felt**	**Felt/ Not Felt**	
Ulna Pulse	**Felt/ Not Felt**	**Felt/ Not Felt**	
Allen's Test – Ulna Filling	**Norma/ slow/ absent**	**Norma/ slow/ absent**	
Adson's Test	**Normal/abnormal**	**Normal/abnormal**	
Foot Temperature	**Normal/abnormal**	**Normal/abnormal**	
Foot Colour	**Normal/abnormal**	**Normal/abnormal**	
Foot Pulse	**Felt/ Not Felt**	**Felt/ Not Felt**	

c. Sensory Assessment

Right	**WEST or Semmes Weinstein**	**Pinprick**	**M2PD**	**Comments**

Little Finger				
Ring Finger				
Middle Finger				
Index finger				
Thumb				

Left	**WEST or Semmes Weinstein**	**Pinprick**	**M2PD**	**Comments**
Little Finger				
Ring Finger				
Middle Finger				
Index finger				
Thumb				

	Left	**Right**	**Comments**
Phalen's Test	**Normal/abnormal**	**Normal/abnormal**	
Tinel's test	**Normal/abnormal**	**Normal/abnormal**	

Peg Board Test (30 Seconds)			
Right Hand	**pegs**	**Left hand**	**pegs**
Both hands		**pairs**	

d. Musculoskeletal assessment

Cervical Spine		**Comments**
Flexion	**Normal/abnormal**	
Extension	**Normal/abnormal**	
Lateral Flexion	**Normal/abnormal**	
Rotation	**Normal/abnormal**	
Other Joints		**Comments**
Shoulders. Elbows and wrists	**Normal/abnormal**	

Grip Strength	**Right**	**Left**	**Comments**

7 Conclusions

Is Reynaud's Phenomenon present?	**Yes / No**
Is the Reynaud's primary?	**Yes / No**
Is the Reynaud's secondary?	**Yes / No**
If secondary is it due to vibration?	**Yes / No**

Stockholm vascular Grade	**R v ( )**	**L v ( )**
Is sensorineural HAVS suggested by the assessment?	**Yes / No**	
Stockholm sensorineural grade	**R sn ( )**	**L sn ( )**
Is Carpel Tunnel suggested by the assessment?	**Yes / No**	
RIDDOR Reportable	**Yes / No**	

8 Actions

Employee Advised of conclusions	**Yes / No**
Employer Advised of conclusions	**Yes / No**
Referred to GP	**Yes / No**
Referred to other (please specify)	**Yes / No**
Health and Safety Notified	**Yes / No**
RIDDOR reportable	

OH Clinician Signature	**Date**

APPENDIX 5: SUGGESTED QUESTIONS FOR TOOL MANUFACTURERS

1. Is the vibration of any handle or other surface likely to be held by the operator likely to exceed 2.5 ms^{-2} in normal use?
2. If Yes what is the frequency weighted acceleration under:

i) Operating conditions producing the highest vibration.

ii) Typical operating conditions.

iii) Other standard conditions.

3. Under what operating conditions were the measurements made?
4. If the tests were in accordance with a published standard, provide details and indicate the extent to which vibration may differ from the quoted values in normal use.
5. Details of steps you have taken to minimise vibration.
6. Are any additional measures practicable? Provide details of design changes, additional cost and any production penalties.
7. What is the maximum frequency weighted vibration that the tool can be guaranteed not to exceed?
8. What tests were carried out to confirm claims made in answer to question 7?
9. Please give details of any other measures required to minimise operator exposure to vibration resulting from use of the tool in question.