

Health surveillance for Hand-arm vibration syndrome

What is health surveillance?

Health surveillance is about having procedures to detect work-related ill health at an early stage and acting on the results. The main aims are to safeguard the health of employees (including identifying and protecting people at increased risk), and also to check the long-term effectiveness of control measures. In the case of hand-arm vibration, one of the specific aims is to prevent employees developing an advanced stage of hand-arm vibration syndrome (HAVS) associated with disabling loss of hand function. It is possible that your employees who are exposed to vibration may have mild symptoms of HAVS. If they are not aware that they have the disease, health surveillance can help them to recognise that the first symptoms of HAVS have started to develop.

What are the health effects?

Employees whose hands are regularly exposed to vibration may suffer from damage to the tissues of hands and arms, which causes the symptoms collectively known as HAVS. These symptoms include:

- numbness and tingling in the fingers, and a reduced sense of touch and temperature, due to damage to nerves in the hand. This damage can make it difficult to feel, and to work with, small objects;
- periodic attacks during which the blood circulation in the fingers is impaired and parts of the fingers become white (blanched). This is sometimes known as 'vibration white finger', 'dead finger' or 'dead hand'. During these attacks the fingers feel numb. As blood circulation returns to normal, either by itself or after rewarming the fingers, they are typically throbbing, red and painful. Although vibration causes the condition, it does not bring on the attacks. The main trigger for these symptoms is exposure to the cold, eg being outdoors early on a winter's morning, or by localised or general body cooling in otherwise warm environments. Rarely, in very advanced cases, blood circulation may be permanently affected;

- joint pain and stiffness in the hand and arm. Grip strength can be reduced due to nerve and muscle damage.

An individual employee with HAVS may not experience the complete range of symptoms, eg there may be nerve damage symptoms without there being blood circulation problems and vice versa. The symptoms of HAVS are usually progressive as exposure to vibration continues, eg the effects on blood circulation are seen initially in the tips of the affected fingers, with changes spreading up the finger. The thumb may also be affected.

Carpal tunnel syndrome, a disorder of the hand and arm, which may involve tingling, numbness, pain and weakness in parts of the hand, can also be caused by exposure to vibration.

Employees suffering from HAVS can experience difficulty in carrying out tasks in the workplace involving fine work or manipulative work and are less able to work in cold conditions. The disease may have an impact on earnings and on social and family life. Everyday tasks may become difficult, eg fastening small buttons on clothes. Attacks of 'white finger' will take place not only at work, but during other activities, especially if people get cold, such as when washing the car or watching outdoor sports. The damage to the hands may be irreversible.

After symptoms first appear, generally the longer an employee is exposed to vibration, the worse the symptoms become, although the rate of deterioration will vary from person to person. How much symptoms may improve when people are no longer exposed to vibration is not well understood, but it is thought that nerve damage does not recover after exposure stops. The effects on blood circulation may improve after reducing or stopping vibration exposure in people below about 45 years old and when the disease has not yet reached the advanced stage associated with disability. Any improvement will be slow, taking several years and smoking may also slow down recovery.

When is health surveillance required?

Health surveillance should be provided for vibration-exposed employees who:

- are likely to be regularly exposed above the action value of $2.5 \text{ m/s}^2 A(8)$;

- are likely to be exposed occasionally above the action value and where the risk assessment identifies that the frequency and severity of exposure may pose a risk to health; or
- have a diagnosis of HAVS (even when exposed below the action value).

If you are self-employed there is no legal requirement for you to have health surveillance for HAVS. However, it is important for your well-being, and for your ability to remain in work, that you identify any early signs of HAVS and take appropriate action. It is therefore recommended that you follow this guidance if you think you are at risk from vibration.

What do I actually have to do?

You need to ensure that you achieve an effective health surveillance programme in the workplace, including co-operation from employees.

When you plan to introduce health surveillance, explain to your employees and their safety or employee representatives what you are proposing to do and give them the opportunity to comment on your proposals. Employees need to be given information about the reasons for carrying out health surveillance and they need to understand their roles and responsibilities.

A simple approach to health surveillance

A simple approach to health surveillance involves working through a number of stages. Briefly, this 'tiered' system works as follows:

Tier 1 is a short questionnaire (an example of which can be downloaded from HSE's vibration website (**initial screening questionnaire**)) used as a first check for people moving into jobs involving exposure to vibration. The replies to the questionnaire will indicate whether they need to be referred to Tier 3 for a HAVS health assessment.

Tier 2 is a short questionnaire (an example of which can be downloaded from HSE's vibration website (**annual screening questionnaire**)) that you can issue once a year

to employees exposed to vibration risks to check whether they need to be referred to Tier 3 for a HAVS health assessment.

Tier 3 involves a HAVS health assessment by a qualified person (eg an occupational health nurse). If the assessment shows that the employee has HAVS, the employee Tier 4 will apply.

Tier 4 involves a formal diagnosis and is carried out by a doctor qualified in occupational health. The doctor will advise you on the employee's fitness for work.

Tier 5 is optional and involves referral of the employee for certain tests for HAVS. The results may help the doctor assess fitness for work.

It may help you keep costs down if you adopt this approach. If you have any positive responses at Tier 1 or 2 which means moving on to Tier 3, you will need to use qualified occupational health professionals but it is not necessary for each employee to be referred to them. In this tiered approach, most appointments with specialists are limited to cases where symptoms that may be suggestive of HAVS have been reported.

'Responsible person'

It is useful to appoint a 'responsible person' as part of your health surveillance programme (Tier 2) to help explain to the employees how the simple screening questionnaire operates. This person:

- should be carefully selected to have experience of the working environment and be able to gain the confidence and co-operation of employees;
- need not be qualified but should have received training from an occupational health professional;
- should understand the health surveillance procedures and the importance of confidentiality;

- should be able to describe to the employee the symptoms of HAVS but should not attempt to diagnose disease;
- should not make judgements about the cause of the symptoms if an employee discloses that they have symptoms.

What do I do with completed questionnaires?

Completed questionnaires could be sorted, and referrals handled in house, by the responsible person, as long as this is acceptable to employees. However, it may be appropriate for the questionnaires to be treated as confidential and returned to suitably competent health professionals. In the first instance, any employee reporting symptoms should be referred to a 'qualified person' (usually an occupational health nurse) for clinical assessment (Tier 3). The qualified person can make an informed assessment of the nature of reported symptoms on the basis of a confidential interview and limited medical examination. A formal diagnosis of HAVS should only be made by a competent doctor (Tier 4). An employee with HAVS should be reassessed at regular intervals and may need additional investigations in order to detect any progression of the disease.

How do I find someone who is suitably qualified?

You should make sure that nurses and doctors offering to carry out health surveillance have appropriate qualifications and training and will provide you with appropriate information. If there is a lack of competence, mistakes have the potential for serious consequences for you and your employees.

Appropriate occupational health qualifications for health surveillance of HAVS are:

- for doctors: Diploma, Associateship or Membership of the Faculty of Occupational Medicine (DipOm, AFOM, MFOM);
- for nurses - Diploma or Degree in Occupational Health or MSc; **plus**

- certification for both doctors and nurses from a Faculty of Occupational Medicine approved training course in HAV (see Appendix 6 Hand-arm vibration The Control of Vibration at Work Regulations 2005 (L140) or equivalent level of competency.

For further advice see HSE's guidance book Health surveillance at work (HSG61) which describes the roles of the responsible person, qualified person and doctor.

For a limited period, following the introduction of the Vibration Regulations in 2005, you may need to use health professionals who have not yet had the specialist training approved by the Faculty. They should, however, possess general occupational health or medicine qualifications and be familiar with the guidance for health professionals (**health surveillance for occupational health advisers**) contained in Part 7 of Hand-arm vibration The Control of Vibration at Work Regulations 2005 (L140).

What information will I receive?

An employee found to have HAVS should be informed of this by an appropriate health professional. You can be told about an individual employee being diagnosed with HAVS, as long as the employee gives their consent. You may receive advice about any recommended restrictions that relate to the employee's job. Even if the individual does not give consent for medical information to be passed on, you should receive advice on fitness for work with exposure to vibration for each employee, undergoing health surveillance. You should also expect to obtain anonymised information, eg for groups of employees.

What do I need to do about the results of health surveillance?

You need to make a decision about an individual employee if the doctor advises you that they are not fit for work with exposure to vibration. The employee is at risk of developing disabling loss of hand function if exposure is allowed to continue. You should consider assigning the employee to alternative work where there is no risk from further exposure to vibration.

If you are informed that an employee has been diagnosed with HAVS but is still fit for work with exposure to vibration, it is good practice for you to consider taking further action to reduce that employee's exposure.

Health surveillance results should be used to check the long-term effectiveness of your control measures. If the number of employees with HAVS has increased, or if the disease is progressing in affected individuals, you need to review your risk assessment and action plan.

What if no symptoms are reported?

If no symptoms are reported on the screening questionnaire, there is no need to refer the employee for further assessment, but they should complete the simple questionnaire again on an annual basis (Tier 2). HSE recommends that after three years of a vibration-exposed employee reporting no symptoms they should be referred for a consultation with an occupational health nurse to provide an opportunity to explore more fully any possible symptoms that the individual may have overlooked.

What type of records should I keep?

You should keep a health record for each individual for as long as they are under health surveillance, although you may wish to retain it for longer. It is good practice to offer individual employees a copy of their health records when they leave your employment, if your business should cease trading or the employee ceases to be exposed to vibration. The record should be kept up to date and should include:

- identification details of the employee;
- the employee's history of exposure to vibration;
- the outcome of previous health surveillance in terms of fitness for work, and any restrictions required;
- the Tier 1 and Tier 2 questionnaire results (as long as they are not confidential) even if an employee has said they have no symptoms.

Health records should not contain personal medical information, which must be kept in confidence in the medical record held by the occupational health professional. The enforcing authority is entitled to ask to see your health records as part of their checks that you are complying with the Vibration Regulations.

Could an occupational health service provider carry out a complete health surveillance service?

You could ask an occupational health service provider to provide a complete service on your behalf. They should be able to:

- advise you on a suitable health surveillance programme for your employees;
- set up the programme;
- provide the necessary training and supervision for your staff if they are going to help with the basic health surveillance;
- provide suitably qualified and experienced staff to carry out Tiers 3, 4 and 5 of the health surveillance;
- provide you with reports on your employees' fitness to continue work with vibration exposure.

RIDDOR reporting

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) place a duty on you as an employer to report any cases of HAVS arising from certain work activities or of carpal tunnel syndrome associated with exposure to vibration. The duty comes into effect when you receive a formal written diagnosis from a doctor confirming that the employee has either of these conditions and that there is reason to believe that the disease is likely to have an occupational origin. Before reporting HAVS to the Incident Contact Centre (Tel: 0845 300 9923 or <http://www.riddor.gov.uk/>), you should check that the employee is currently doing a job involving one of the specific activities listed in Schedule 3 of RIDDOR. You are also required to keep details of any report you make for at least three years.

Industrial Injuries Disablement Benefit (IIDB) Scheme

It may also be appropriate for you to advise your employee that the vascular form of vibration white finger and carpal tunnel syndrome are both prescribed diseases under the Industrial Injuries Disablement Benefit (IIDB) Scheme. More information is available from Jobcentreplus.