

Glossary for Basic Occupational Safety and Health

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Acknowledgement:

We are grateful for the comments and contributions from staff members of the Coronel Institute of Occupational Health in Amsterdam, the Netherlands, and of the Occupational and Environmental Epidemiology and Net Teaching Unit in Munich, Germany. Both centers are WHO Collaborating Centers in Occupational Health.

*Terms with ** before the term still need careful consideration. Comments and suggestions on the other terms are welcome as well, of course, as the Glossary is a representation of only one interpretation of a specific term and always bound to culture, time, mistakes, etc. We strive to select, develop and present those terms and interpretations that have a more common global significance and that are of practical value. We do not strive to cover each term completely and do not have the aim to present terms for legal purposes. See also the Disclaimer.*

Aim and process

This glossary has the aim to support professionals and non-professionals interested in Occupational Safety and Health (OSH). The main aim is to support those who are involved in practice and in the development of policy. This glossary, we hope, will supply the need, which we have noticed in the education and training of students and professionals in many countries, for a rather short list of the most frequently used terms and phrases providing a short explanation or definition.

For many terms we used an explanation or definition from an already existing source when we found that explanation appropriate. In such cases we mentioned the original source name after the explanation between brackets: [source]. In other cases we felt the need to change the explanation slightly, or we added e.g. one sentence, without changing the original explanation substantially. In those cases we mentioned the original source name between brackets and added 'adapted' [source, adapted]. In the cases where we changed the explanation more substantially we did not mention the original source, as we had to take the full responsibility for the new explanation. In still other cases we defined the terms fully ourselves.

This glossary is a list of terms in the field of OSH with accompanying definitions. This glossary offers a description or definition, which is more than some other glossaries do. Of course descriptions and definitions are in a sense arbitrary and are dependent on time, culture and sometimes legislation. We tried to make a choice for those descriptions that are not too complicated and that may be valid in many countries and situations. The most elaborate glossary in OSH that we know and that we like to recommend is the ILO-CIS dictionary from 1993 with 2.600 OSH terms in five languages⁵. However, we did not use this glossary for our list, as this 1993 ILO glossary offers translations but no descriptions or definitions.

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⁵ <http://www.ilo.org/safework/info/publications/lang--en/>, Title: Occupational Safety and Health Glossary, 1993; look in the year 1993 (page 11); retrieved at September 4, 2011.

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The Coronel Institute in Amsterdam produced in 2011 a limited dictionary including 320 OSH terms presented in three languages: Spanish, English and Dutch, included in the book: *¿Cómo buscar la evidencia en las fuentes de internet? Salud Ocupacional*⁶. In this 2011 publication we offer translations but no descriptions or definitions.

Sources

The most frequently used sources for this Glossary are:

- Glossary of Occupational Health & Safety Terms. Toronto, Canada: Industrial Accident Prevention Association; revised May 2007.
“This glossary is designed for joint health and safety committee members, health and safety representatives and others with workplace health and safety responsibilities. It provides easy to understand definitions of common workplace health and safety terms. The glossary does not attempt to provide strict legal or technical definitions.” For users of the Glossary: look at the Disclaimer in the original publication. [IAPA 2007]
- Technical and ethical guidelines for workers' health surveillance (Occupational Safety and Health Series No. 72). Geneva, Switzerland: International Labour Office (ILO); 1998. Also published in French and in Spanish. (Glossary pages 21 – 22). [ILO 1998]
- Fundamental principles of occupational health and safety. Benjamin O. Alli. ILO Geneva. First edition 2001 (revised 2008, we used the free downloadable first edition 2001). [ILO 2001]
- Healthy workplace Framework and Model: Background and supporting literature and practice (Annex 2 Glossary of terms and phrases). Geneva, Switzerland: WHO; 2010. [WHO 2010]
- Occupational Health; A manual for primary health care workers. Cairo, Egypt: WHO Regional Office for the Eastern Mediterranean; 2001. [WHO 2001]
- Guideline for Basic Occupational Health Services. Helsinki, Finland: Finnish Institute of Occupational Health (FIOH); 3rd, revised edition, 2007. ”Published as a response to the Joint ILO/WHO Committee on Occupational Health priority area for ILO/WHO/ICOH collaboration, with support of the Finnish Institute of Occupational Health (FIOH).” Author: Professor Jorma Rantanen. Editing: Suvi Lehtinen. [Ran 2007]

Frequency of sources used (version 11-9-2011):

| | |
|--|-----|
| <i>IAPA (inclusive 'adapted')</i> | 61 |
| <i>WHO (various sources, incl. 'adapted')</i> | 19 |
| <i>ILO (various sources, incl. 'adapted')</i> | 22 |
| <i>No other source, or original source(s) changed substantially by the authors</i> | 16 |
| <i>Wikipedia</i> | 5 |
| <i>Rantanen 2007</i> | 5 |
| <i>Websites of international professional Associations</i> | 3 |
| <i>Total terms or phrases in the glossary</i> | 129 |

⁶ *¿Cómo buscar la evidencia en las fuentes de internet? Salud Ocupacional*. Amsterdam, The Netherlands: Coronel Institute AMC; 2011. Free downloadable at <http://www.beroepsziekten.nl/content/publicaties-2011> .

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Producers

This Glossary is developed and produced by the Occupational Health teams of the Academic Medical Center in Amsterdam, the Netherlands, and of the University Hospital of Munich (LMU), Germany. Both centers are WHO Collaborating Centers in Occupational Health. Manuel Parra from the Instituto de Salud Pública de Chile joined the team in the development of the Glossary. The editors responsible for the Glossary are Katja Radon, Manuel Parra and Frank van Dijk.

Application of the glossary

This glossary can be useful in the education of medical and other students interested in this field, but can also be used by different professionals during training in occupational health and safety knowledge and skills. The glossary may also be useful as a source of reference in e.g. a website for workers and managers with the aim of disseminating knowledge on occupational safety and health.

Disclaimer

The information is developed with most care. Nevertheless no guarantee can be made as to the correctness, suitability, fitness or sufficiency of any information contained in this material.

Future

We like to receive suggestions in order to improve the Glossary. Please send comments and suggestions to Frank van Dijk: f.j.vandijk@amc.uva.nl. Thanks beforehand! In the future we might consider starting a more or less permanent WIKI type working group to improve the glossary.

New terms to describe

We like to describe new terms in the future such as:

- **Occupational epidemiology**
- **Roles of OSH specialists: safety engineers, ergonomists, hygienists, physicians, nurses, others.**
- **Vulnerable worker.**
- **Nosocomial infections.**
- **Occupational zoonosis.**
- **Psychosocial risks.**
- **Prevention strategies and levels of prevention.**
- **Mutagenic**
- **Biomechanics.**
- **Healthy workplace.**
- **Way-to-work-accident (commuting accident?)**

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Accident

An unplanned event that results in harm to people, damage to property or loss to process.
[IAPA 2007]

Acute effect

A change that occurs in the body within a relatively short time (minutes, hours, days) following exposure to a substance.
[IAPA 2007]

Alma Ata Declaration

The Declaration of Alma-Ata was adopted at the International Conference on Primary Health Care (PHC), Almaty (*formerly Alma-Ata*), currently in Kazakhstan; 6-12 September 1978. It expressed the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world. It was the first international declaration underlining the importance of primary health care. The primary health care approach has since then been accepted by member countries of the World Health Organization (WHO) as the key to achieving the goal of "Health For All".
[Wikipedia July 2011]

Area sampling

Collection and analysis of representative samples of air in general work areas in order to determine the concentrations of any contaminants that are present.
[IAPA 2007]

Asphyxiant

A vapor or gas that can either reduce the oxygen content in the air or interfere with the body's ability to use oxygen. Exposure to an asphyxiant can result in unconsciousness or death due to being unable to breathe or by interruption of cell respiration.
[IAPA 2007]

Audiometric testing

Tests that are conducted to determine the hearing ability of a person. These tests may be used to establish an employee's baseline hearing, to identify any subsequent hearing loss, and to monitor the effectiveness of noise controls.
[IAPA 2007]

Audit

A systematic and documented process for obtaining evidence from inspections, interviews and document review, and evaluating it objectively to determine the extent to which relevant criteria are fulfilled.
[WHO 2010]

Biological agent

Any living organism (for example, virus, bacteria or fungi) that affects the body, a part of the body, or any of its functions. The effects may be beneficial or harmful.
[IAPA 2007 adapted]

Biological monitoring

Assessments in blood, urine, faeces, exhaled air, nails or hair of a chemical or its metabolite to determine whether a person has been or is being exposed to that chemical by looking for traces of the chemicals or biological indicators of chemical exposure.

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BOHS

The Basic Occupational Health Services are an application of occupational health by means of primary health care principles for workers who are underserved. Many regions and economic sectors lack regular occupational health services. Basic Occupational Health Services (BOHS) is a starting point for these area's and economic sectors.

[Rantanen 2007]

Carcinogen

A chemical, physical or biological agent that can cause cancer in humans or animals.

[IAPA 2007]

Ceiling exposure limit

See *Threshold limit values*.

Chemical agent

A chemical substance that affects the body, a part of the body, or any of its functions. The effects may be beneficial or harmful.

[IAPA 2007]

Chronic effect

A change that occurs in the body over a relatively long time (weeks, months, years) following repeated exposure or a single over-exposure to a substance.

[IAPA 2007]

Cochrane Collaboration

An international, non-profit, independent organization established to ensure that current, accurate information about the effects of health care interventions is readily available worldwide, through the publication of Cochrane Reviews (systematic reviews of the literature).

[WHO 2010]

Cochrane Occupational Safety and Health Review Group

It is one of more than 50 collaborative Review Groups within the Cochrane Collaboration. The group collects for as many occupational safety and health topics as possible, all the available research on the effects of specific protective measures. The results of these studies are combined in reports that are called systematic reviews.

[Website Cochrane Occupational Safety and Health Review Group, September 2011]

Compensation claim

A claim filed mostly in accordance with national legislation, insurance regulations or other regulations, or with a contract by or on behalf of an employee, who has suffered a disabling injury, illness, or death arising out of and in the course of work.

[IAPA 2007 adapted]

Controls

Measures designed to eliminate or reduce hazards or hazardous exposures. Examples include: engineering controls, administrative controls, personal protective equipment. Hazards can be controlled at the source, along the path to the worker, or at the worker.

[IAPA 2007]

Convention, ILO

Legally-binding international treaties related to various issues related to work and workers. Once a Convention has been passed by ILO, Member States are required to submit it to their parliament for consideration for ratification.

[WHO 2010]

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Corrosive substance

A substance that will burn the skin or mucosa on contact.
[IAPA 2007]

Cumulative trauma disorder

See *repetitive strain injury*.
[IAPA 2007]

Dermatitis

A general term for various types of inflammation of the skin. Symptoms of dermatitis may include: redness, itch, scaling, blisters, and cracks in the skin. [IAPA 2007]

Disabling injury

An injury that prevents a person from coming to work or doing his or her usual job duties.
[IAPA 2007 adapted]

Embryotoxin

An agent that is harmful or poisonous to unborn children up to the end of the eighth week of development. See also *Teratogen*.
[IAPA 2007]

Emergency plan

Detailed procedures for responding to an emergency, such as a fire or explosion, a chemical spill or an uncontrolled release of energy. An emergency plan is necessary to keep order and minimize the effects of the disaster.
[IAPA 2007]

Engineering controls

A category of hazard control that uses physical/engineering methods to eliminate or minimize the hazard. Examples of engineering controls include: ventilation, isolation, elimination, enclosure, substitution and design of the workplace or equipment.
[IAPA 2007]

Enterprise

A company, business, firm, institution or organization designed to provide goods and/or services to consumers. It may imply for-profit business, not-for-profit organizations or agencies or self employed individuals.
[WHO 2010 adapted]

Ergonomics

See *Occupational ergonomics*.

Ergonomic principles

A concept whereby the work to be carried out is organized and specified – and tools and equipment designed and used – in such a way as to be matched with the physical and mental characteristics and capacity of the worker.
[ILO 2001]

Exposure records

The records kept by employees themselves, an employer, occupational physician or occupational health nurse of an employee's exposure to a hazardous material or physical agent in the workplace. These records show the time, level and length of exposure for each substance or agent involved.
[IAPA 2007 adapted]

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Family - work interference

One type of work-family conflict; a form of role interference that occurs when family demands and responsibilities make it more difficult to fulfil work role responsibilities. See also *Work - family interference*.

[WHO 2010]

Fatal occupational injury

Occupational accident or injury leading to the death of a worker.

General ventilation

See *Ventilation*.

Hazard

A physical or psychosocial condition, object or agent that has the potential to cause harm to a worker and/or to cause damage to property or environment.

[WHO 2010 adapted]

Hazardous material

Any substance that may produce adverse health and/or safety effects to people or the environment.

[IAPA 2007]

Health and safety program

A systematic combination of activities, procedures, and facilities designed to ensure and maintain a safe and healthy workplace.

[IAPA 2007]

Health and safety representative

A health and safety representative is selected following mostly national legal prescriptions that are present in many countries. A health and safety representative has prescribed responsibilities and powers. See *joint health and safety committee*.

[IAPA 2007 adapted]

****Health risk assessment (the term health risk appraisal is regarded as a synonym)**

A type of assessment tool that collects information from health status measures (e.g. BMI, blood cholesterol, nutritional analysis, heart rate response to exercise). The assessment is usually based on clinical reports/measures and/or self-reported information on health habits. In most cases, a health risk assessment requires a professional. The assessment usually results in individualized results and an aggregate report for the workplace.

The term *health risk assessment* is sometimes used in Occupational Health in a different meaning to refer to an assessment of the health risks in a workplace through hazard and risk identification and exposure assessment. Consequently the assessment results in a feedback to the worker, and the program offers the worker an intervention to promote health, sustain function or prevent disease. See also *risk assessment*.

[WHO 2010 adapted]

Rantanen uses the terms *occupational health risk assessment*, in which he includes the identification of occupational health hazards (as a result of surveillances) and workers exposed to specific hazards. Then an analysis of how the hazard may affect the worker (ways of entry and type of exposure, threshold limit values, dosage/ response, relationships, adverse health effects it may cause, etc.) followed by the determination of intensity (level) and magnitude (volume) of the risk. The identification of individuals and groups with special vulnerabilities is the next step, followed by an evaluation of available hazard prevention and control measures, and the making of conclusions and recommendations for the management and control of risks. Finally, the assessment of an individual worker's health risk is made by combining information from health surveillance and from health examinations.

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[Rantanen, 2007 adapted]

Hygiene practices

A broad term for personal health habits that may reduce or prevent the exposure of a worker to chemical or biological substances. Hygiene practices include e.g.: not smoking, not eating or drinking in the work area, washing up before breaks and meals, removing contaminated clothing before leaving work and keeping street clothes separate from contaminated work clothing. See **Industrial hygiene**, where another concept of the term hygiene is described as a science that deals with the anticipation, recognition, evaluation (measurement), and control of hazards in the physical work environment. Also known as *Occupational Hygiene*.

[IAPA 2007]

ICOH

The International Commission on Occupational Health (ICOH) is an international non-governmental professional society whose aims are to foster the scientific progress, knowledge and development of occupational health and safety in all its aspects. It was founded in 1906 in Milan as the Permanent Commission on Occupational Health. Today, ICOH is the world's leading international scientific society in the field of occupational health with a membership of 2,000 professionals from 93 countries. [ICOH website July 2011]

IEA

The International Ergonomics Association is the federation of ergonomics and human factors societies around the world. The main goals of the IEA are: to develop more effective communication and collaboration with federated societies; to advance the science and practice of ergonomics at an international level; and to enhance the contribution of the ergonomics discipline to global society.

[IEA website July 2011]

ILO

The International Labour Organization (ILO) is a specialized agency of the United Nations which aims at social justice concerning labor issues. ILO is a tripartite organisation with government, workers' and employers' representatives.

[Wikipedia July 2011]

ILO convention

See *Convention, ILO*.

Incapacity for work

Inability to perform normal duties of work.

[ILO 2001]

Incident

An unwanted event which, in different circumstances, could have resulted in harm to people, damage to property or loss to a process. Also known as a *near miss*.

[IAPA 2007]

Incident investigation

The process of systematically gathering and analyzing information about an incident. This is done for the purposes of identifying causes and making recommendations to prevent the incident from happening again.

[IAPA 2007]

Industrial hygiene

A science that deals with the anticipation, recognition, evaluation (measurement), and control of hazards in the physical work environment. These hazards may cause sickness, harm to employee health, discomfort, and inefficient performance on the job. Also known as *occupational hygiene*.

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[IAPA 2007 adapted]

Informal economic sector

The non-regulated labour market, which usually involves workers with informal (unwritten) arrangements with an employer. In many countries entitlement for social benefits (such as sick or maternity leave, paid retirement, or access to health care), and applicability of legal rules (such as limits on work hours, minimum wage) require a formal job contract.

[WHO 2010 adapted]

Infrastructure for occupational safety and health

OSH Infrastructure refers to both physical and non-physical facilities that support the delivery of specialized OSH services, care, information and advice. Examples are the body of rules and regulations governing OSH; government ministries or departments that are committed and equipped for occupational safety and health; Labor Inspection; providers of basic and specialized OSH care and related financial provisions; educational systems for workers, management and professionals; organizations that create OSH knowledge and develop OSH tools; knowledge dissemination facilities such as OSH websites, helpdesks, journals and congresses; national OSH institutes and associations for OSH professionals; etc. See *National system for occupational safety and health* for an ILO vision.

Ingestion

The intake of a substance in the body through the mouth.

Inhalation

Breathing in a substance.

IOHA

The International Occupational Hygiene Association was established to improve, promote and develop occupational hygiene worldwide through its member organizations, and to improve and maintain a safe and healthy working environment for all. From its creation in 1987, IOHA has grown to 26 member organizations, representing over 20,000 occupational hygienists worldwide.

[IOHA website July 2011]

Irritant

A substance which, in sufficient quantities, can inflame or irritate the eyes, other mucosa, skin or respiratory system (lungs, etc.). Symptoms include pain and reddening.

[IAPA 2007 adapted]

Job security

Security at work against unlawful dismissal, as well as against unsatisfactory work conditions and an unsatisfactory work environment. Sometimes also security against falling income due to sickness or unemployment are included.

[ILO 2001]

Joint health and safety committee

In a number of countries there are so called 'joint health and safety committees' in workplaces with more than a defined number of workers. Members of the committee can be partly workers who do not exercise managerial functions, e.g. selected by the workers or, where there is one, the trade union, partly persons who exercise managerial functions or are OSH experts, appointed by management. The responsibilities and powers of joint committees can include: obtaining information on workplace hazards, identifying workplace hazards, and recommending how to make the workplace safer and healthier.

[IAPA 2007 adapted]

Knowledge infrastructure for occupational safety and health

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All physical and non-physical facilities that support the creation of, access to and dissemination of reliable information (knowledge) on occupational safety and health to experts, workers and companies, such as: the creation of knowledge by research; publication of results in journals, websites, reports and books; development of knowledge products such as reviews, guidelines, protocols, instruments, criteria documents and norms; storage in and access to (virtual, online) libraries or other repositories; education and training; knowledge transfer (dissemination) by congresses and meetings, by quality websites, and in print and by answering questions (e.g. helpdesks, online Q&A facilities). The ultimate goal is to provide good accessible and understandable, relevant, evidence-based information and tools for workers and management/employers, so that they have access when and where they need it in order to use this information to make informed decisions about health and safety at work.

Labor inspectorate

A government authority with the task of advising and giving directions on issues concerning the protection of workers and the work environment, as well as checking that the protection is sufficient. [ILO 2001]

Material Safety Data Sheet (MSDS)

A form that contains detailed information about the possible health and safety hazards of a product and how to safely store, use and handle the product. In most countries, suppliers are required to provide MSDSs for all hazardous materials as a condition of sale. [IAPA 2007 adapted]

Medical surveillance program

See *Occupational health surveillance (systems)*.

Monitoring of exposure

The systematic measurement of exposure to work related health hazards from, for instance, chemical substances, noise, vibration or radiation. There are two types of measurements that can be taken:

- **biological monitoring** based on assessments in biological media of the worker such as in blood, urine, faeces, exhaled air, nails or hair; the assessments are e.g. of a chemical or its metabolite to determine whether a person has been or is being exposed to that chemical, looking for traces of the chemical or biological indicators of chemical exposure.
- **environmental monitoring** based on assessments in the working environment e.g. in the workplace air, at objects at the workplace or in fluids present at the workplace.

See also *Biological monitoring*.

Musculoskeletal disorders

Disorders of the muscles, joints, tendons, ligaments, bones and nerves. Most work-related MSDs develop over time and are caused or exacerbated by the work itself and/or by the working environment, especially by using force, repetition of movements, awkward posture, or vibration. MSDs affect the back, neck, shoulders, upper and lower limbs. Health problems range from discomfort, minor aches and pains to more serious medical conditions requiring time off work and medical treatment. In more chronic cases the disorders could result in permanent disability and loss of employment.

National system for occupational safety and health

Refers to the infrastructure which provides the main framework for implementing the national policy and national programs on occupational safety and health. The national system for occupational safety and health shall include among others (text shortened, you may read the original text):

- (a) law and regulations, collective agreements where appropriate
- (b) an authority or body responsible for occupational safety and health
- (c) mechanisms for ensuring compliance with laws and regulations e.g. inspection
- (d) arrangements to promote cooperation between management and workers (representatives)

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The national system shall include where appropriate (text shortened, you may read the original text):

- (a) a national tripartite advisory body
- (b) information and advisory services on occupational safety and health
- (c) provision of occupational safety and health training
- (d) occupational health services
- (e) research on occupational safety and health
- (f) mechanisms for collection and analysis of data on occupational injuries and diseases
- (g) provisions for collaboration with insurance or social security schemes
- (h) support mechanisms for improvement of occupational safety and health conditions in micro-enterprises, in small and medium-sized enterprises and in the informal economy.

[ILO C187 Promotional framework for Occupational Safety and Health Convention 2006]

National program on occupational safety and health

A program that includes objectives to be achieved, priorities and means of action formulated to improve occupational safety and health, and means to assess progress. A national program shall promote the development of a national preventative safety and health culture; contribute to the protection of workers by eliminating or minimizing work-related hazards and risks to prevent occupational injuries, diseases and deaths and promote safety and health in the workplace; be formulated on the basis of an analysis of the national situation; include objectives, targets and indicators of progress; be supported by other national programs and plans.

[shortened from ILO C187 Promotional framework for Occupational Safety and Health Convention 2006]

NGO

A non-governmental organization (NGO) is a legally constituted organization created by natural or legal persons that operates independently from any government. The term originated from the United Nations (UN), and is normally used to refer to organizations that do not form part of the government and are not conventional for-profit business. The term is usually applied only to organizations that pursue some wider social aim that has political aspects, but that are not overtly political organizations such as political parties.

[Wikipedia July 2011]

Noise

Sound that can lead to so called noise-induced hearing loss, tinnitus or stress, or interfere with the ability to hear other sounds, to concentrate, to relax or to communicate.

[IAPA 2007 adapted]

Notification

Procedure specified in national laws and regulations which establishes the ways in which:

- the employer or self-employed person submits information concerning occupational accidents, commuting accidents, dangerous occurrences or incidents; or
- the employer, the self-employed person, the insurance institution or others directly concerned submit information concerning a case of occupational disease.

[ILO 2001]

Occupational

Related to work.

Occupational accident

An accident related to work.

****Occupational disease (short version)**

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A disease caused by work. This means that the disease is caused by physical, chemical, biological, ergonomic or psychosocial factors at work. In many countries there are official lists of occupational diseases, including lists of factors which may cause such diseases. ILO guides the countries by the ILO List of Occupational Diseases (revised in 2010).

[Rantanen adapted]

****Occupational disease (long version)**

In the ILO Encyclopaedia of Occupational Health (edition?) and Safety Lesage distinguishes three categories of occupational diseases with respect to the strength of the causal relation. *Classic occupational diseases* are characterized by a clear, often practically monocausal relation to a specific exposure, for example mesothelioma caused by asbestos, or asthma caused by a specific chemical substance like methylene diphenyl diisocyanate (MDI). If the relation is less obvious, the disease is indicated as *work-related*. Most musculoskeletal diseases and mental health disorders are judged as belonging to this category. Most work-related diseases are considered as multicausal and include work as one of the factors that play a role in the aetiology. Following this line of reasoning, there is a recognizable relation between the working condition and the disease on the individual level (for example between repetitive movements and shoulder complaints), but it is often not clear whether the working conditions are the decisive factor in the development of the disease. Finally, a third group of diseases is distinguished in which a relation between working conditions and health effects can be demonstrated only on a *population level*. The incidence or prevalence of these diseases is higher in specific occupational groups, but it is difficult to substantiate the nature of the causal relation in, for example, biological terms. One reason may be the lack of specific signs to identify them as work-related. For example, cardiovascular diseases caused by shift work belong to this third category.

See also *Work-related disease*.

Occupational ergonomics

An applied science that studies the interaction between people and the work environment. It focuses on matching the job to the worker to ensure a healthy and productive worker.

[IAPA 2007 adapted]

Occupational health (short version)

The development, promotion, and maintenance of workplace policies and programs that ensure the physical, mental, and social well-being of employees. These policies and programs strive to: prevent harmful health effects because of the work environment, protect employees from health hazards while on the job, place employees in work environments that are suitable to their physical and mental capacities and other characteristics, and address other factors that may affect an employee's health and well-being.

[IAPA 2007 adapted]

Occupational health (long version)

The common ILO and WHO definition of occupational health, revised in 1995, says that occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of workers in an occupational environment adapted to their physiological and psychological capabilities; and, to summarize, the adaptation of work to the workers and of each worker to his or her job. The main focus is on three different objectives: (i) the maintenance and promotion of workers' health and working capacity; (ii) the improvement of working environment and work to become conducive to safety and health; and (iii) development of work organizations and working cultures in a direction which supports health and safety at work and, in doing so, also promotes a positive social climate and smooth operation, and may enhance the productivity of the enterprises. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the enterprise concerned. Such a culture

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is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the enterprise.

[ILO 1998]

Occupational health care

Occupational health care refers to the care of the health of workers. It includes preventive health care, health promotion, in some places also curative health care, first aid and rehabilitation, where appropriate, as well as strategies for prompt recovery and return to work.

[ILO 1998 adapted]

****Occupational health services**

Occupational health services means services entrusted with essentially preventive functions and responsible for advising the employer, the workers and their representatives in the undertaking on:

- (i) the requirements for establishing and maintaining a safe and healthy working environment which will facilitate optimal physical and mental health in relation to work;
- (ii) the adaptation of work to the capabilities of workers in the light of their state of physical and mental health.

[ILO C161 Occupational Health Services Convention, 1985]

Occupational health professionals

These are persons who have been accredited through appropriate procedures to practise a profession related to occupational health or who provide occupational health services according to the provisions of relevant regulations. They may be occupational health physicians, nurses, occupational safety and health inspectors, occupational hygienists, occupational psychologists and specialists involved in ergonomics, toxicology, accident prevention and the improvement of the working environment, as well as in occupational health and safety research and knowledge transfer. Many others, in addition to occupational health and safety professionals, are involved in the protection and promotion of the health of workers, e.g. management and workers' representatives.

[ILO 1998 adapted]

Occupational health risk assessment

See *Health risk assessment*.

Occupational health surveillance

Occupational health surveillance is the ongoing systematic collection, analysis, interpretation and dissemination of data for the purpose of prevention. Surveillance is essential to the planning, implementation and evaluation of occupational health programs and to the control of work-related ill health and injuries, as well as to the protection and promotion of workers' health. Occupational health surveillance includes workers' health surveillance and working environment surveillance.

[ILO 1998]

Occupational health surveillance systems

Occupational health surveillance systems are systems which include a functional capacity for data collection, analysis and dissemination linked to occupational health programs. It refers to all activities at individual, group, enterprise, community, regional and country levels to detect and assess any significant departure from health caused by working conditions, and to monitor workers' general health. Occupational health surveillance programs record instances of occupational exposures or work-related illness, injury or death and monitor trends in their occurrences across different types of economic activities, over time, and between geographical areas.

[ILO 1998]

Occupational hygiene

See *Industrial hygiene*.

[IAPA 2007]

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Occupational injury

Death, any personal injury or disease resulting from an occupational accident.
[ILO 2001]

Occupational safety

The maintenance of a work environment that is relatively free from actual or potential hazards that can injure employees.
[IAPA 2007]

Occupational safety and health

The discipline dealing with the prevention of work-related injuries and diseases as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment. Members of many different professions (e.g. engineers, physicians, hygienists, psychologists, nurses) contribute to “occupational safety, occupational health, occupational hygiene, well-being at work and improvement of the working environment”.
[ILO 1998 adapted]

Parts per million (PPM)

Parts of gas or vapour per million parts of air by volume at room temperature. For example, 1 cubic centimetre of gas in 1 million cubic centimeters of air has a concentration of 1 PPM.
[IAPA 2007]

Personal data

Personal data are any information related to an identified or identifiable person; minimum requirements for confidentiality should be established for health data.
[ILO 1998]

Personal protective equipment (PPE)

Any device worn by a worker to protect against hazards, as a barrier between himself or herself and the hazardous agent. Some examples are: respirators, gloves, ear plugs, hard hats, safety goggles and safety shoes.
[IAPA 2007 adapted]

Physical agent

A source of energy (for example, noise, radiation, vibration, heat, cold) that affects the body, a part of the body, or any of its functions. The effects may be beneficial or harmful.
[IAPA 2007 adapted]

Physical work environment

The part of the workplace facility that can be detected by human senses or by physical, chemical, biological or ergonomic assessment including the structure, air, machines, furniture, products, chemicals, materials and processes that are present or that occur in the workplace, and which can affect the physical or mental safety, health and well-being of workers. If the workers perform their tasks outdoors or in a vehicle that location is their physical work environment. See also *Psychosocial work environment*.
[WHO 2010 adapted]

Precarious employment

Employment terms that may reduce social security and stability for workers, defined by temporality, powerlessness, lack of benefits, lack of protection and low income. Flexible, contingent, non-standard temporary work contracts do not necessarily, but often provide an inferior economic status.
[WHO 2010]

Presenteeism

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Attending the job while being sick, physically or mentally, resulting in reduced productivity and reduced wellness.

Preventive maintenance

A system for preventing machinery and equipment failure through scheduled regular maintenance, knowledge of reliability of parts, maintenance of service records, scheduled replacement of parts, and maintenance of inventories of the least reliable parts and parts scheduled for replacement.

[IAPA 2007]

Primary health care

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods. It is the first level of contact of individuals, the family and the community with the national health system bringing health care as close as possible to where people live and work.

[Rantanen 2007 adapted]

Procedure

A step-by-step description of how to do a task, job, or activity properly.

[IAPA 2007]

Psychosocial work environment

The content of work and work demands, the social relationships at work, the organization of work and the work culture, which each can affect the mental and physical well-being of workers including management. All these work aspects are sometimes referred to as workplace stressors, which may have cognitive, emotional or motivational effects on workers. See also *Physical work environment*.

Radiation

The energy transmitted by waves through space or some medium. There are two types of radiation: ionizing (for example, X-Rays or radiation from a radioactive device), and non-ionizing radiation (for example, infra-red radiation, ultraviolet radiation).

[IAPA 2007]

Reactivity

The capability of a substance to undergo a chemical reaction with the release of energy. Unwanted effects include: pressure build-up, temperature increase, and formation of harmful by-products. These effects may occur because of the reactivity of a substance to heat, an ignition source, or direct contact with other chemicals in use or in storage.

[IAPA 2007]

Repetitive strain injury

A problem with the muscles, tendons or nerves that develops over time due to overuse. Examples of repetitive strain injuries include: carpal tunnel syndrome and tendonitis. A similar term is *Cumulative trauma disorder*.

[IAPA 2007]

Reproductive hazards

Any material that can affect the development of sperm and egg cells. This can lead to an inability to have children, birth defects and other harmful changes in childhood or later in life.

[IAPA 2007 adapted]

Risk (related to work)

The likelihood of a harmful effect such as an accident or occupational disease occurring within a specified period or in specific circumstances such as during or after specified exposure. It may be expressed either as a frequency, such as the number of harmful effects in a certain time period, or as a probability, such as the probability of a harmful effect during or after exposure.

[ILO 2001 adapted]

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****Risk assessment** (related to work)

Risk assessment is the process of quantifying the frequency or probability of a harmful effect to individuals or populations (e.g. related to exposure or activities at work) and is one of the first steps in risk management.

See also *Health risk assessment* and *Risk management*.

[Wikipedia adapted]

Risk management (related to work)

All actions taken to achieve, maintain or improve work and working conditions so that harmful effects to individuals or populations related to exposure or activities at work will be prevented.

See *Risk* and *Risk assessment*.

Route of entry

The method by which a contaminant can enter the body. There are four main routes of entry. Contaminants can be breathed in, swallowed, absorbed through the skin, or injected into the bloodstream. See *Ingestion* and *Inhalation*.

[IAPA 2007]

Safety professional (or safety engineer)

A person whose basic job function and responsibility is to prevent accidents and other harmful exposures and the personal injury, disease or property damage that may ensue.

[WHO 2001]

Sampling

The process of taking small representative quantities of a gas, liquid, or solid for the purpose of analysis.

[IAPA 2007]

Sensitizer

A substance which has the potency to activate (sensitize) the adaptive immune system upon exposure. Once sensitization has taken place, repeated exposure to even very low quantities of the substance is enough to cause a marked response in humans or animals, not necessarily limited to the contact site. Skin sensitization (for example to a metal such as nickel) is the most common form of sensitization in the workplace. Respiratory sensitization to various chemicals (for example isocyanates) and biological agents (for example rodent allergens) is also known to occur.

[IAPA 2007 adapted]

****Sentinel events**

Are designed to identify high-risk jobs and activities with regard to occupational health, as well as to provide pointers towards the etiology of diseases [ILO 2008].

Sentinel health events in OSH are events so closely associated with occupational exposures that the occurrence of any cases indicates an occupational hazard [Checkoway et al., 2004].

PAHO OHS team adopted the following definition, borrowed from Mulan: “a disease, disability, or untimely death which is occupationally related and whose occurrence may provide the impetus for epidemiological or industrial hygiene studies, or serve as a warning signal that materials substitution, engineering control, personal protection, or medical care may be required“ [Choi et al, 2001].

Short-term exposure limit (STEL)

See *Threshold limit values*.

Skin notation

A notation sometimes used with Threshold Limit Value (TLV) or Time-Weighted Average Exposure Value (TWAEV) exposure data. It indicates that the substance may be absorbed by the skin, mucous membranes and eyes and thereby contribute to systemic effects. This additional exposure must be

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considered part of the total exposure to avoid exceeding the TLV or TWAEV for that substance. So air sampling alone is insufficient to quantify exposure accurately, and measures to prevent significant absorption by the skin may be required.

Solvent

A substance that dissolves other substances. Many solvents are flammable.

[IAPA 2007]

Standard

A guideline, rule, principle, or model that is used as a means to compare, measure or judge performance, quality, quantity, etc.

[IAPA 2007]

Static electricity

An electrical charge that cannot move. This charge will eventually develop enough energy to jump as a spark to a nearby grounded or less highly charged object. If sparks occur in an ignitable vapor or dust mixture, it can cause an explosion or fire.

[IAPA 2007]

Stress at work

Subjective feelings and physiological responses that result from the psychosocial work environment and put an individual in a position of being unable to cope or respond appropriately to demands being made upon him or her. Physiological responses that characterize stress can also arise from the physical environment. See also *Psychosocial work environment*.

[WHO 2010 adapted]

Stressor at work

A condition or circumstance in a workplace (or other setting) that elicits a stress response from workers. See also *Psychosocial work environment*.

[WHO 2010]

Substitution

The replacement of toxic or hazardous materials, equipment or processes with those that are less harmful.

[IAPA 2007]

Surveillance

Surveillance is the ongoing and systematic collection, analysis and interpretation of data and the appropriate dissemination of such data.

[ILO 1998]

Surveillance of the working environment

Surveillance of the working environment is a generic term which includes the identification and evaluation of environmental factors which may affect workers' health. It covers assessments of sanitary and occupational hygiene conditions, factors in the organization of work which may pose risks to the health of workers, collective and personal protective equipment, exposure of workers to hazardous agents and control systems designed to eliminate and reduce them. From the standpoint of workers' health, the surveillance of the working environment may focus on, but not be limited to, ergonomics, accident and disease prevention, occupational hygiene in the workplace, work organization, and psychosocial factors in the workplace.

[ILO 1998]

Surveillance of the workers' health

See *Workers' health surveillance*.

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Systematic review

A literature review of a single issue or question that attempts to identify, select and synthesize all high quality research evidence relevant to that question. Systematic reviews of, among others, high-quality randomized controlled trials are considered to be basic elements for evidence-based medicine.

[WHO 2010 adapted]

Task

A set of related steps that make up a discrete part of a job. Every job is made up of a collection of tasks. For example, answering a phone or entering data into a computer are tasks of a secretary's job.

[IAPA 2007]

Task analysis

A technique used to identify, evaluate, and control health and safety hazards linked to particular tasks. A task analysis systematically breaks tasks down into their basic components. This allows each step of the process to be thoroughly evaluated. Also known as *job task analysis*.

[IAPA 2007]

Teratogen

An agent that causes birth defects by harming the unborn child. See also *Embryotoxin*.

[IAPA 2007]

**Threshold Limit Values

The airborne concentrations of a biological, chemical, or physical agent to which, it is believed, nearly all workers may be exposed without experiencing any harmful effects. Because of individual susceptibility or through aggravation of a pre-existing condition, a small percentage of workers may experience discomfort or will even develop an occupational or work-related disease from exposure at concentrations or levels below the threshold limit value.

TLV is a reserved term of the American Conference of Governmental Industrial Hygienists (ACGIH) and does certainly not represent a legal term. The term is, however, often used in occupational health as a more generic term for limit values. A number of specifications are important:

1. **TLV-TWA** (time weighted exposure limit) is presented as a time weighted average (TWA) exposure value, that is the time weighted average concentration or levels of a chemical or biological agent for an 8-hour day or a 40-hour week to which, it is believed, nearly all workers may be exposed, day after day, without experiencing harmful effects.
2. **TLV-STEL** (short-term exposure limit) presenting a short-term exposure value as the maximum airborne concentration of a chemical, biological or physical agent to which workers may be exposed provided that the exposure is for not more than 15 minutes and is not more often than four times in a work day.
3. **TLV-C** (ceiling exposure limit) presenting the maximum exposure to an airborne concentration of a chemical, biological or physical agent that should not be exceeded at any time.

Time weighted average (TWA)

See *Threshold limit values*.

Ventilation

The supplying and exhausting of air at the same time to an enclosed machine, room, or an entire building. There are two types of ventilation:

1. **General or Dilution:** The air contaminants are diluted by natural or mechanical air exchange in the plant or in the specific workplace. This method is not appropriate for highly toxic contaminants.
2. **Local Exhaust:** The contaminant is captured at its source and removed before dilution in the workplace air can occur, usually by the use of hoods, ducts or vents located near or directly over the source. This is the preferred method for work places, where toxic contaminants are released and there is the potential for worker exposure. The effectiveness of local exhaust ventilation is dependent on an appropriate design and an adequate use adapted to local conditions.

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[IAPA 2007 adapted]

Vibration

Vibration is oscillatory motion that is alternately greater and less than some average value. It is defined by frequency and magnitude. Exposure to high levels of mechanical vibration at work can lead to hand-arm vibration syndrome or affect the whole body.

Volatility

The tendency or ability of a liquid to quickly vaporize into the air. Examples of volatile liquids include alcohol and gasoline. Liquids that are volatile must be carefully dispensed and stored. This includes paying special attention to temperature.

[IAPA 2007]

WHO

The World Health Organization (**WHO**) is a specialized agency of the United Nations (UN) that acts as a coordinating authority on international public health. Members of the WHO are 191 UN members.

[Wikipedia July 2011]

WIND

ILO program for Work Improvement in Neighborhood Development (WIND). A model for improvement based on the idea of participatory action-oriented training. The six basic principles for WIND, WISE and WISH are: 1) Build on local practice, 2) Use learning-by-doing, 3) Encourage exchange of experience, 4) Link working conditions with other management goals, 5) Focus on achievements, 6) Promote workers' involvement.

[WHO 2010 pg.71]

WISE

ILO program for Work Improvement in Small Enterprises (WISE). A model for improvement based on the idea of participatory action-oriented training. See also **WIND**.

[WHO 2010 pg.71]

WISH

ILO program for Work Improvement for Safe Home (WISH). A model for improvement based on the idea of participatory action-oriented training. See also **WIND**.

WHO 2010 pg.71]

Work - family interference

One form of work-family conflict; a type of role interference that occurs when work demands and responsibilities make it more difficult to fulfil family role responsibilities. See also **Family - work interference**.

[WHO 2010]

Work practices

Procedures for carrying out specific tasks which, when followed, will ensure that a worker's exposure to hazardous situations, substances or physical agents is controlled by the manner in which the work is carried out.

[IAPA 2007]

****Work-related disease (short version)**

A disease for which the work or working conditions constitute the principal causal factor, or a disease for which the occupational factor may be one of several causal agents, or a disease for which the occupational factor may trigger or worsen an already existing disease, or a disease for which the risk may be increased by work or work-determined lifestyles.

[Rantanen 2007, adapted]

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****Work-related disease (long version)**

For the category of work-related diseases, there is much more discussion regarding causal inference on the individual level in comparison with the classic occupational diseases, where there is ample evidence for the work-relatedness so that they can be attributed to work with confidence in individual patients. Criteria for the identification of work-related diseases on an individual basis for diagnostic purposes should preferably be based on evidence from epidemiological research. Examples are criteria developed for work-related upper-extremity musculoskeletal disorders and for work-related low-back pain. Lesage's third category (see *Occupational diseases*) does not differ in essence from the work-related diseases but the odds ratios or relative risks found in epidemiological studies are lower. In several countries a relative risk of 2 (corresponding with an aetiological fraction of 50%) is maintained to distinguish diseases that can be recognized as occupational (and can be included on the list) from diseases that are not predominantly occupational.
[ILO Encyclopedia, edition?]

Worker

A person who provides physical and/or mental labour and/or expertise to an employer or other person. This includes the concept of "employee," which implies a formal employment contract, and also informal workers who provide labour and/or expertise outside of a formal contract relationship. In a larger enterprise or organization it includes managers and supervisors who may be considered part of "management" but are also workers. It also includes those who perform unpaid work, either in terms of forced labour or domestic work, and those who are self-employed.
[WHO 2010]

Workers' health surveillance

Workers' health surveillance is a generic term which covers procedures and investigations to assess workers' health in order to detect and identify (early) signs of abnormality. The main aim is the prevention of occupational and work-related diseases and injuries. The results of surveillance should be used to protect and promote the health of the individual, collective health at the workplace, and the health of the exposed working population. Health assessment procedures may include, but are not limited to, medical examinations, biological monitoring, radiological examinations, questionnaires or a review of health records. Preferably the starting point is a risk assessment at the workplace to identify a health hazard or risk.
[ILO 1998 adapted]

Working environment surveillance

See *Surveillance of the working environment*.

Workplace

Any place where physical and/or mental labour occurs, whether paid or unpaid. This includes formal worksites, private homes, vehicles, or outdoor locations on public or private property.
[WHO 2010]

Workplace design

The planning of workplace environments, structures and equipment so that the potential for injury and illness is reduced or eliminated. See also *Ergonomics*.
[IAPA 2007]

Workplace inspection

A regular and careful check of a workplace or part of a workplace in order to identify health and safety hazards and to recommend corrective action. Workplace factors that have the potential to cause injury or illness to employees include: equipment, materials, processes or work activities, and the environment.
[IAPA 2007]