

WORK AND HEALTH: OCCUPATIONAL HAZARDS. DAMAGES DERIVING FROM WORK

Work must be organized in such a way that the individual has the possibility to intervene in the development of his or her tasks. Decent work in suitable conditions implies the need for safe work that guarantees the safety and health of workers.

The exercise of a professional activity involves an effort and a necessity for most of the active population available for work. The performance of a job involves, as in any other task, exposure to risks that in the world of work are called "occupational", and which must be minimized.

To begin with, we will talk about **working condition**, which has been defined by the Law on Occupational Risk Prevention (LPRL), in its article 4.7, as any characteristic of the work that may have a significant influence on the generation of risks to the safety and health of the worker.

The National Institute for Safety and Health at Work (INSST) describes working conditions as "the set of variables that define the performance of a specific task and the environment in which it is carried out, as these variables will determine the worker's health in the triple aspect (physical, psychological and social) according to

■ Working condition

Characteristic of the work that is related to the worker, whether or not it has an influence on health.

■ Risk

The possibility that exposure to a work condition will produce a health problem for an exposed worker in a given time.

■ Risk factor

A work condition that has a non-zero probability of producing a health problem in an exposed worker.

■ Damage to health

The following are considered work-related damages: illnesses, pathologies or injuries caused by work activity.

■ Exposure

Circumstances (duration, intensity, routes of penetration, degree of collective or personal protection, etc.) in which there is a relationship between a working condition and a worker or group of workers.

■ Dose

Intensity of a working condition - physical, chemical, biological - to which a worker is exposed under given circumstances.





the WHO". There are authors who consider that this definition is still too deterministic and define the working condition as "everything that is and revolves around work from the point of view of its impact on the people who work".

The latter definition has the advantage of establishing a clear separation between working conditions and health, in that a working condition is any characteristic of work that is related to the worker, whether or not it influences - positively or negatively - the worker's health.

Knowledge of the working conditions in each workplace is a preliminary step in identifying occupational risks.

The definition of the health problem can be assimilated to the term damage to health, which, according to article 4.3 of the LPRL, is considered to be "damage derived from work, illnesses, pathologies or injuries suffered as a result of or on the occasion of work".

We can therefore state that **work-related injuries** refer to those health problems causally related to working conditions, regardless of the time it takes to manifest themselves: immediately in injuries caused by accidents at work, or more slowly in work-related occupational diseases.

Work affects health in different ways, either because there are risk factors that can directly and negatively affect health (such as exposure to toxic or dangerous agents), or because new technologies change the dangerous conditions that surround the world of work, making the immaterial (human, psychological and organisational) aspects of work, repetitive exposure to low doses, the use of new chemical substances with as yet unknown effects, prevail. Women are also entering the world of work with aggravating conditions, and we must not forget the ageing of the working population.

While the prevention of traditional occupational risks (lead, benzene, ionising radiation, noise) is still necessary, other risks have been recognised and are increasingly appearing in surveys of working conditions: physical strain due to repetitive and monotonous work (musculoskeletal disorders), the emergence of psychopathologies, diseases with a slow or delayed onset (cancer, sensitisation, infections), reproductive function disorders, non-specific health effects, and disorders due to the physical and psychological characteristics of an ageing population.



RISK FACTORS THAT MAY BE PRESENT IN THE WORKPLACE AND THEIR EFFECTS

Risks arising from safety conditions

Uneven or slippery floor
Obstructed walkways
Unprotected stairs

**WORK
ACCIDENTS**

Risks arising from environmental conditions

Noise (occupational deafness)
Radiation (eye and other conditions)
Vibrations (Bone, muscle and joint disorders)

**OCCUPATIONAL
DISEASE**

Risks arising from the organisation of work

Inadequate work pace
Tasks requiring excessive attention
Night work
Monotonous and repetitive work

**Fatigue
Stress
Loss of
attention**

**WORK
ACCIDENTS**

Risks arising from workload

Physics:
Static posture

**Fatigue
Dizziness
Muscle pain**

**ACCIDENT
JOB
DISSATISFACTION**

Mental:
Workload, motivation

**Stress
Depression
Insomnia**

ABSENTISM

_PRINCIPLES OF PREVENTIVE ACTION

What does prevention involve?

■ The prevention of occupational risks is the set of activities or measures adopted or planned in all phases of the company's activity with the aim of avoiding or minimising the risks derived from work (art. 4.1 of the LPRL).

Prevention implies, therefore, the achievement of effective protection of the health and safety of workers in all aspects related to work.

Who is obliged to ensure preventive activities or measures?

■ The employer is obliged to guarantee preventive activities or measures, in accordance with art. 14.2 of the LPRL, which establishes that, in compliance with the duty of protection, the employer must guarantee the safety and health of the workers in his service in all aspects related to work.



This duty of protection constitutes, in itself, a duty of public administrations with regard to the personnel in their service. The employer shall take all necessary steps to ensure the protection of the safety and health of workers by means of the following actions:

- **Risk assessment.**
- **Information and training of workers.**
- **Actions in case of emergencies.**
- **Health surveillance.**

■ It follows from this legal mandate that prevention must be a matter integrated into the overall management of the company, with objectives, planning and organisation that are adapted to an effective preventive policy.

For his part, the worker must cooperate in the preventive activity, by complying with the preventive measures adopted in each case.

How is prevention integrated into the company's activity?

■ All levels of the company must assume the obligation to include prevention in any activity they carry out.

PREVENTION MANAGEMENT

The company's preventive action involves the adoption of the measures summarised in the following table:

Prevention plan

Organisational structure
Definition of functions
Resource requirements
Practices and procedures

Study of working conditions

Risks identification:

Acting on working conditions
Reduce risks when they cannot be avoided

Planning of preventive activity

Assess risks:

Determine priorities
Define programmes
Evaluate programmes

Content

Material and human resources

Definition of programmes:

Emergencies
Health surveillance
Information and training of workers
Coordination

PREVENTION ACTION PRINCIPLES

The prevention law establishes some general principles, which inspire preventive action, in a certain order of priority. The first requirement is to avoid risks and, if that is not possible, to assess them and combat them at source.

These principles are the following:

- Avoid risks.
- Assess risks that cannot be avoided.
- Combat risks at the source.
- Adapt work to the person, in particular for the design of workplaces, the choice of equipment and working methods, to reduce monotonous and repetitive work and to reduce the effects on health.
- Take into account the evolution of technology.
- Replace what is dangerous with what is no longer dangerous.
- Planning prevention in a way that it integrates technology, work organisation, working conditions, social relations and the influence of environmental factors at work.
- Adapt preventive measures so that collective protection is prioritised over individual protection.
- Provide the necessary instructions to workers: training and information.

DECLARATION OF THE OCCUPATIONAL HAZARD PREVENTION POLICY AT THE UNIVERSITY OF BARCELONA - PRINCIPLES AND COMMITMENTS

(Approved by the Governing Board on 13 July 2000)

The University of Barcelona (UB) is aware of the current requirement of all companies and institutions to ensure a safe and healthy working environment for their employees. This requirement is a necessity for four main reasons:

- 1.** For ethical and moral reasons: the UB must be concerned about the quality of its employees' working life as an explicit manifestation of its social conscience.
- 2.** For legal reasons: the appearance of the Law on the Prevention of Occupational Risks and complementary regulations obliges companies and institutions to comply with a series of obligations in the area of risk prevention.
- 3.** For economic reasons: work-related accidents and illnesses impose high economic costs on workers, companies and society in general.
- 4.** Because one of the functions of the UB, at the service of society, is the creation, development and transmission of science, technology and culture, acting within the framework established by both the University Reform Act and the UB Statutes. We must therefore be pioneers in the promotion of prevention in both teaching and research, so that our students

become aware and develop their activity under a philosophy of safe work.



With the aim of achieving optimum levels of health and safety at work, we consider it appropriate to make this statement of principles the basis for our health and safety policy:

- 1.** We consider that the prevention of occupational risks must be an integrated action within the University's own activity, understanding it as a main objective in the line of continuous improvement of our work.
- 2.** Given our social function, preventive activity must reach not only the organisation itself but also the students and their preparation, enabling them to spread the word to society in general.
- 3.** The UB's staff is the most important resource that guarantees our future. This is why they must be identified with the UB's objectives and, specifically, with risk prevention.
- 4.** We believe that occupational illnesses and accidents are not the result of the activity itself, but of an inadequate risk prevention and control policy.

In order to implement the actions aimed at fulfilling these principles, we adopt the following commitments:

- 1.** All personnel in command shall take all actions within their power to ensure proper working conditions for the workers in their charge, as a function of their job.
- 2.** The UB must have the necessary resources for the development of the preventive activity.
- 3.** The UB shall ensure that all its personnel carry out their work under appropriate conditions by taking the necessary measures to identify, assess and control risks.
- 4.** The UB shall establish the necessary channels so that all its employees and students are trained, informed and can actively participate in the establishment of the necessary risk prevention measures.

In order to try to achieve the commitments acquired, an occupational risk prevention management system will be adopted, bearing in mind the singularity of our institution.

