



ACOUSTIC SHOCK

New Guidelines June 2004

The Health and Safety Executive (HSE) is aware of research, which suggests that call centre operators may be exposed to noise levels and conditions that can cause problems to their hearing. Having studied the evidence and with liasing with experts in other countries it is possible to discuss the evidence. It is early to say whether we consider the findings to be correct - or whether it would be accurate to describe any such symptoms as acoustic shock.

BACKGROUND

HSE's initial thoughts on acoustic shock syndrome were based largely on physiological evidence for hearing loss, with a strong link between an individual's exposure to noise and the level of risk to their hearing (how loud the noise was and how long it lasted). An extensive HSE study incorporating evidence from 15 call centres in the UK indicated that call centre workers were not normally exposed to levels of noise that were considered likely to cause permanent hearing loss. Even on those occasions where operators were exposed to high-intensity noise, which might cause permanent damage to hearing (such as loud screeches and alarms being let off down the phone), such noises would be excluded by the protection built into the operators' headsets. The associated risk was therefore considered to be low.

Since HSE carried out its research, new medical evidence from Australia and Denmark has emerged. This evidence was presented at the very first international seminar on acoustic shock in Freemantle, Australia in September 2001.

This evidence was based on symptoms found in Australian and Danish call centre workers claiming to suffer from acoustic shock. The symptoms ranged from numbness and tenderness around the ear, to hypersensitivity to sound in extreme cases.

The research concludes that noise of high intensity and high frequency might cause symptoms at levels, which are lower than was previously thought to be the case. In addition to loudness and the duration of exposure, the research identifies a range of previously unconsidered variables, which may affect whether exposure to high intensity

noise might cause symptoms. This includes factors such as: the sudden onset of the noise, stress, and an individual's personal susceptibility. Initial clinical suggestions as to the physiological causes of the symptoms; include muscular spasms of the middle ear region.

Over a hundred cases have been recognised in Australia, and a lesser (but still significant number) have been reported in Denmark. On the other hand there have been no or few reported cases in other countries such as the USA. It is possible that the few reported cases in the UK could have experienced symptoms as described by the Australians.

Prior to the new evidence from Australia and Denmark, HSE had no cases of acoustic shock reported to it. The only case to receive publicity was a claim by a BT operator for acoustic trauma; this was settled out of court. The initial exposure to high noise levels in this case occurred many years ago, possibly before headsets were built with protection as standard. With the later designs of headsets, which contained safety limiters, it was thought that such high noise events could not occur and could not cause damage. It is possible that in Australia there was not an initial association between the acoustic incident (a high short burst of noise caused by an electronic fault) and the various reported symptoms. Now this link has been proposed by the Australians between the acoustic incident and the range of reported symptoms, HSE will be actively seeking further evidence.

At this stage HSE is considering the new information and will remain in contact with experts from other countries - as well as the major interested parties in the UK - in order to form an opinion on the emerging evidence.

As an interim measure HSE recommends that call centres consider the following actions:

There is evidence that call centre managers and operators are not fully aware of the implications of acoustic shock incidents. This awareness of the subject by managers can be addressed by them attending one of the seminars now available for the subject. The Call Centre Management Association (www.ccma.org.uk) is one of the industry representatives currently offering awareness seminars. Such seminars should address the following subjects:

- The history of the syndrome. It's relation to Health & Safety legislation
- The symptoms and the causes of damage to an individual
- The effects on the industry of any common law claims for damage
- A method of recording incidents
- Research into elimination of the problem
- Available devices to measure both noise exposure and elimination of acoustic shock
- Rehabilitation and treatment of individuals who have been subject to acoustic shock.

The vast majority of call handlers wear headsets. These contain as previously stated built in protection against high noise levels. It is not possible to advise employers at this stage

of additional means of protection. Work is being carried out to design an in-line acoustic shock limiter and HSE are closely monitoring these developments.

Initial advice to call centres is to implement a traceable reporting system for headset users who may have been exposed to acoustic shock incidents. The following information should be reported:

- The date and time of the incident;
- Details of the source of the exposure;
- A description of the noise;
- The duration of the exposure;
- Details of the headset and telephone equipment used;
- Whether the incident was electronically recorded (a copy should be kept for future reference);
- Symptoms experienced by the operator directly related to the acoustic shock incident.
- Operators should be trained to recognise such incidents and how to report them.

HSE will continue to monitor this situation and will report its findings as new evidence is found.

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