



Control of Noise at Work Regulations 2005

The Control of Noise at Work Regulations 2005 will come into force on 6 April 2006. The new regulations implement the European Union's Physical Agents (Noise) Directive within Great Britain. These improved regulations will bring significant changes to the actions required by employers and employees under the current Noise at Work Regulations 1989.

Employers will have extra responsibilities, and noise exposures and level limits will be lowered. The Regulations cover not only the obviously noisy industrial premises and construction sites, but virtually all workplaces with few exceptions, including workplaces where the risk of the noise may not be immediately obvious.

So they apply for example, to motorcycle couriers, and to call centre workers who are exposed to noise (including speech) through headphones. The regulations also cover the self-employed, as employers and employees.

Action Values and Limit Values

The Control of Noise at Work Regulations 2005 specifies action values and exposure limit values for daily personal noise exposure (or weekly personal noise exposure) and peak sound level.

Daily personal noise exposure (LEP,d) is a measure of the total noise received by an employee over the working day. *Daily personal noise exposures* depend both on *noise levels* experienced at work and on the *time spent in the noise*. A high level noise for a short time will give the same noise exposure as a lower level noise for a longer time, if the total sound energies of the two noises are the same.

For an eight-hour working day, the average noise level over the eight hours is numerically equal to the daily personal noise exposure.

For example, an employee working for 8 hours in a noise level of 75 dB(A) will have a noise exposure of 75 dB(A) *LEP,d*. However, if the time spent is less than 8 hours the noise exposure will be less than 75 dB(A) *LEP,d*, and if the time is longer than eight hours the noise exposure will be more than 75 dB(A) *LEP,d*.

The **lower exposure action values** are

- 80 dB(A) *LEP,d* or 80 dB(A) *LEP,w* - i.e. a daily or weekly personal noise exposure of 80 dB(A); and
- 135 dB(C) *Lcpeak* - i.e. a peak sound pressure level of 135 dB(C).

The **upper exposure action values** are

- 85 dB(A) *LEP,d* or 85 dB(A) *LEP,w* - i.e. a daily or weekly personal noise exposure of 85 dB(A); and
- 137 dB(C) *Lcpeak* - i.e. a peak sound pressure of 137 dB(C).

The **exposure limit values** are

- 87 dB(A) *LEP,d* or 87 dB(A) *LEP,w* - i.e. a daily or weekly personal noise exposure of 87dB (A); and
- 140 dB(C) *Lcpeak* - i.e. a peak sound pressure of 140 dB(C).

The exposure action values are ambient noise levels in the workplace at the worker's location and do not take into account the effect of any hearing protection. The exposure limit values however, do take the effect of hearing protection into account.

Actions required

General assessment of risk - Employers shall ensure that risks from the exposure of his employees and others to noise is either eliminated at source or, where this cannot be achieved, reduced to as low a level as is reasonably practicable.

If one of the lower exposure action values is likely to be exceeded, an employer needs to carry out a *"suitable and sufficient"* risk assessment to assess whether any employees or others, are likely to be exposed to noise at or above a lower exposure action value, an upper exposure action value, or an exposure limit value.

Therefore, the risk assessment should consider:

- a) The level, type and duration of exposure, including any exposure to peak sound pressure;
- b) The effects of exposure to noise on employees whose health is at particular risk from such exposure;
- c) Any effects on the health and safety resulting from the interaction between noise and the use of ototoxic substances at work, or between noise and vibration;
- d) Any effects of noise on audible warning signals or other sounds that need to be audible for safety, or in order to reduce risk at work;
- e) Any information provided by the manufacturers of work equipment;
- f) The availability of alternative equipment designed to reduce the emission of noise;
- g) Any extension of exposure to noise at the workplace beyond normal working hours, including exposure in rest facilities;
- h) Appropriate information obtained following health surveillance, including, where possible, published information; and
- i) The availability of personal hearing protectors with adequate attenuation characteristics.

At and above a lower exposure action value - Where noise exposures exceed the lower exposure action value the employer must make suitable hearing protection available to any employee who wants to use it, though employees do not have to wear it. The employer must also provide information and training on:

- a) The nature of risks from exposure to noise;
- b) The organisational and technical measures taken in order to reduce noise exposures;
- c) The exposure limit values and upper and lower exposure action values;
- d) The significant findings of the risk assessment;

- e) The availability and provision of personal hearing protectors and their correct use;
- f) Why and how to detect and report signs of hearing damage;
- g) The entitlement to health surveillance, and information, where there is a need;
- h) Managerial control measures that allow safe working practices that minimise need for exposure to noise; and
- i) The collective results of any health surveillance undertaken.

At or above an upper exposure action value - If any employee is likely to be exposed to noise at or above an upper exposure action value, the employer must reduce exposure to as low a level as is reasonably practicable by establishing and implementing a programme of organisational and technical measures, excluding the provision of personal hearing protectors, which is appropriate to the activity:

- a) Other working methods which reduce exposure to noise;
- b) Choice of appropriate work equipment emitting the least possible noise, taking account of the work to be done;
- c) The design and layout of workplaces, work stations and rest facilities;
- d) Suitable and sufficient information and training for employees, such that work equipment may be used correctly, in order to minimise their exposure to noise;
- e) Reduction of noise by technical means;
- f) Appropriate maintenance programmes for work equipment, the workplace and workplace systems;
- g) Limitation of the duration and intensity of exposure to noise; and
- h) Appropriate work schedules with adequate rest periods.

The provision of hearing protectors is a last resort, to be used where the preferred methods of reducing noise exposures are not reasonably practicable. Hearing protection zones must be marked and employees must wear the protection provided when anywhere within the zone(s).

At or above an exposure limit value - The exposure limit values must never be exceeded. If a limit value is exceeded the employer must identify the reason and take steps to ensure that it cannot happen again.

Changes from previous regulations

The *Control of Noise at Work Regulations 2005* differs from the *Noise at Work Regulations 1989* currently in force in many ways. For example:

- a) The threshold for providing hearing protection and training on noise and hearing is lowered from 85 dB(A) *LEP,d* to 80 dB(A);
- b) The thresholds for introducing noise control is reduced from 90 dB(A) *LEP,d* to 85 dB(A);
- c) Weekly averaging of noise exposure is permitted when noise exposures vary from day to day (previously an HSE derogation was needed);
- d) More emphasis is placed on consultation between employers and employees and their representatives;
- e) There is a specific requirement for health surveillance and hearing testing where a risk is identified; and
- f) The new regulations will apply in aircraft in flight over British soil.

The *Control of Noise at Work Regulations 2005* provide more detail than given above, and in October 2005 the HSE will be publishing detailed guidance on the regulations.

Unusual sources of occupational noise - Frequent, repeated exposure to high noise levels can cause hearing loss or tinnitus. But you do not need to work in a factory or on a building site to receive high levels of noise.

Noise exposures above 85 dB(A) *LEP,d*, equivalent to a noise level of 85 dB(A) for 8 hours per day, can cause measurable hearing damage in the long term. 85 dB(A) *LEP,d* is the First Action Level of the Noise at Work Regulations 1989, and the Upper exposure Action Value of the Control of Noise at Work Regulations 2005. A prudent employer will ensure that no employee regularly experiences such high exposures.

Hearing damage caused by noise at work is often associated with the engineering, construction, manufacturing and process industries.

Many of the *'traditional'* noisy industries have declined, but many of today's jobs can still be unexpectedly noisy. We regularly assess noise in different workplaces, sometimes the results are surprising.

On the telephone - Headsets, earphones and earpieces are used by many people in their work - telephonists, air traffic controllers, operators in fire and police control rooms, pilots, typists, TV and radio staff, police officers and security guards. Probably the most numerous are people who work in 'call centres' selling products and services by telephone.

We have usually found that noise exposures from headsets are below the First Action Level in the call centres and control rooms, even if operators choose to turn their volume controls up full. We have, however, found exceptions where exposures were high, and for this reason, we advise that sound levels be measured as a precaution.

Acoustical treatments of rooms and furnishings can reduce background babble of busy colleagues, allowing operators to reduce their headset volume and hear more clearly. Binaural headsets, covering both ears rather than one, will also help reduce distracting background noise in the worst cases.

Up the club, down the disco - we often hear about people damaging their hearing in clubs and discos. But consider the staff who may be there several nights a week - not just the DJ, but the bar, door and security staff. Noise levels can reach 105 dB(A) on the dance floor but even at the bars levels of 90 - 95 dB(A) are common.

Most workers tend to be part-time, and some may also have noisy day jobs, which makes assessment of the individual's noise exposures very difficult. Solving the problem is not easy. Sometimes staff can be 'rotated' between quieter and noisier areas, but this is of limited use where high noise levels mean that the 'safe' exposure times can be measured in minutes not hours. The best (and perhaps only) solution is to turn the music down.

The message - The risks from noise at work have not disappeared with the decline of the 'traditional' heavy industries and the improvements made in controlling noise in factories. New noise hazards have appeared, some almost unnoticed. Hazardous noise can occur in the most unexpected of jobs: therefore, consider everything.