

## **SAFETY** OF TEMPORARY WORKERS

Information for workplace prevention and health & safety for temporary workers

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## INTRODUCTION

Ebitemp is the Bilateral Body for temporary work established under the national collective agreement for temporary work. Within Ebitemp there is a National Equal Commission for workplace health & safety, whose duties include preparing proposals for training modules on health & safety matters and creating educational and training materials for temporary workers.

To this end, the Commission has produced this information booklet, updated pursuant to Legislative Decree 15th June 2015, no. 81 and with the new items introduced by the national collective agreement signed by the social partners in 2019 which, in adopting the contents of the Consolidating Act for workplace health & safety (Legislative Decree no. 81/2008 as amended), dedicates much room to workplace safety and introduces more protection and prevention measures in favour of temporary workers, in consideration of the peculiarities and specific issues of this sector.

The growing focus on issues of safety, particularly with regards to information, training and prevention, requires further responsibilities to be taken on by all parties involved in safety management (from employers to workers, including safety managers and occupational doctors), in order to prevent the occurrence of workplace accidents and occupational diseases and illnesses.

In order to make this possible, it is necessary to have an in-depth knowledge of the regulations to be applied, of the risk factors, of the behaviour to assume in specific circumstances, of the possible damages caused by conduct that does not comply with directives. It is also essential to have continuous training and updates to establish, in workers themselves, the correct safety, protection and prevention culture.

This booklet therefore aims to be a useful tool for all temporary workers - regardless of the sector in which they work - so that, on the basis of the knowledge acquired and through suitable training and information, they are able to recognise and suitably assess the risks connected with their occupation.

The National Equal Commission for Workplace Health & Safety



### TEMPORARY WORK: SECTOR REGULATIONS AND NATIONAL COLLECTIVE AGREEMENT

The indications and information contained in this booklet, which is easy to look up, aim to consolidate workers' awareness that safety in the workplace is established through knowledge of the risk factors present in the company, through the company elaborating specific prevention and protection measures and through every party involved complying with the rules.

Temporary work is a type of employment that involves three different parties:

- **user:** the entity that avails itself of temporary workers;

 - employment agency: a company authorised by the Ministry for Work that provides the manpower;

- temporary worker: a worker who, hired by the employment agency (employer), carries out their work at the user's premises.

Due to these characteristics, temporary work stands out due to the existence of two different types of contracts:

 staff leasing agreement: this is stipulated by the employment agency and the user, it is the business contract by which the agency undertakes to send one or more workers employed by the agency itself to the user in order to carry out their work under the direction, control and in the interest of the user.

- temporary work agreement: contrat this is an employment contract between the employment agency and the worker.

Regardless of the type of employment contract (fixed-term or permanent) the employmentagency and the user both have specific obligations, both administrative ones and others relating to preventing and protecting against work risks as specified by the sector's national collective agreement; the employment agency and the user are bound to adopt such obligations with regards to workers.

In particular, **the employment agency is under obligation to** (art. 40, paragraph 2 of the national collective agreement for temporary employment agencies):

 notify temporary workers of the general health & safety risks linked with the work in general;

 notify workers, through the employment contract or employment letter, of the names of the persons responsible and of the procedures to be followed (art. 40, paragraph 3, national collective agreement);

- train and educate temporary workers to use the equipment necessary to carry out their jobs.

The staff leasing agreement (between the employment agency and the user) and, therefore, the employment contract or employment letter, can make provisions for the aforementioned activities to be carried out by the user (*art. 40, paragraph 4, national collective agreement*).

This option, in particular with regards to training and educating, is justified by the fact that it is usually the user that has adequate knowledge of the machinery and equipment to be used by workers.

#### The user is under obligation to:

- notify temporary workers of those duties which include specific risks that have ari-



sen after the contract was signed, such as, for example: presence of chemical, biological or carcinogenic agents, noise, asbestos, visual display units, etc.

Workers carrying out risky duties must undergo medical monitoring by the occupational doctor, in the cases set out by current regulations or on the basis of the indications provided by the Consultation Commission or, also, in the event that the workers requests it and the medical monitoring is deemed to be related to work risks by the occupational doctor (*art.* 40, paragraph 6, national collective agreement).

- fulfil training obligations as required by law, also with regards to the risk assessment report;

 ensure that temporary workers have the same protection systems in place as the company's own employees. This includes the obligation to provide, if necessary, the relevant Personal Protective Equipment (PPE);

- provide workers, at the end of the assignment, with a copy of their medical and risk chart, which must accompany them on their new jobs, which may also be under various other users (art. 40, paragraph 9, national collective agreement).

Temporary workers are counted as company staff for the purposes of fulfilments linked with workplace safety (art. 34, paragraph 3, Legislative Decree no. 81/2015).

At the moment of the employment contract or employment letter being signed, workers must be notified with regards to (art. 40, paragraph 7, national collective agreement):

- the person of reference in charge of pro-

viding them with details of the workplace health & safety risks linked with the company's activities;

- The name of the employees' safety representative (in Italian RLS);

 the procedures concerning first aid, firefighting procedures, evacuation of work premises;

- the names of workers in charge of applying measures as per art. 45 and 46 of Legislative Decree no. 81/2008 as amended;

- the names of the person responsible, of the officers of the prevention and protection service (in Italian RSPP) and of the occupational doctor, if applicable.

Failure to comply with these obligations of information, training and professional education, as well as failure to provide protective and safety equipment, can constitute **just cause for resignation** by workers (*art. 40, paragraph 11, national collective agreement*), with entitlement to receive the entire payment until the end of the work term set out in the contract.

Exercising these rights by the worker is implemented by a specific notification (Attachment 1 - Form C of the national collective agreement for temporary employment agencies).



## DEFINITIONS

#### What is a work accident/injury?

A work accident/injury is an event that happens as a result of a violent cause and during work, which causes a physical injury or illness/disease that requires absence from work.

#### What's an occupational disease/illness?

An occupational disease/illness is a damaging event that manifests in a nonviolent way and progressively over time, which is contracted while carrying out work or caused by it.

#### What is prevention?

Prevention is the set of provisions or measures necessary, also according to the peculiarities of the job, expertise and technique, to avoid or lower professional risks in compliance with public health and integrity of the environment.

#### What is a danger?

The intrinsic property or quality of a given factor which can potentially cause harm or damage.

#### And what is a risk?

It is the chance of reaching the potential level of damage in the conditions of use or exposition to a given factor or agent or their combination.

#### A company employer is obligated to carry out a risk assessment. What is a risk assessment?

It is the global and documented assessment of all health & safety risks to workers present within the organisation where they carry out their job; this assessment aims to identify the necessary prevention and protective measures and to draw up a plan of measures apt to ensure the improvement of health & safety levels over time.





## LEGISLATIVE DECREE 81/2008: GENERAL NOTIONS

#### What is it?

Legislative Decree no. 81 of 2008, integrated with decree no. 106 of 2009 which carries amendments and additions, is the most recent regulatory reference with regards to workplace health and safety.

Legislative Decree 81 has reshaped, grouped and harmonised, by repealing them, the provisions dictated by numerous past regulations concerning health & safety in the workplace (among others Legislative Decree no. 626/94), which followed one after the other for almost sixty years, in order to adapt regulations to the evolution of technical standards and of work organisational systems. Legislative Decree no. 81/2008 is addressed to all types of work and businesses, public and private ones, and aims to involve all roles present within a company or organisation. No one should be uninterested in the topic of workplace safety!

## ORGANISATION OF CORPORATE SAFETY

#### Which are the main roles?

Based on Legislative Decree 81/2008, workplace health & safety is the result of multiple actions, carried out by multiple corporate entities, including workers, in the context of the corporate organisation. The main roles in the corporate prevention system are:

- Employer
- Manager
- Supervisor
- RSPP (Health & Safety officer)
- ASPP (Health & Safety supervisor)
- Occupational doctor (MC)
- RLS (employees' safety representative)
- First Aid officers
- Fire Prevention officers
- Workers
- Les travailleurs





#### **DEFINITIONS:**

**Employer**: the holder of the employment contract with the worker or, in any case, the entity that, according to the type and setup of the organisation in which the worker is working, is responsible for the organisation itself or productive unit, as it has decisional and expenditure powers.

Manager: the person who, due to the professional duties and hierarchical and functional powers suited to the nature of the role assigned, implements the employer's directives by organising the work activity and supervising it.

Supervisor: the person who, due to the professional duties and hierarchical and functional powers suited to the nature of the role assigned, supervises the work and ensures the implementation of the directives received, checking that the workers are executing these correctly and exercising a functional power of initiative.

**RSPP (Health & Safety officer):** the person equipped with the professional skills and prerequisites appointed by the employer, to whom they report, to coordinate the risk prevention and protection service.

**ASPP (Health & Safety supervisor)**: the person equipped with the professional skills and prerequisites who is part of the prevention and protection service.

**Occupational doctor**: a doctor who holds one of the educational and professional titles and prerequisites under article 38, who collaborates with the employer, as set out by article 29, paragraph 1, in order to assess risks; they are appointed by the employer to carry out medical supervision and for all other duties as per Legislative Decree no. 81/08. **RLS (employees' safety representative)**: the person elected or appointed to represent workers with regards to workplace health & safety issues.

**Fire prevention officers**: workers appointed with implementing fire prevention and firefighting measures, and with evacuating work premises in the event of an immediate and present danger.

First Aid officers: workers appointed with implementing first aid and rescue measures and, in any case, with managing an emergency; they are appointed by the employer.

Worker: the person who, regardless of their type of contract, works within the organisation of a public or private employer, with or without payment, even if only to learn a profession, an art or a trade, excluding those assigned to household and family services.

The following equate to a worker as defined above:

 a worker who is a member of a cooperative or company, also when de facto, who carries out their work on behalf of the companies and body itself;

 - an individual who is the beneficiary of internships/ apprenticeships and vocational initiatives;

- a student at educational institutions or universities;

- a person taking part in vocational training courses where labs are used.



## GENERAL RIGHTS AND OBLIGATIONS FOR THE WORKERS

#### Every worker must:

- Contribute together with the employer, directors and managers, compliance with the obligations of protection of health and safety in the workplace provided;

 Observe the provisions and the instructions imparted by the employer, directors and managers, for the purposes to the collective and individual protection;
 Use the facilities workplace correctly, the substances and dangerous preparations, the transport, and the security devices;

- Use in appropriate way the protection devices available;

- Signalize immediately to the employer, director or manager, the deficiencies of media, the devices, and the facilities, and also any eventual dangerous condition they have awareness, endeavoring directly, in case of emergency, in the field of their own abilities and possibilities;

 Do not remove or modify without authorization the security devices, the signaling or the control;

 Do not make by own initiative operations and shunting that are not of their knowledge or can risk their own security and the others;

- Participate to the formation and training programs organized by the employer;

- Submit to the sanity controls expected for the D.Lgs. 81/08 or however by the medical competent devices.

## FIRST AID

Among the obligations of the employer it's found to assign preventively the workers in charge for the performance of fire prevention measures and the fire fighting, the immediate evacuation of the workplace in case of a grave danger, rescue, first aid and also the emergency management.





## Which is the difference between first aid and emergency assistance

With first aid its means the all actions that pretends to help one or more people in danger, while it waits the arrival of the qualified help. Any action must be done without having evaluated the scene of the event. Meanwhile the emergency assistance is the "intervention realized by medical personnel trained for this task", which they are normally in organized structures for that purpose, equipped with infrastructure and spaces specifically dedicated.

#### Signaling the First Aid alarms

In case of a medical emergency signaling, every worker must contact the first aid employee, following the procedures as indicated:

- It goes immediately on the place of the event, taking the first aid kit a the closest point to the accident;

- Verify the scene of the event is safe;

- Verify the conditions of the person, clarifying with eventual witnesses what happened;

- Evaluate the necessity to call the first aid taking all the necessary conditions:

• Nature of the accident and symptoms found;

• Eventuales intervenciones de primeros auxilios efectuados.

#### First aid general rules

- No action must be made without having evaluated the scene of the event;

- with exception of the imminent cases of danger of life, seek not help the victim, not move it, and not give it any of drink;

- Especially in case of a fall, search to help (without obligate it) assuming a comfortable position for the victim; - Evoid to ask inquisitorial questions, as:

- How was the accident?
- Whose it's the fault?, etc.

 Talk as less as possible, to not increase the stress conditions of the victim, contributing to worsen the physical and psychological shock;

- Limit to express words and attitudes of calm and comfort;

 After the aid has been provided to the victim, remain available to those who have to rebuild what has happened;

 Provide, when it requested, all the information that is known avoiding creating conclusions and presenting hypothesis which there aren't true.

#### Principal situations that requires assistance

- Wounds, epistaxis or traumas with presence of blood;

- Contusions, distortions, dislocations, muscle sprains, fractures;

- Heatstrokes;
- Eyes injuries;
- Electrocutions, burns or scalds;
- Heart problems;

- Insect bites, contact with potentially infected animals.



## THE RISK OF FIRE AND EVACUATION

The fire is an event that causes a sensation but can be prevented and for that reason the risk must be evaluated and appropriately mitigated.

#### What is Fire Prevention?

It is an interdisciplinary field that studies and implements the measures to:

- Avoid the occurrence of a fire
- Limit the consequences.

#### And when it does apply?

In all workplaces is an obligation of the employer to prepare a risk evaluation, that includes the evaluation and preventions of a possible fire.

#### The objectives of the anti-fire security

- Minimize the changes of fire

- Stability of structures having enough time to guarantee the aid worker

- Limited production of fire and smoke

 Possibility of the employees to leave the work or they have been helped by another way.

- Possibility for assistance team to work in a safe way.

#### The most common causes of fire...

- Electrical systems designed, realized or used not properly.

- Misuse of electrical equipment (examples: portable stoves, block the ventilation, etc.)

- Smoking in prohibited areas or throw cigarette butts without precaution

- Deposit or misuse of flammable or combustible substances.

#### ...and the consequences!

- Panic of the people involved
- Reduction of the visibility
- Intoxication and anoxia
- Phenomena burns
- Serious structural damages to buildings





#### What to do in case of fire?

In the case that a fire develops at the place where we met, it is appropriate:

- Give the alarm voice immediately to the fire department or through the alarm button

- Keep away the present people helping who is in trouble

- Lock well the door behind, being secure that nobody is inside, waiting for help.

- Follow every general order of building evacuation or all clear.

In case when the fire alarm sounds, must be:

- Lock well the door behind, being secure that nobody is inside, waiting for help.

- Abandon the place and...

#### ... in case of evacuation

- Address tidily to the establish point, following the orders of the emergency employees

 Only use the stairs and don't the elevator
 Do not return for personal objects neither for other reasons

- Do not stop for long time on escape routes or near emergency routes

#### Main means of extinction

The main means of extinction in workplaces are fire extinguishers and hydrants. Hydrands will only be used by properly trained personnel. On the surface of each fire extinguisher are reported various information to facilitate its use in relation to:

- quantity and type of extinguishing agent
- capacity
- process for commissioning
- fire classes
- warnings.





## WORK EQUIPMENT

Legislative Decree 81/08 defines "equipment" any machine, apparatus, tool or installation intended for use during work, which must comply with the general safety requirements.

#### What to do in case of use of equipment?

Follow the instructions supplied with the machine operation and maintenance manual

- Verify the presence of the fixed/mobile/adjustable protections preventing the ejection of objects or access to moving parts

- display notices should expressly forbid cleaning, oiling, greasing, repairing or hand-adjusting the elements of the machines when it is moving

- verify that the interruption and ensuing return of electricity do not cause the automatic restart of the machine.

- verify that the emergency stop devices are immediately accessible and working

- verify the existence of the ground connection of the metal parts (where it is visible)

verify the existence of the ground connection of the metal parts (where it is visible)
 check the good condition of use of the portable electric devices and their power cables
 periodically check the efficiency of RCDs (test button)

- keep the machines clean from residues of machining and / or oil

 manipulate with suitable gloves any objects or debris that involve risks of injury
 always report with prohibition, obligation or warning signs any condition of danger. In particular block off in a suitable manner the machines and the equipment undergoing repair or maintenance; it is forbidden to use any machines out of order being present in the department for educational or demonstration purposes because they do not comply with safety standards

- periodically check the condition of use and the expiry date of the piping of gas-powered installations

- before using pressure systems require testing and verification

- check that the plug leads are provided with upstream switches

 use portable electric lamps only if protected by a cage and with insulated handle
 always report to supervisors any requirement regarding safety of installations and equipment





## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment is all the equipment designed to be worn and kept by workers in order to protect them from one or more risks that may endanger their safety and health at work, as well as any accessory designed for this purpose.

PPEs are divided according to the parts of the body that must be protected:

- Head Protection
- Eye And Face Protection
- Hearing Protection
- Respiratory Protection
- Upper Limbs Protection
- Body Protection
- Legs Protection
- Fall Protection

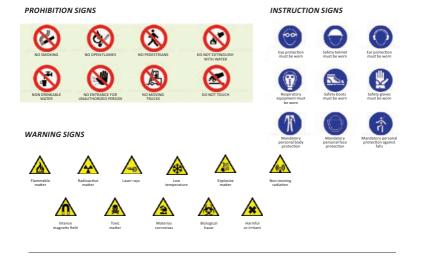
## SAFETY SIGNS

#### What are workers' obligations as regards PPEs?

Workers should use the PPEs provided to them in accordance with the information and training possibly received.

Workers must take care of the PPEs provided to them without modifying them on their own initiative.

After use, workers shall follow company procedures concerning return and shall immediately report to the employer or manager or person in charge any defects or drawbacks they have found in the PPEs provided to them.





The purpose of safety signs is to catch the worker's attention for an easy and immediate understanding of potentially risky objects and / or situations. Sur les lieux de travail, la signalisation jour un rôle fondamental dans la prévention des accidents, mais ne constitue en aucun cas une mesure de protection.

Sur les panneaux, le message est indiqué au moyen de: la COULEUR, la FORME et les SYMBOLES qui, combinés entre eux, rendent le signal unique et irrévocable.



FIRE PREVENTION SIGNS



## THE WORKSTATION

WORKPLACES are those spaces that house workstations located within the company or production unit, as well as any additional company or production unit accessible to employees for their activities.

Workplaces must comply with all the provisions set out in Legislative Decree 81/08. The employer must ensure that:

 the inner or outer circulation streets leading to exits or emergency exits, as well as the latter, are kept clear in order to allow for their use in all circumstances;

- workplaces, installations and devices are subject to regular technical maintenance,

and any faults found which might affect the safety and health of workers are eliminated as rapidly as possible;

 workplaces, installations and devices are subject to regular cleaning, in order to ensure suitable hygienic conditions;

 - csafety systems and devices, intended to prevent or eliminate hazards, should be subject to regular maintenance and operational testing.



## THE MOST COMMON RISKS

#### VIDEO OPERATOR

#### What is a video display unit?

It is a graphics alphanumeric screen, regardless of the type of display.

#### ... and what is a video operator?

It's a worker who uses equipment that features video display units, in a systematic and frequent way, for at least 20 hours a week.

#### What are the possible health issues of someone using equipment featuring video display units?

• Eye/vision disorders



Musculoskeletal disorders



VISUAL APPARATUS DISORDERS are mainly due to an elevated stimulation and fatigue of the eyes.

The visual apparatus is stimulated because of the following:

 accommodation and adaptation effort (always different distances and levels of brightness);

 - incorrect position of the screen in relation to windows and other light sources. This causes dazzling, bothersome reflections and an increased light/dark contrast;

- flickering of fonts and background, especially with older generation screens;

- poor visualisation of single characters, sentences or whole sections of text;

- cluttered desktop used in an unsatisfactory manner.

#### What can be done about it?

Position the screen correctly in relation to natural light sources in order to avoid reflections and dazzling effects and, if necessary, adjust curtains/blinds in order to avoid too strong a light.

Artificial light sources must be located outside the worker's field of view and must be screened.

We recommend against using desk lamps as these do not have a uniform distribution of light. It is necessary to adjust the video settings to avoid flickering and excessive brightness.

PAIN IN THE NECK AND ARTICULATIONS are attributable to:

 a prolonged sedentary position or wrong posture;

- it isn't enough workspace for the keyboard and mouse;

 the lack of ergonomic work instruments (examples: footrest, wrist rest for keyboard and mouse);

- the height of the chair is not suitable or it is



completely wrong to the user physical characteristics;

- the screen placed in an elevated position;

- the use of inadequate glasses or low graduation (the use of inadequate progressive glasses may, in fact, forcing the worker to assume an incongruent head position).

#### What to do?

**Furniture**. The desk must be wide enough, to contain the equipment and at the same time allow the support to the operator forearms while is typing.

**The screen** must be capable to keep the correct distance (50-70 cm for the normal size screens).

The ground must be stable, with a height of 70 to 80 cm, light color (not white) and in every case non-reflective. The posterior space must hold comfortably the inferior extremities and allow the movement. The type of the chair must be rotary, with stable support, must have floor and adjustable backrest independently. In some cases may require a footrest.

The space in the worksurface must provide support to the forearms front to the keyboard while is typing, considering the anthropometric characteristics of the operator.

Keyboard and pointing devices. The keyboard must be separated of the screen and easy to adjustable, with a variation of slope mechanism in order to allow the worker to find a comfortable working position avoiding fatigue in the arms and the hands. The keyboard should have a matt surface to avoid reflects. The layout and characteristics of the keyboard should facilitate use. The symbols on the keys should emphasize enough and being readable from the normal working position.

The mouse or any tracking device provided to the workstation must be placed in the

same keyboard level, in an easily accessible place and have a suitable space for use it.

Work chair. The work chair must be stable, providing the user the freedom of movement, as well as a comfort position. The height of the work chair must be adjustable backrest independently and the seat dimensions must be considered the anthropometric characteristics of the operator. The backrest must provide an appropriate support to user's dorsolumbar area. So, must be adapted to the anthropometric characteristics of the user, and can be able to adjust the height and tilt. Inside these adjusts the user will be capable to fix the backrest in a desirable position.

The backrest and the seat must have beveled edges. The materials must be of a level of permeability that do not compromise the user comfort, and being easy to clean. The seat must be equipped with a rotary mechanism to facilitate the position changes, and must be able to be easily moved according to user necessities.

A footrest will be available to those who wish to take an appropriate position in the inferior extremities. The footrest must not move unwittingly during the use.

Laptops. The prolonged use of the laptop requires the supply of keyboard and a mouse or another external pointing device, as well as an adequate support that allows the correct positioning of the screen.



#### MANUAL MOVEMENT OF CARGO

#### What is it?

This term means all transport operations or support of a cargo by one or more workers, as lifting, placing, pushing, pulling, bringing, or move a cargo.

#### Which are the risks?

The activities of manual movement, for its intrinsic characteristics or ergonomic unfavorable conditions, could give place to disease risks of biomechanical overload, specially a back injury, more in general musculoskeletal structures, muscle tendon and neurovascular diseases.

#### Information, education, training

Before carrying out a manual movement of cargo operation it should know and take in count some conditions and external characteristics that may reduce the risk of getting an injury or a related disease. This is why it is good to receive:

- appropriate information about the content, weight, dimensions, and other characteristics of the cargo handled;

- appropriate education related to the work risks, and the correct execution of the activities;

 appropriate training in shunting and adequate procedures that should be adopt in the manual manipulation of a specific cargo.

#### Right and wrong behavior

If you have to lift and move a load you must:

- Bend your knees, lift keeping the load close to the body;

- Get up slowly, using the legs' strengh;

- Use mechanical aids or ask for help of a colleague for heavy / bulky loads;







- In the case of rotation, turn the whole body using the legs;

- if the load is on a higher plane than you, use a ladder.

If you have to lift and move a load must not:

- Bend your back;
- make fast movements or tears;

- Rotate only the trunk body in case of rotation;

- inarcare your back in case of loads on high floors.

#### Individual risk factors

There are cases that need to be evaluated in a specific way, because are releted to temporary or permanent physical characteristics of the individual worker:

- pregnancy;
- very young-workers;
- old workers;
- Physical fitness to perform the task;

- Work equipment not in accordance with law;

- insufficient training to work.

#### **ELECTRICAL RISK**



#### What is the electrical risk?

The electrical risk comes from the harmful effects of the electric current can make on a person, directly or indirectly, regarding the use of materials, equipments, and electrical systems. The harmful effects of the electric current in humans may be the result of:

#### Direct contact

There is a direct contact when a part of the body is accidentally in contact with an active part of the electrical system, or usually with voltage part (examples: electrified fences of the power stations, electrical cables, etc.).

#### Indirect contact

There is an indirect contact when a part of the body get in contact with some pieces of the equipment during the normal function without voltage, but there is an unpredictable voltage due to a failure or malfunction.



#### Where and when?

The most common risk situations are identified in the next activities:

 misuse of equipment and energy supply components, (use of many power strips or adapters);

 use of electrical components not completely unabridged (damaged electrical conductor insulations, current electrics or power strips, etc.);

- technical operations carried out in the elements with electric current;

- construction of electrical systems or part of them not adequate for the it use or for the environment that are installed.

#### What other risks are related?

The fire is maybe the most serious negative event and the most common related with the use of electricity. This phenomenon is associated with one or more of these causes:

- wrong creation / design of electrical systems;

- deficient maintenance of itself;

- Misuse of electrical power supply devices (example: use of extension cords, power strips, multi-outlet converters).

#### Which are the effects of the electrical current on the human body?

The effects of the electrical current on the human body can take different forms and severity regarding with the type of the event (type of contact, duration, voltage, etc.) and the environment conditions (examples: humidity, soil resistivity, etc.). En général, on relève les effets suivants:

- muscle contraction (tetanization);
- respiratory failure;
- heart attack;
- burns.

#### How to reduce the risk?

An electrical system built in a "perfection way" (according with the specifications of the Italian and european legislation), provides the installation of protection equipments against direct / indirect contacts and against thermal effects caused by an overcurrent or overvoltage.

The most common protection systems used at homes and workplaces are:

- to ground;
- circuit breakers;
- fuses;

- residual-current device (RCD).

#### Suggestions...

 It doesn't exist a secure system, but, as always, our conscious behavior may influence in the occurrence probability of an accident;

 for the ordinary and extraordinary maintenance, it is necessary to trust in qualified companies and choose quality materials;

 - don't believe that you are immune to an electric shock, in other words, be capable to resist "little electric shocks";

- it is in our interest to respect and make the security rules of the power stations been respected.



#### **CHEMICAL AND BIOLOGICAL RISK**

#### What is the chemical risk?

Chemical risk is what derives from the use and handling of dangerous substances or hazardous products and flammable materials, explosives or corrosives.

The level of risk depends on the type of chemical substance taken and its concentration. Therefore it is essential the knowledge of the prepared compositions used in order to take appropriate security procedures which all the workers must adapt to.

This information is contained within the security form.

#### What is the security form?

The security form is mandatory for all dangerous substances and preparations; it is provided by the person responsible for placing on the market the dangerous substance or preparation; it is structured in 16 items that give the employee all the information it needs for proper use of hazardous chemical agent.

This are the main items:

- identification of the product and the company;

- composition / information of the ingredients;

- indications of danger;

- first aid and fire prevention;
- measures in case of accidental release;
- handling and storage;
- exposure control / personal protection;
- physical and chemical properties;
- toxicological information;
- disposal considerations.

The form must be strictly in Italian. The supplier must also label the packaging containing the dangerous substances and

preparations made available, so that workers can identify them completely.

#### How do you get in contact with the substances?

The absorption of toxic substances can occur by:

- 1) inhalation
- 2) ingestion
- 3) skin contact.

#### What are the appropriate behaviors?

- store in the workplace the minimum quantity of chemical agents necessary for the working cycle;

- keep the containers in a separate place, ventilated, away from heat sources;

- organize storage in suitable premises;

 ascertain that the dangerous substances, including waste, are in sealed containers with good closing and properly labeled;

- dispose of waste as the legislation on waste says;

- do not pour into drains;

- store containers in ventilated area, away from heat sources;

- always close the containers;
- read and carefully follow the safety data sheets or indications;

- manipulate the chemicals away from open flames, heat sources and sparks

- do not use containers for food to store or use chemicals.





Frequent risk condition, among the first and most widely reported.

#### How to prevent?

washing hands with water and detergent;
use of gloves, should always be worn when there is or there may be contact with biological elements;

 shirts, protective aprons, masks, goggles should always be worn while performing procedures that may produce the emission of droplets or splashing of biological fluids;
 cleaning and sanitation of the workplace;
 periodic maintenance of the filters of air conditioning systems.

#### What is the biological risk?

Biological risk consists of hazards to human health, allergies, poisoning, infection, transmission of diseases, each resulting from the encounter of the person with microorganisms that propagate or less in the community.

#### Where can you find them?

That summed up as biological is a very transversal condition and that, given the vastness of the agents involved in it, can affect the health and safety of work environments very different from one another: from a public toilet to a cultivated field, a farm but also a school, offices, public places, piercing and tattoo laboratories, dental offices.



#### **NOISE RISK**

#### What is the noise?

The noise is defined as an "unpleasant sound." It has the same nature of sound, in the sense that both are the result of mechanical energy emitted by a source that propagates in a medium (solid, liquid or gaseous) in the form of vibration, but the noise is a sound that we do not want to hear.

#### How we perceive the sound?

The sound waves that reach our ears are sent to the brain via a special nerves pathways, which processes auditory perception. Only frequencies between 20Hz and 16.000Hz can reach our ear.

## What are the possible consequences of the noise risk?

The most obvious effects born in the ear can be affected by two different situations: - a very loud noise, like an explosion, may cause pain, until the eardrum breaks (a noise above 85 decibels without protection, for example, it causes hearing loss). Can also determine:

- changes in the cardiac and circulatory frequency

- changes in blood pressure;

- increased peripheral vascular resistance;

- functional changes of the nervous and autonomic nervous system;

- changes in the digestive tract.

#### How can we defend ourselves?

The noise risk may be attenuated through: - isolation of the noise source with appropriate sound insulating materials;

 absorption of vibrations by suitable materials (tires, spring shock absorbers and felt carpets);

- proper maintenance of noisy machines.

Only as a "last resource", once they have been evaluated possible technical and organizzative solutions without success, you can apply the use of appropriate DPI against noise: headphones, caps, headband.





#### THE RISK OF WORK-RELATED STRESS

Work-related stress is considered international, European and national, as a problem both by the employers and the employees. Stress, potentially, can indeed strike at any workplace and any worker, regardless of company size, the field of activity, the type of contract or employment relationship.

#### What is work-related stress?

Work-related stress can be defined as a set of harmful physical and emotional responses that occurs when the demands posed by the work are not commensurate with the ability, resources and needs of the worker (Niosh, 1999).

The causes of stress at work can be many and vary from person to person. The factors potentially gene-stress (stressors) at work can mainly be divided into two different categories:

 work context (role in the organization, organizational culture, career development, interpersonal relationships at work);

- work content (working environment and equipment, load and work rate, working hours).

Stress is not a disease, but it is a situation, that at prolonged exposure can reduce effectiveness at work and determine a poor state of health.

Stress, if excessive and prolonged, may have an adverse effect on the worker from the psychological, cognitive, social and physical point of view.

From the psychological point of view, the main effects may manifest as anxiety, irritability, depression and excessive fragility.

From the cognitive point of view may occur in concentration and memory problems.

From the social point of view the network of social relations can suffer changes in a pejorative sense.

From the physical point of view can appear alterations, for example in the sleep-wake cycle, or real syndromes of disorders (example: sleep disorders, gastrointestinal disorders, cardiovascular disorders, etc.).



The effects of stress can affect not only the individual but also the organization. The main effects of stress on the organization are: sickness absence, increased staff turnover, frequent disciplinary problems, reduced productivity, increased errors and accidents at work, reduced sense of belonging and reducing competitiveness.



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