

A Picture of Health: Workplaces that are Bad for your Health are Bad for your Business

It is now well recognised that occupational disease is the biggest cause of work-related deaths in the UK and that thousands of people suffer from the results of an occupational disease each year.

Occupational exposure to hazardous substances, noise and vibration can lead to long-term, disabling health problems, and in the worst cases can result in fatalities. Asbestos related deaths are the highest in the UK, along with occupational cancer, and other lung diseases are also towards the top of the list.

There are a number of reasons why the UK still has high rates of occupational disease in the 21st century. Over the years, occupational health has been seen as secondary to physical safety issues. There is still a national shortage of specialist occupational health professionals, from physicians and nurses to occupational hygienists and competent safety practitioners.

Occupational diseases are notoriously difficult to manage and this can be attributed to the lack of awareness demonstrated by employers, employees, contractors and the self-

employed regarding the severity and nature of exposures to certain chemical and physical agents.

More often than not the level (and route) of exposure is not immediately obvious. For example, levels of respirable dust in the workplace or actual levels of harmful hand-arm vibration cannot be determined without specific and accurate monitoring.

Occupational diseases often have a long latency period, so people can work in an environment that is noisy or where chemicals release vapours and fumes without feeling the ill effects for some time after the exposures begin. Asbestos related cancer such as mesothelioma is a vivid example. Workers exposed to asbestos fibres may not develop disease until 15 years or more after the initial exposure.

The UK Today – Not Quite the Picture of Health

Statistics published by the Health and Safety Executive (HSE) reveal that:

- **2.1 million** people were suffering from an illness they believed was caused or made worse by their current or past work.
- **2056** people died of mesothelioma (2006), and thousands more from other occupational cancers and lung diseases.
- **229** workers were killed at work, a rate of 0.8 per 100 000 workers.
- **34 million** days were lost overall (1.4 days per worker), 28 million due to work-related ill health and 6 million due to workplace injury.

Exposures in the workplace to chemical and physical agents (such as noise and vibration), require strategic health and safety plans and ongoing effective management in order for employers to drive down occupational diseases and safeguard the health of their employees and other stakeholders. However, due to the nature of these agents, employers often struggle to implement effective controls to reduce the risk to health.

Unlike some safety issues where the danger is obvious, an employee's exposure to hazardous substances or physical hazards, such as noise and vibration, can go undetected. In order to effectively manage occupational health risks, employers must undertake suitable and sufficient risk assessments which will determine the most appropriate means to prevent or control exposure to an acceptable level.

Exposure to Chemical Agents

There are several pieces of legislation in place to protect workers from exposure to harmful materials. The key piece of legislation is the Control of Substances Hazardous to Health 2002 regulations (as amen-

ded) (COSHH). In addition there is the Control of Asbestos at Work regulations (CAW) and the Control of Lead at Work regulations (CLAW). More recently, the Registration, Evaluation, Authorisation of Chemicals (REACH) regulations have also been implemented with a view to improve performance in reducing harmful exposures to substances in the workplace.

Furthermore, the UK is currently in a transition period over the way in which hazardous substances are classified. On 1st June 2015 the Classification, Labelling and Packaging of Substances and Mixtures (also known as the CLP regulations) will be fully in force for the classification of both substances and mixtures. This regulation is being implemented by the European Union as our enactment of the Globally Harmonised System for Classification and Labelling of Chemicals (GHS). These changes are intended to improve the quality of hazard information made available to suppliers, transporters and end users of chemicals in an increasingly global market. To allow for a smooth transition, amendments are being made to the Chemical (Hazard Information for Packaging and Supply) regulations (CHIP), the latest version being CHIP 4 which came into force on 6th April 2009.

Historically, employers have struggled with COSHH, despite the regulations being in place for over 20 years now. Efforts to harmonise standards across Europe and to simplify procedures has prompted the UK to redefine a number of personal exposure limits to both chemical and physical agents. For example, the updated COSHH regulations make reference to Workplace Exposure Limits (WELs) which has replaced the Maximum Exposure Limit (MEL) and Occupational Exposure Standard (OES), limits that are fundamental to controlling personal exposure to hazardous substances.

The European Agency for Occupational Safety and Health has recently published a report outlining what is considered to be new and emerging chemical risks across Europe. Some of these chemicals are a relatively new phenomenon. Nano-particles and ultra-fine particles are becoming more prominent as developing technologies emerge in the modern workplace. Some more familiar dusts and particles are also cited in the report 'Expert forecast on emerging chemical risks related to occupational safety and health'. Substances such as diesel fume, Machine-Made Mineral Fibres (MMMF) and respirable crystalline silica are still not being adequately controlled.

It's not just the airborne contaminants that pose a problem. According to the HSE statistics 2007/08, an estimated 20,000 individuals who worked in the previous 12 months suffered "skin problems" which they believed to be work-related. There were 2,617 cases of occupational skin disease in 2007 reported by dermatologists and occupational physicians. Of these, 1,780 (68%) were contact dermatitis and 614 (23%) – most of the remainder – were skin cancers.

Exposure to Noise

Recent changes to noise regulations have seen action values become tighter with the extension to industries that have previously been exempt, the most recent being the music and entertainment industry.

Recent statistics published on the HSE website show that 175 individuals qualified as new cases of noise-induced deafness under the Industrial Injuries Disablement Benefit scheme in 2006/07. This has fallen from 210 individuals in 2005/06. There has been consistent reduction in cases awarded under the scheme from 1995/96 (530 cases) to 2006/07 (175 cases). Nevertheless in 2007/08 an estimated 21,000 individuals who worked in the last 12 months were suffering hearing problems which they believed to be work-related, according to the Labour Force Survey.

In order to qualify for Industrial Injuries Disablement Benefit, the level of hearing loss has to be quite severe so this is not an accurate measure of people who may have experienced hearing problem attributable to work.

Exposure to Hand-Arm Vibration

The Control of Vibration at Work Regulations 2005 provide action and limit values for hand-arm (HAV) and whole-body vibration (WBV). Prior to this the UK followed guidance from the Health and Safety Executive (HSE) but the new regulations made the control of exposure an explicit legal requirement.



The number of new cases of Vibration White Finger (VWF) assessed for Industrial Injuries Disability Benefit was 510 in 2006/07 down from 645 in 2005/06. This is the lowest number of new cases in the last ten years. It is estimated that there were around 288,000 sufferers from VWF in Great Britain in 1997/98. The number of new cases of Carpal Tunnel Syndrome (CTS) assessed for disablement benefit has decreased from 520 cases in 2005/06 to 435 in 2006/07.

Managing the Issues

Quantifying personal exposure provides accurate data on which the level of risk can be determined and the most suitable risk control measures can be selected. Opting for personal exposure monitoring surveys is not always a legal requirement, and they can prove to be expensive in the short-term. Nevertheless the long-term gains of undertaking a good quality, bespoke survey will assist employers in making informed decisions regarding the control measures to put in place. For example, the noise regulations do not require a noise survey to take place, however this will be required if elevated noise levels are experienced. Health surveillance may also be required if noise levels are above the upper exposure action values, or people are at risk for any reason (for example they already suffer from hearing loss or are particularly sensitive to damage).

It is imperative that risk assessors are fully competent, or supported by competent advisors. This advice could be provided by a health and safety practitioner who has undergone specific training; an occupational health advisor, nurse or physician; or an occupational hygienist.

Adopting EU directives and taking heed of the vast body of research undertaken across Europe ensures that the UK raises its game in protecting health and safety at work by imposing increasingly tougher standards. Employers can rise to this challenge by ensuring they have competent advice and effectively manage the workplace by adopting robust risk assessment procedures to ensure that the most appropriate and efficient controls are implemented to safeguard their employees and businesses together.

Sources of statistical data:

<http://www.hse.gov.uk/statistics/overpic.htm>

<http://osha.europa.eu/en>

http://osha.europa.eu/en/riskobservatory/teaser/european_workers_face_new_increasing_health_risks_hazardous_substances_01.11032009

About the Author

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