

3 Legislation Related to Health and Safety

3.1 The Law Affecting Health and Safety in the UK

3.1.1 UK Health and Safety at Work Act (HASWA) 1974

The 1974 HASWA defines the statutory duties UK employers must perform for the reasonable care of their employees [1, 2]. The HASWA currently imposes only criminal liability. Companies and individual managers and employees can be prosecuted for breaches of their statutory duties. A provision in Section 47 of HASWA extends jurisdiction of the Act, permitting employees injured at work to sue in a civil court. The Act covers everyone at work, including independent contractors and their employees, the self-employed and visitors, but excludes domestic servants in private households. Under Section 6 of the HASWA, the manufacturers and suppliers of industrial chemicals must furnish appropriate information relating to the toxic potential of their products. The employer has a duty to provide such information as is necessary to ensure the health and safety of his employees at work. That is, he/she should obtain information not only from the manufacturers and suppliers but, if necessary, from other sources.

3.1.2 Statutory Duties of the Employer

Section 2 of the HASWA imposes general duties on employers to take reasonable care of the health, safety and welfare of their employees at work and to provide:

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- A safe system and place of work
- Information, instruction and training on matters of health and safety and adequate supervision
- A safe system for the handling, storage and transport of substances and materials
- A safe working environment

3.1.3 Statutory Duties of Employees

Employees' duties are outlined in Sections 7 and 8. They are to take reasonable care to ensure their own health and safety and that of others, to co-operate on any matter of health and safety, and to avoid behaviour or actions that would endanger their own health and safety or that of others. This includes the duty to inform employers if a medical history is requested.

3.1.4 The Institutions

The Health and Safety Commission established under HASWA as a tripartite body (Government, Confederation of British Industry, and the Trades Union Congress) is responsible for policy. The Health and Safety Executive (HSE) is responsible for enforcing the Act. There are several divisions, the largest of which is the Factory Inspectorate. The Employment Medical Advisory Service is the field force of the medical division of HSE.

Environmental Health Officers employed by local authorities enforce the Act. Their powers are the same as the Factory Inspectorate. The employment protection legislation includes sections on:

- Standard of evidence of ill-health
- Standard of medical evidence and medical reports

- Guidance for conflicting medical advice
- Guidance for disclosure of medical notes
- Interpreting contracts *vis-à-vis* health and safety
- Recommended checklists
- Strategies for dealing with misrepresented medical condition(s)

3.1.5 UK Control of Substances Hazardous To Health Regulations (COSHH)

COSHH imposes duties on employers to protect employees and other persons who may be exposed to substances hazardous to health and also places responsibilities on employees. Employers are required to prevent or, if this is not practicable, to control exposure to hazardous substances. To help protect the worker against ill-health, the HSE sets occupational exposure limits. The former Maximum Exposure Limit and Occupational Exposure Standard (OES) have been replaced with a single type of limit—the Workplace Exposure Limit (WEL). COSHH requires that exposure should be reduced as far below the WEL as possible. An OES is set at a level at which (based on current scientific knowledge) there is no indication of risk to the health of workers who breathe it every day. If exposure to a substance that has an OES is reduced at least to that level, then adequate control has been achieved. It is recommended that exposure to all airborne contaminants is kept as low as possible [3].

3.1.6 The Code of Practice of the British Rubber Manufacturers' Association (BRMA)

The BRMA [4] has prepared a Code of Practice on Rubber Chemicals to help to secure the health and safety of workers in the rubber industry. This code is based on the basic principles of occupational hygiene:

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- An assessment of the risk to health and of the precautions needed.
- The introduction of appropriate measures to control the risk.
- Ensuring that control measures are used, that equipment is appropriately maintained, and procedures observed.
- The monitoring (if necessary) of exposure of workers and the provision of appropriate health surveillance.
- The instruction and training of employees about the risks and the precautions to be taken.

The code defines the recommended working procedures for handling compounding ingredients and other chemicals. If these recommended procedures are carefully followed, a high standard of industrial hygiene will be ensured without introducing unnecessary restrictions into the manufacturing operation.

3.2 The Law Affecting Health and Safety in the USA

In the USA, toxic substances in the workplace are primarily controlled through three Federal laws: the Safety and Health Act of 1969, the Occupational Safety and Health Act (OSH Act) of 1970, and the Toxic Substances Control Act (TSCA) of 1976. The OSH Act established the Occupational Safety and Health Administration (OSHA) in the Department of Labor to enforce compliance and the National Institute for Occupational Safety and Health (NIOSH) in the Department of Health and Human Services (under the Centre for Disease Control) to carry out research and conduct health hazard evaluations. The Office of Toxic Substances in the Environment Protection Agency administers the TSCA. Regulatory laws under the OSH Act have clearly influenced other environmental legislation, and will probably affect implementation of the TSCA [5].

3.2.1 Federal Regulation of Occupational Health and Safety in the Workplace

The OSH Act requires the OSHA to: (1) encourage employers and employees to reduce hazards in the workplace and to implement new or improved safety and health programs; (2) develop mandatory job safety and health standards and enforce them effectively; (3) establish separate (but dependent) responsibilities and rights for the safety and health conditions of employers; (4) establish reporting and record-keeping procedures to monitor job-related injuries and illnesses; and (5) encourage states to assume the fullest responsibility for establishing and administering their own occupational safety and health programmes [6].

The OSHA therefore: (1) inspects workplaces for violations of existing health and safety standards; (2) establishes advisory committees; holds hearings; sets new or revised standards for control of specific substances, conditions, or use of equipment; enforces standards by assessing fines or by other legal means; and (3) provides constructive services, training and education for employers and employees. From the development of standards through to their implementation and enforcement, the OSHA upholds the right of employers and employees to be fully informed, to actively participate, and to appeal its decisions [5].

The coverage of the OSH Act initially extended to all employers and their employees, except self-employed people, as well as family-owned and family-operated farms and workplaces already protected by other federal agencies or other federal statutes. In 1979, however, Congress exempted ~1.5 million businesses with 10 or fewer employees from routine OSHA safety inspections. Federal agencies such as the US Postal Service are not subject to OSHA regulations and enforcement provisions, so each agency is required to establish and maintain its own effective and comprehensive job safety and health programme. The OSHA provision does not apply to state and local governments in their role as employers. However, it does require any state desiring to gain support or funding from the OSHA for its own occupational

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safety and health programme to provide a programme to cover its state and local government workers that is as effective as the OSHA programme for private employees.

The OSHA can set standards on its own or if petitioned to do so by other parties, including: the Secretary of Health and Human Services; NIOSH; state and local governments as well as nationally recognised standards-producing organisations; employers or labour representatives; or any other interested person. The Standard setting process involves input from advisory committees and from NIOSH. If the OSHA develops plans to propose, amend or delete a standard, these intentions must be published in the Federal Register. Interested parties can then present arguments and pertinent evidence in writing (or at public hearings) in support of or against the changes. The OSHA is authorised to set emergency temporary standards which take immediate effect but expire within six months. To do this, the OSHA must first determine that workers are in grave danger from exposure to toxic substances (or new hazards) and are not adequately protected by existing standards. Standards can be appealed through the federal courts, but filing an appeals petition will not delay enforcement of the standard unless a Court of Appeal specifically orders it. Employers may make application to the OSHA for variance from a standard or regulation if they lack the means to comply, or if they can prove that their facilities or methods of operation provide effective protection for employees.

OSHA requires employers of more than 10 employees to maintain records of occupational injuries and illnesses. Irrespective of company size, the following must be recorded: all occupational injuries and diseases resulting in death and injuries resulting in one or more lost work days; restriction of work or motion; loss of consciousness; transfer to another job; or medical treatment (other than first aid) [5].

3.2.2 Workers' Compensation

Workers' compensation is a legal system designed to shift some of the costs of occupational injuries and illness from workers to employers. Workers' compensation is a no-fault system with a wider coverage than common law. Workplace injuries and illnesses are compensable even if they are only in part work-related and injured workers do not need to prove that their injuries were caused by employer negligence. In general, workers' compensation laws require employers or their insurance companies to reimburse part of the lost wages and entire medical and rehabilitation expenses of injured workers.

Workers' compensation provides income benefits medical payments and rehabilitation payments to workers injured on the job and benefits to survivors of fatally injured workers. There are 50 state and three federal workers' compensation jurisdictions, each with its own statutes and regulations. The law prescribes the benefit formulae. Some large employers pay the benefits themselves, but most pay yearly premiums to an insurance company, which then processes all claims and pays compensation to injured workers.

3.3 Occupational Health and Safety (OHS) Legislations in the Asia/Pacific Rim

3.3.1 Japan

In Japan, the Ministry of Labour of the national government has full jurisdiction over the administration of occupational health. OHS legislation stipulates the minimum standards for measures to be taken by employers as well as outlining the level of supervision and guidance to which inspectors of labour standards should adhere. To enforce the standards, the Japanese government has provided detailed voluntary activities by management and labour [6]. Two laws in Japan regulate the use and control of chemicals.

First, the Chemical Substances Control Law, amended in 1987, aims at preventing environmental contamination by chemical substances that are low in biodegradability and harmful to human health. The law is divided into three classes: class 1: low biodegradability, high bioaccumulation and risk to human health; class 2: low biodegradability and low bioaccumulation but still a risk to human health and of environmental contamination; and class 3: low biodegradability and low bioaccumulation with a suspected risk to human health.

The second law is a parallel system with a specified list of chemical substances requiring labeling. Chemicals are classified into four groups (lead, tetraalkyl lead, organic solvents, and other specified chemical substances). The classification criteria are: (1) possible occurrence of serious health impairments; (2) possible frequent occurrences of health impairment; and (3) actual (known or measured) impairments to health.

There are other laws concerning hazardous substances, including the Explosive Control Law, the High-Pressure Gas Control Law, the Fire-Prevention Law, the Food Sanitation Law, and the Drugs, Cosmetics and Medical Instrument Law [7].

3.3.2 India

There is no single comprehensive occupational health and safety legislation in India. However, there are three principal acts: the Factory Act, 1948; the Mines Act, 1952; and the Dock Worker Safety, Health and Welfare Act, 1986. Although the Factory Act was first adopted in 1881, the Act covers only workers in registered factories. There persist unfortunately large numbers of blue- and white-collar workers that do not fall under the umbrella of occupational safety and health laws [6].

3.3.3 China

The Labour Law of the People's Republic of China specifically addresses OHS issues. The legislation emphasises the positive action employees need to take against employers by refusing to work, to submit written criticisms, or to file charges against any conditions endangering the safety of their life and health. The responsibility of supervision and inspections lies with the Labour Administrative Departments of the People's Governments or the trade union. Recently, three new pieces of legislation were passed in an effort to improve OHS standards in China: (1) Law of the People's Republic of China on the Control of Occupational Diseases; (2) New Coal Mine Safety Regulation; and (3) Provisions on Treatment of Toiler Pressure Vessel and Pressure Pipe Special Equipment Accidents [6].

3.3.4 Australia

Under the Australian system of government, the states and territories have responsibility for making and enforcing laws about health and safety in the workplace. Each state and territory has a principal OHS Act which defines the requirements for ensuring safety and health in the workplace. These regulations clarify the duties of different groups of people and their role in health and safety in the workplace [6].

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