Health Surveillance: voluntary or mandatory?

Your position as an employer:
We find that it is not uncommon for employers to think that that health surveillance is voluntary, which is not the precise legal situation. A consequence of this is that such employers do not bother to identify those who should be subject to health surveillance, with the further consequence that those who need it do not get it. This seems to particularly be the case with Hand Arm Vibration, which I will use as a worked example to show how the law applies to all forms of health surveillance.

In clarifying the legal requirements it is necessary to draw a distinction between attendance for health surveillance and consenting to examination.

Here are the relevant points:

1. Where health surveillance is appropriate, (i.e. is likely to be effective in reducing the risk of hand arm vibration syndrome) employers should provide it.

2. Effectiveness of health surveillance depends on there being a significant risk of its occurrence. This will be the case where exposures exceed 2.8 ms^{-2} (A(8)*) (although these numerical limits will change in 2005 with implementation of the EC Directive on Vibration as a new set of health and safety regulations).

3. Attendance for health surveillance is not optional, where its provision is appropriate (as per 1, and 2, above).

4. The occupational health practitioner should notify the employer of the outcome of health surveillance in terms of each employees' fitness to continue in the work requiring health surveillance.

5. Where an employee attends for health surveillance, he/she cannot be compelled to undergo examination This is the only sense in which health surveillance is voluntary. Where an employee refuses to do so, *ie withholds consent to undergo examination,* the occupational health practitioner should notify the employer that they are not able to provide a recommendation of continued fitness.

6. In these circumstances, since the employer is unable to manage the employee properly i.e. safely, it is reasonable for the employer to remove the employee from further exposure.

7. The legal bases of the employees' obligation in these circumstances are S.7 of The Health and Safety at Work Act 1974, and S.14(2) of The Management of Health and Safety Regulations 1999.

8. The above process implies that employers should identify those workers for whom health surveillance is appropriate and make sure that they attend. This is a legal duty under The Management of Health and Safety Regulations 1999.

Successful health surveillance programmes also depend on good levels of trust between management, workers, and occupational health practitioners. If these don't exist then employees are unlikely to state their true symptoms when examined. If health surveillance is properly implemented, legal compliance does not strain these good relationships.

Is it time for you to review health surveillance arrangements at your workplace?

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Healthy Work Matters

the newsletter of the Sheffield Occupational Health Development Group

HAV I got news for you?

We probably all know by now that regular exposure to vibration from hand-held tools or vibrating surfaces can cause several kinds of injury to the hands and arms. Together these injuries are known as 'hand-arm vibration syndrome' (HAVS).

The problem of HAVS has been known for decades and employers are obliged to manage the risks to their employees from hand transmitted vibration. Until now, there has not been any legal limit set in the UK on the amount of vibration exposure that should be considered too much. This is about to change.

In July 2005 the EU Physical Agents (Vibration) Directive will come into force in the UK. This will introduce new law with respect to exposure to hand-transmitted vibration.

There are two number you need to remember:

- 2.5ms^{-2}*, which is referred to as the exposure action value (EAV), and
- 5ms^{-2}*, which is referred to as the exposure limit value (ELV).

The exposure action value of 2.5ms^{-2} is the point at which an employer needs to introduce health surveillance and adopt measures to ensure that exposures are reduced to the lowest level reasonably practicable. Information and training on hand transmitted vibration should also be provided. This is similar to the current HSE guidance figure of 2.8ms^{-2} which is described in HS(G)88.

** A(8) based on the vibration total value which is a measure of the acceleration from the tool or workpiece in three measurement directions.*

The exposure limit value of 5ms^{-2} is the limit for an operator's daily exposure to vibration. The table inside shows some examples of tools common to the industry showing what the possible vibration level from these tools might be and, based on the figures in the table, how long the tools can be used before the exposure action and exposure limit values are exceeded.

continued overleaf

In this Issue

Healthy Work Matters

Editorial

Welcome to the spring edition of Healthy Work Matters, focusing on the topic of Hand Arm Vibration Syndrome. This issue contains a very useful article that provides information on vibration exposure and the forthcoming EU Physical agents [vibration] directive. Additionally, we have an interesting article that tackles the difficult topic of whether health surveillance is voluntary or mandatory. This theme continues into the next network meeting, 'Hand Arm Vibration Syndrome'. Full details of the next network meeting (to be held on 21 April 2004 at HSL) can be found on the enclosed flyer.

We would like to encourage you to send in your thoughts, comments and views on the Newsletter and any occupational health issues you would like us to cover. Also, don't forget to visit our Website, which is full of useful information, and back issues of the newsletter.

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What is Hand Arm Vibration Syndrome?

Hand Arm Vibration Syndrome (HAVS) is a disease largely of the hands that is caused by excessive, long-term exposure when you are working with tools that vibrate, or holding materials that are shaking.

How does the vibration affect my health?

Excessive exposure to vibration can cause injuries to:

- Blood vessels in your hands and fingers
- Sensory nerves in your hands and fingers
- Bones and joints in your hands, wrist and possibly elbow and shoulder
- Muscles in your hand and forearm

Recovery of the damage after you stop any exposure is slow or may appear permanent.

What are the symptoms?

Blood circulatory system:

- Periodic attack when fingers, or parts of them, turn white especially when exposed to cold. This is known as "vibration white finger" and indicates that the supply of blood to that area has been temporarily stopped. Those areas that turn white will lose any sensation.
- Throbbing pain in fingers when the blood returns during recovery from an attack of "vibration white finger"

Sensory Nerve Damage:

- Tingling sensation and pins and needle in hand and fingers
- Numbness in the hand and fingers
- Your ability to detect touch and temperature is reduced in your fingers
- You find it difficult to carry out delicate jobs with your hands

Damage to muscle, bone and joints:

- Loss of strength in your hand
- Pain in the hand, wrist and arm

What tools can cause it?

Tools usually associated with HAVS include;

Hammer drills
Chain Saws
Rivetting and Chipping hammer and bolsters
Road Drills/Concrete breakers
Sanders, angle grinders
Powered lawnmowers
Nut runners, power screwdrivers
Scrabblers, needle guns
Vibrating compressors
Tampers
Hand-held sanders
Power hammer and chisels
Strimmers/brush cutters
Swaging machines

However, any tool that vibrates may potentially cause HAVS if the exposure is high enough. For example, HAVS has also been found in people using high pressure hose/washer systems, high speed drills used in medical procedures. You do not necessarily have to be holding the tool itself, workers holding wood or metal that is being cut, drilled, sanded or formed may also be at risk if the vibration is transferred to the material.

What really causes the problem?

All the tools that are listed above may produce high levels of vibration which can cause damage to your hand and arms. Considerable efforts are made to ensure that new tools on sale have low vibration emissions which substantially reduce the risk of HAVS. But the risk of damage depends on the following points:

- How high the vibration levels are
- How long you use the equipment
- How tightly you have to grip the equipment
- How awkward is the position your hands and arms when using the tools
- How cold and wet you get when using the equipment

How common is the HAVS problem?

- About 4.9 million workers are exposed to vibration to the hands
- It is estimated that 1 million people in Britain may be exposed to potentially harmful levels
- Estimates are that there are about 300,000 workers with moderate to severe symptoms of "vibration white finger". Currently it is the largest reason for new claims under the Industrial Injuries Disablement Benefit Scheme.
- HAVS is also a very common reason for civil compensation against employers

Which job or industries to look out for?

Traditionally the following industries have suffered with significant levels of HAVS in their workforces:-

- Building and Construction
- Forestry
- Concrete production
- Foundries
- Heavy Engineering
- Mines and Quarries
- Plate and Sheet metal fabrication
- Public Sector (maintenance of road, footpath, parks)
- Public utilities (Water, Gas, Electricity,
- Telephone and Cable TV companies)

However, any employer where vibrating tools are used needs to ensure that the appropriate risk and exposure assessment has been carried out and that they are vigilant for any early signs of HAVS in their workers.

How can I reduce the risk?

- By taking active part in your company's Occupational Health Training
- Talk to Health and Safety representative if you have any doubts or worry
- Avoid any tools or processes which produces high level of vibration (above legal limits)
- Make sure that you are not working with your hands and wrists in positions that feel awkward or uncomfortable
- Only grip the tool tight enough to get the job done properly and safely
- Do the job with the right tools
- Keep machinery and tools in good working condition, properly maintained and serviced
- Don't ignore your symptoms,
- Keep warm and avoid getting your hands wet . Wear warm clothing and gloves if you work in cold
- Try to avoid using vibrating tools for long periods

What can my employer do?

Your employer should try to reduce the risk as much as practicably possible by

- Checking that the vibration level of tools are not above the recommended level
- Buying new tools that have low vibration emissions
- Making sure vibrating tools which may give high exposures have vibration control built in it (anti-vibration or damping handles)
- Looking at alternative ways of doing the job that reduces workers' exposure
- Training their employees to use the tools correctly
- Arranging rotational of jobs so that employees can get a break from high vibration tools
- Arranging advice and routine health checks through an occupational health adviser
- Keeping the environment warm and to provide warm clothing for outdoor workers
- Encouraging employees to report any symptoms or concerns they have at an early stage.
- Looking out for information on the new European Directive on Physical
- Agents (Vibration) and how implementation in 2005 may affect them and their employees in reducing the risk of HAVS

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	Typical vibration total value (ms^{-2})	Time to exceed exposure action value	Time to exceed exposure limit value
Die grinder	3	5½ hours	>8 hours
Angle grinder	5	2 hours	8 hours
Chipping hammer	10	½ hour	2 hours
Needle scaler	20	7½ mins	30 mins
Scaling hammer	35	2 mins	10 mins

Reducing vibration exposure

The first thing to do is to decide if there is a problem of hand transmitted vibration exposure in your organisation. If this is the case, you should then identify the tools and processes in use which may be posing a risk to health in terms of the vibration they produce and the people who are using them. Once the tools have been identified, you need to consider what you can do to reduce the vibration exposure that they cause

There are a number of ways in which vibration exposure might be reduced such as looking for alternative ways of working, using the most appropriate equipment for the job and training operators in correct use, keeping exposure time to a minimum for example by job rotation where possible, introducing breaks between exposure periods, improving posture and reducing the forces necessary to do the job, making sure tools are well maintained.