

Risk Identification Tool

OCCUPATIONAL
HEALTH AND SAFETY
MANAGEMENT

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Research and Development

Guyline Bourque, Engineer, Expert Prevention-Inspection Consultant
Direction générale de la prévention-inspection

Collaboration

Audrey Lacasse, Expert Prevention-Inspection Consultant
Direction générale de la prévention-inspection

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EMPLOYER RESPONSIBILITIES

Employers are responsible for taking concrete measures to ensure the prevention of industrial accidents and occupational diseases in the workplace. By following the procedure recommended by the CNESSST, i.e. identifying, correcting and controlling risks, you will soon realize that occupational health and safety (OHS) can be managed like anything else in your organization.

OHS MANAGEMENT

The aim of the *Act respecting occupational health and safety* is to eliminate hazards at the source. To achieve this objective, the Act establishes mechanisms for participation in order to foster OHS management. But what exactly does “OHS management” mean?

It means taking the necessary measures to fulfill your legal obligations, i.e. to identify, correct and control risks, and to promote worker participation in the prevention approach.

PREVENTION APPROACH

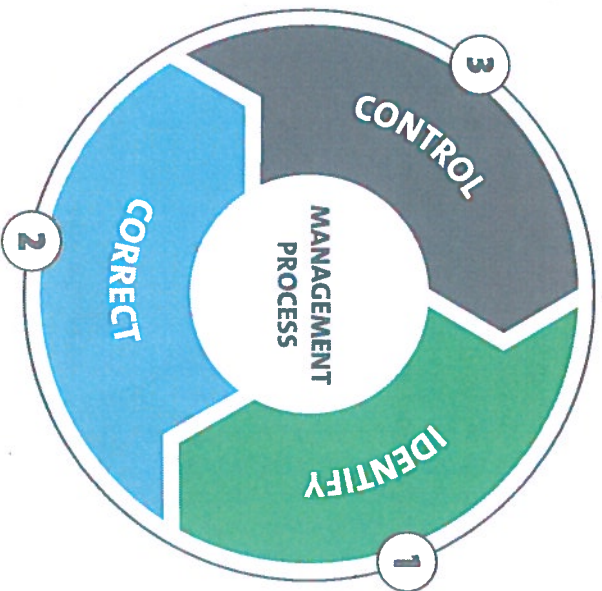
Effective management consists in implementing two types of activities:

- Activities aimed at identifying, correcting and controlling risks; for example, ensuring that equipment is safe and compliant with regulations
- Activities aimed at organizing prevention in your organization; for example, investigating accidents

The result of this prevention approach will enable you to implement or update a prevention program adapted to your organization, thereby ensuring workplace safety.

A prevention program is an occupational health and safety action plan, i.e. a document listing hazards, risks and priorities, and the necessary corrective measures. Of course, it is important to assign responsibilities and establish a timetable.

RISK IDENTIFICATION TOOL



This tool presents the activities needed to identify, correct and control risks. It is intended for the principal stakeholders in OHS management in your organization: the employer, workers, their representatives, the H&S committee and any other stakeholder group.

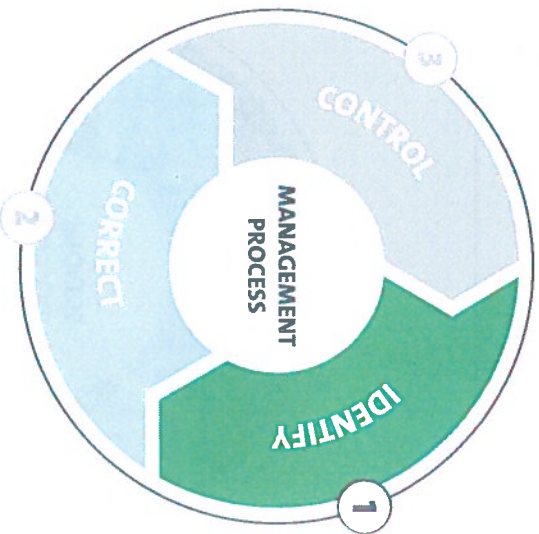
HAZARD OR RISK?

The Act respecting occupational health and safety sometimes refers to hazard, sometimes to risk. What is the difference? Do you need to know the difference to carry out prevention activities? Here are a few concepts associated with prevention.

A hazard or a hazardous situation is a potential source of injury for workers. When there is a potential for workers to come into contact with a hazard, there is a risk.

According to prevention consultants, a hazard is identified, while a risk is analyzed. Similarly, hazards are eliminated, while risks are reduced or controlled. To simplify the approach, each step will use the term "risk" to encompass both concepts.

IDENTIFY



The starting point for improving health and safety measures in your organization is risk identification. This means that you must identify any risks, then analyze them in order to set priorities. To do this effectively, you must make sure that every risk is included, that you have given the people in question time off from their regular duties, that you are being as objective as possible, and that everything you do is written down.

There are several ways of identifying risks. For example, you can use information gleaned from:

- regular inspections
- your organization's accident, near miss and first-aid log
- task analyses
- comments, complaints and suggestions made by workers, foremen or the H&S committee

- the experience of other organizations in your sector or of other members of your prevention mutual group
- the risk analysis

Using more than one source of information will enable you to develop an accurate risk profile for the workplace. Don't know where to start? Make sure that you at least comply with regulations.

This tool provides two different ways of identifying risks:

- Task analysis: ITEM
- Types of risks

Whichever method you use, you must take into account current activities, as well as less frequent activities such as tasks related to unjamming, maintenance, repairs, special clients, special orders and emergency procedures.

Once the risk is identified, you must analyze it, which means that you must determine the probability that an event will occur and identify its possible consequences. To do this effectively, you must assign the necessary human and financial resources. Objectivity is key, and the people involved must participate in the endeavour.

If certain situations require more detailed analysis, for example when it is difficult to identify risks precisely or to determine effective corrective measures, you may have to consult an expert.

There are several risk analysis methods you can use. See our training capsule on identifying, correcting and controlling risks (in French only) at messt.gouv.qc.ca/priseencharge. You can also read IEC/ISO 31010: *Risk Management – Risk Assessment Techniques*¹.

¹ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION AND INTERNATIONAL ELECTROTECHNICAL COMMISSION, *Risk Management – Risk Assessment Techniques* (Geneva: IEC, 2009) (IEC/ISO 31010:2009)

TASK ANALYSIS ITEM



Diagram 1 : ITEM

You can identify risks by performing a task analysis. To do so, you must analyze four components:

- Individual
- Task
- Environment
- Materials

Diagram 1 presents the four elements analyzed in the ITEM process, and the table on the next page gives examples of questions to be asked in relation to each one.

ITEM : EXAMPLES OF QUESTIONS

INDIVIDUAL	TASK
<ul style="list-style-type: none"> • Do workers have the knowledge they need to do their work safely? • Have workers received the necessary education to do their work safely? • Are workers sufficiently trained to do their work safely? • Are workers adequately supervised to ensure that they do their work safely? • Do new workers and workers assigned to new tasks receive training adapted to their needs? 	<ul style="list-style-type: none"> • What tasks are workers performing? • Which elements of these tasks could pose a risk (e.g. handling, movements and manoeuvres, working alone, interaction of several teams, special clients, aggressive clientele, organization of work)? • Are the work methods safe? • How often are these tasks performed (frequency)? • When are these tasks performed (e.g. during the day, at night, on weekends, at the beginning of the shift, on overtime)?
ENVIRONMENT	MATERIALS
<ul style="list-style-type: none"> • Are the premises in good repair and free of clutter (e.g. floor, workstation, traffic areas, access and other routes, yard)? • Are the premises safe (e.g. contaminants, noise, dust, lighting, temperature, humidity, thermal stress, air quality, vibrations)? • Are the premises organized so as to ensure the protection of workers? • Does the environment pose special risks (e.g. confined space, work at heights, isolated area where it is impossible to ask for help, storage of hazardous products)? • Is the building in good repair? 	<ul style="list-style-type: none"> • Are the equipment and materials needed to perform the tasks, including personal protective equipment, available (e.g. tools, machinery, vehicles, safety shoes, safety harnesses, respiratory protective devices)? • Are the equipment and materials in good repair? • Are the equipment and materials maintained in accordance with the manufacturer's specifications? • Is the personal protective equipment properly used, maintained and stored? • Do workers use hazardous products?

TYPES OF RISKS

You can also identify risks based on their type. There are six different types of risks: chemical, biological, physical, ergonomic, psychosocial and safety. The following is a definition of each type of risk.

Chemical risks

All raw materials and by-products of a process or a product which may arise as the result of mechanical action, evaporation, combustion, decomposition or a chemical reaction.

Biological risks

Living organisms such as plants, animals and biological agents (viruses, bacteria, parasites, fungi) that can be toxic.

Physical risks

Forms of energy or forces such as noise, vibrations, electricity, temperature, pressure and radiation.

Ergonomic risks

Repetitive tasks, use of equipment not designed for the purpose, excessive effort or uncomfortable or static postures.

Psychosocial risks

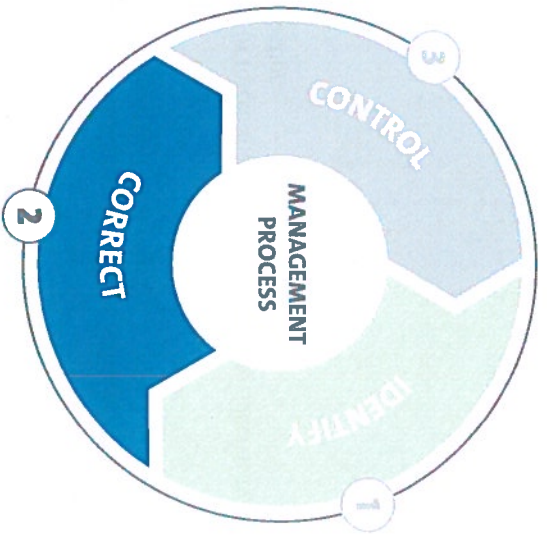
Factors related to the nature or organization of the work such as harassment, violence and aggression, ambiguity of roles, lack of respect, work overload, excessive work pace, complexity of the task and insufficient training.

Safety risks

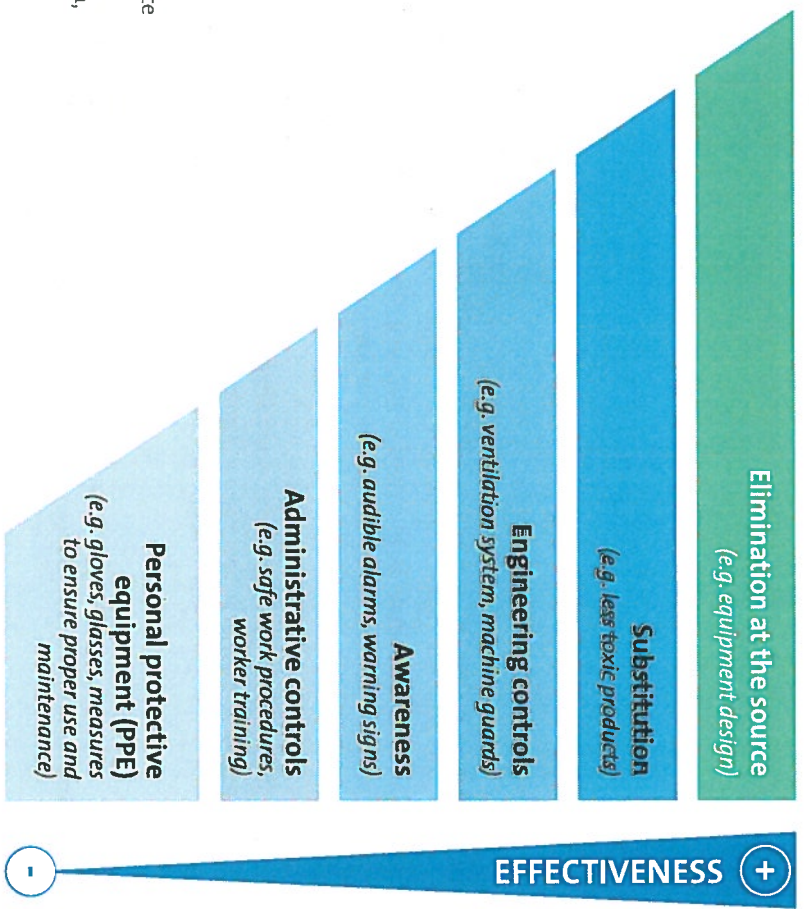
Moving parts of machinery and equipment, in-running nips, shapes of parts and materials, handling of tools and equipment, working at heights or in confined spaces, slippery or uneven floors, vehicles, aggressive clientele, splashing and/or projectiles, insufficient mechanical resistance, fires and explosions.



CORRECT



Once the risks have been identified and prioritized, you must select the corrective and preventive measures to apply. The first step is to eliminate the risk at the source. If this is not possible, use the hierarchy to the right. Often, you will need to combine several measures to ensure workers' health, safety and physical well-being. You must at least ensure that the measures comply with regulations.



HIERARCHY OF CONTROLS

ELIMINATION AT THE SOURCE

Elimination at the source provides the highest degree of safety because the risk is effectively removed from the workplace.

SUBSTITUTION

The substitution of materials, processes or equipment can reduce risk by:

- replacing hazardous elements with less hazardous elements (e.g. lower toxicity, reduced energy, less weight), which reduces the potential severity of injuries and damage
- reducing need or frequency (e.g. once a day instead of once every hour)
- improving workers' ability to avoid injury and damage (e.g. reduced work pace, improved capacity to recognize risk)

ENGINEERING CONTROLS

Engineering controls can reduce the probability of a hazardous event in some circumstances, and must be applied whenever the risk cannot be eliminated. Engineering controls reduce risk by:

- a) preventing or limiting access to the risk (e.g. guards around a hazardous area)
- b) preventing or limiting exposure to the risk (e.g. capture at the source)
- c) reducing the amount of energy available (e.g. reducing the amount of time the breakers are on)
- d) providing alternate means of interacting with the hazard (e.g. step-by-step controls)

AWARENESS

If any risks remain, measures must be taken to improve workers' ability to identify risks and to remain vigilant. The main measures are:

- technology (including software)
- lighting and audible alarms
- warning signs
- indicators

For effective awareness, workers must be trained to identify and interpret the measures applied to raise awareness of risks.

ADMINISTRATIVE CONTROLS

Administrative controls are methods designed to improve workers' ability to work safely with a product, process or service. They include:

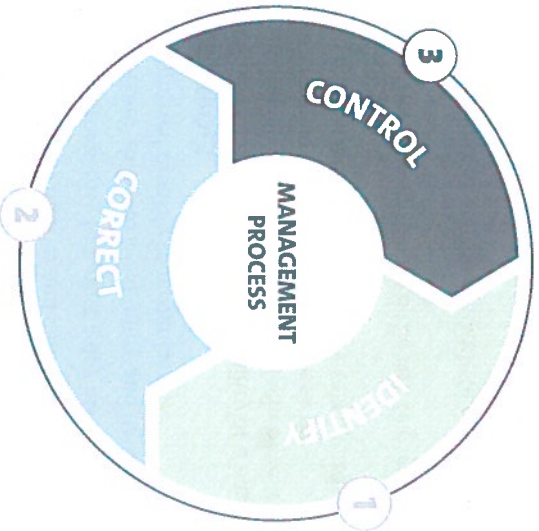
- restricted access to work areas to ensure that the work is done only by competent, qualified workers
- worker training, including information about risks, possible situations, preventive measures and PPE use, maintenance and storage
- safe work methods
- policies and directives concerning work organization, the assignment of tasks and occupational health and safety responsibilities

PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE should be used if the measures intended to reduce and control the risk are insufficient to protect workers' health, safety and physical integrity. PPE must be:

- used in conjunction with administrative controls
- used to reduce risk and improve workers' ability to perform their tasks safely
- selected based on the job to be done, the risks and the worker

CONTROL



Once corrective measures have been taken, you must make sure that they remain in place and that they continue to be effective. This is what is called “sustainable corrective measures.” The following is a list of ten ways you can achieve this goal.

Ten controls

1. Information
2. Training, refresher training
3. Inspection
4. Supervision
5. Preventive maintenance
6. Purchase policy
7. Outsourcing policy
8. Engineering policy
9. Monitoring of workplace quality
10. Monitoring of workers' health

A template and instructions are presented in Appendix 1. You can use the template to record risks identified by type and the preventive measures and controls needed to eliminate or control them. You can use the format that best corresponds to your current management methods. Appendix 2 includes aspects to consider about each type of risk. Appendix 3 contains examples of preventive measures for each type of risk. Appendix 4 presents controls that you can incorporate into your template.

For more information
You can visit the CNESTT's website at cnesst.gouv.qc.ca/priseencharge. You will find online training capsules and various tools (in French only) to help you manage occupational health and safety.

References

- Canadian Standards Association and Standards Council of Canada, *Occupational Health and Safety – Hazard Identification and Risk Assessment and Control* (Mississauga, ON: CSA, 2013) (CAN/CSA: 21002-12).
- Canadian Standards Association and Standards Council of Canada, *Occupational Health and Safety Management* (Mississauga, ON: CSA, 2006) (CAN/CSA: 21000-06).
- INRS: Definition of risk
- Suvapro, *Connaissez-vous le potentiel des phénomènes dangereux dans votre entreprise?*

APPENDIX 1 – TEMPLATE

LOCATION, TASK, WORKSTATION, EQUIPMENT OR MATERIALS: _____

Template filled out by: _____ Date: / / Update (date and initials): / /

IDENTIFY					CORRECT			CONTROL					
1 No RISKS	2	3 Presence		4 Description	5 Priority			6 Preventive measures	7 Deadline and person responsible	8 Completed	9 Controls	10 Deadline/ frequency and person responsible	11 Completed
		Yes	No		1	2	3						

Legend

- 1 Number of the risk identified
- 2 Definition of risk by type
- 3 Presence or absence of risk
- 4 Description of the situation (e.g. information about the risk, location of risk in the workplace, tasks performed, possible injury or damage or equipment used)
- 5 Risk priority (1 designating the highest level of priority)
- 6 Preventive measures in place or to be applied
- 7 Expected completion date and person responsible
- 8 Activity completed (preventive measures)
- 9 Controls in place or to be applied
- 10 Expected completion date or frequency and person responsible
- 11 Activities completed (controls)

INSTRUCTIONS

There are different ways of identifying risks:

- by place
 - by task
 - by workstation
 - by equipment
 - by material
- Choose one and write it in the designated space on the first line of the template.
 - Write the name of the person or people participating in the identification of risks.
 - Write the date of the initial activity.
 - When the risk identification is updated, write the date and have the person responsible initial it.

IDENTIFY

Use the template in Appendix 1 and refer to the list of aspects to consider for each type of risk in Appendix 2.

Repeat the process for each type of risk:

- Chemical
- Biological
- Physical
- Ergonomic
- Psychosocial
- Safety

COLUMN 1: If necessary, number each of the risks identified.

COLUMNS 2-3: In Column 2, write the aspects that are present in your organization (location, task, workstation, equipment, materials) and check off YES in Column 3.

COLUMN 4: Clearly define each risk.

COLUMN 5: Once you have written all of the questions applicable to each of the six types of risks on the template, analyze the risks and prioritize them by checking off the appropriate box in Column 5 (1, 2 or 3).

CORRECT

COLUMN 6: Use Appendix 3 to help you identify the appropriate preventive measures for each risk, and write them in Column 6.

Remember that Appendix 3 is not an exhaustive list of preventive measures. Consequently, you may have to apply other measures that are not on the list.

COLUMN 7: Set a deadline for the application of the preventive measure selected and appoint a person responsible.

COLUMN 8: Write the date on which the preventive measure was applied.

CONTROL

COLUMN 9: See Appendix 4 for a list of the 10 controls. Identify and describe the appropriate controls for each preventive measure selected, and write them in Column 9. Remember that you need at least two controls to ensure sustainable corrective measures.

COLUMN 10: Set a deadline for the application of the selected controls and indicate the frequency of control and the name of the person responsible.

COLUMN 11: Write the date on which the controls were applied.

APPENDIX 2 – ASPECTS TO CONSIDER FOR EACH TYPE OF RISK

CHEMICAL RISKS

Presence of hazardous products in the following forms: solid, liquid, aerosol, gas, vapour, dust, smoke, mist

Types of exposure:

- Inhalation
- Cutaneous absorption
- Ingestion
- Other

BIOLOGICAL RISKS

Presence of microorganisms in the following forms: dust, mist, decomposition, growth under humid conditions, deposits on surfaces, biological degradation

Contact with:

- | | |
|---|---|
| <ul style="list-style-type: none"> • infectious agents (viruses, parasites, fungi, bacteria, etc.) • vectors (plants, insects, animals, birds, humans, soil, dust, etc.) • allergens (pollen, insect venom, mites, hair, animal saliva and dander, etc.) | <ul style="list-style-type: none"> • toxins (endotoxins, mycotoxins, etc.) • plant or animal particles • other |
|---|---|

PHYSICAL RISKS (ELECTRICAL RISKS, THERMAL RISKS, NOISE, VIBRATIONS, OTHER)

ELECTRICAL RISKS

Exposure to electricity via:

- contact with live parts
- a conductor or another live element
- proximity to high-voltage parts
- contact with charged parts (electrostatic phenomenon)
- leakage current
- a power supply
- stored energy
- overhead power lines
- other

THERMAL RISKS

Exposure to:

- cold or hot temperatures
- objects or materials at extreme temperatures
- flames, radiation from a heat source or explosions
- air flow
- other

NOISE

Exposure to continuous, intermittent, impulsive or impact noise from:

- manual, pneumatic, hydraulic or electrical tools
- pneumatic, hydraulic or electrical equipment
- machinery
- animals
- other

VIBRATIONS

Exposure to vibrations from:

- pneumatic, hydraulic or electrical tools
- pneumatic, hydraulic or electrical equipment
- machinery
- vehicles
- other

OTHER PHYSICAL RISKS

Exposure to magnetic risks (static or variable, electromagnetic interference) from:

- heating by dielectric loss
 - an alarm system
 - telecommunications towers or antennas
 - radiation: ionizing or non-ionizing (X-rays, gamma rays, alpha rays, beta rays), low-frequency, radiofrequency or microwave radiation
- from:
- medical instruments
 - installations producing nuclear energy
 - other

Infrared, visible or ultraviolet light from:

- the sun
- an electric welding arc
- a UV drying lamp
- a UV laser
- lighting
- other

ERGONOMIC RISKS

- Awkward or static postures
 - Working standing up
 - Frequent handling
 - Excessive effort
 - Repetitive movements
 - Vibrations or contact pressure
- Awkward configuration of controls
 - Repetitive tasks
 - Machine-regulated work pace
 - Insufficient rest periods
 - Other

PSYCHOSOCIAL RISKS (NATURE OF WORK, WORK ORGANIZATION, SOCIAL FACTORS)

NATURE OF WORK

- Unhealthy work environment
- Little decision-making power
- Lack of support from colleagues and management
- Other

WORK ORGANIZATION

- Work overload or not enough work
- Fast work pace
- High psychological demand
- Insufficient training
- Frequent interruptions
- Irregular work schedule
- Excessive duration or pace of work
- Other

SOCIAL FACTORS

- Ambiguity or conflict concerning roles and responsibilities
- Conflicting relationships (colleagues, management, clients, suppliers, other)
- Discrimination, discourtesy, psychological harassment, sexual harassment
- Intimidation and violence
- Authoritarian or laissez-faire supervision
- Perception of unfairness or injustice
- Competitive environment
- Lack of communication
- Organizational changes
- Other

SAFETY RISKS (GENERAL MECHANICS; MOVING PARTS, TOOLS AND VEHICLES; FALLS AND FALLING OBJECTS; CONFINED SPACES; FIRES AND EXPLOSIONS; VIOLENCE)

GENERAL MECHANICS

Contact with:

- sources of energy (energy from the controlled or uncontrolled movement of elements)
- hazardous stationary or moving shapes (e.g. sharp, pointed)
- energy accumulated inside a machine:
 - springs
 - gases or liquids under pressure (hydraulic or pneumatic)
- other

MOVING PARTS, TOOLS AND VEHICLES

Contact with tools, machinery or equipment that can:

- watch or wind around
- cut or shear
- drag or trap
- crush or shock
- rub or abrade
- perforate or prick
- other

When moving vehicles or equipment, contact of pedestrian or equipment with:

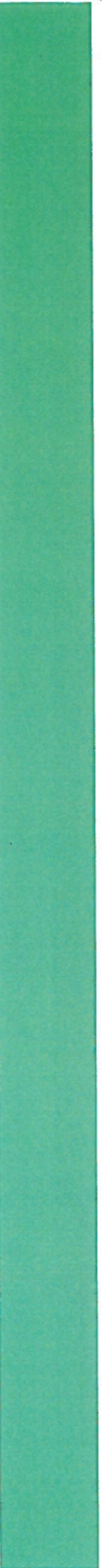
- a lift truck
- hoisting equipment (e.g. chain hoist, lifting platform, pneumatic table)
- handling equipment
- a pedestrian
- other

FALLS AND FALLING OBJECTS

- Working at heights
- Working under a load
- Working under a machine
- Working close to a void (e.g. scaffolding, hole, ladder)
- Slippery, uneven or cluttered ground, route or floor
- Exposure to falling objects
- Dragging by objects or materials (e.g. water, bulk materials in a silo, movement of the ground in a trench)
- Stair design
- Steps up or down on the floor
- Inappropriate lighting
- Other

CONFINED SPACES

- Internal atmosphere
- Insufficient mechanical or natural ventilation
- Presence of materials in the confined space
- Configuration of the interior
- Presence of energy
- Ignition sources
- Special situations
- Other



FIRES AND EXPLOSIONS

- Storage of flammable products
- Processes, equipment or machines that use flammable materials (liquids, solids, gases, sprays)
- Hot work
- Explosive environment (e.g. confined space)
- Electrical installations
- Other

VIOLENCE

Violent behaviour by:

- external clients
- patients
- specific clientele
- colleagues
- suppliers
- external players
- animals
- other

APPENDIX 3 – EXAMPLES OF PREVENTIVE MEASURES FOR EACH TYPE OF RISK

To help you select measures for eliminating or reducing the risks you have identified in the workplace, the following table provides examples of preventive measures, prioritizing those that can eliminate the risk, followed by those that foster the implementation of more effective measures.

This is a general list and is not meant to be exhaustive. It does not address complex problems that require more in-depth analysis, such as safety issues specific to machinery, confined spaces and magnetic risks.

Remember that it is often necessary to combine several preventive measures to ensure the protection of workers, and that preventive measures must be adapted to your needs and workplace.

CHEMICAL RISKS

- Eliminate hazardous products in the process design.
 - Use a less reactive and less toxic substitute product.
 - Use less of the products.
 - Install a system to capture products at the source.
 - Ensure adequate ventilation.
 - Confine the processes.
 - Install detection sensors.
 - Use direct- or continuous-read detection devices.
 - Post procedures (e.g. "Turn on ventilation system before starting").
 - Use material safety data sheets (MSDS) or data sheets and labels.
 - Use safe work methods.
 - Develop and implement a safe storage procedure for products.
- Train workers in WHMIS, safe work methods, health risks and PPE use and maintenance.
 - Make sure that equipment and containers are in good repair to prevent leaks, spills and emissions.
 - Maintain the premises to avoid the accumulation of contaminants on surfaces and in the ventilation system.
 - Plan emergency measures, including the installation of emergency equipment (eyewash stations, safety showers, fire extinguishers), an evacuation plan and the presence of first-aiders.
 - Install double changing rooms.
 - Decontaminate surfaces.
 - Provide the necessary PPE and make sure it is properly used, maintained and stored.
 - Other

BIOLOGICAL RISKS

- Design safe instruments and devices.
 - Use a substitute product or safer equipment.
 - Ensure general or local ventilation.
 - Confine the processes.
 - Post procedures (e.g. "Mandatory hand washing," "Turn on ventilation system before starting").
 - Use material safety data sheets (MSDS) or data sheets and labels.
 - Use safe work methods.
 - Establish biosafety and hygiene rules (e.g. hand washing, sanitizing of tools and equipment).
 - Develop and implement a safe storage procedure for products.
 - Handle and store biomedical waste properly.
- Train workers in safe work methods, health risks, biosafety rules and PPE use and maintenance.
 - Maintain the premises and clean regularly.
 - Regularly sanitize tools and equipment.
 - Apply repellent to keep vector insects at bay.
 - Offer to vaccinate workers.
 - Ensure the presence of epinephrine auto-injectors.
 - Plan emergency measures, including the installation of emergency equipment (eyewash stations, safety showers, fire extinguishers), an evacuation plan and the presence of first-aiders.
 - Provide the necessary PPE and make sure it is properly used, maintained and stored.
 - Other

PHYSICAL RISKS, ELECTRICAL RISKS, THERMAL RISKS, NOISE, VIBRATIONS, OTHER PHYSICAL RISKS

ELECTRICAL RISKS

- Work with the power off.
- Lock out machinery.
- Use automated procedures for live-line work (robotics).
- Distance and isolate power circuits from control circuits.
- Insulate accessible live elements.
- Use compliant electrical equipment that is installed in accordance with standards.
- Reduce the amount of time breakers are open to limit the energy released in the case of a short circuit.
- Use insulated tools and equipment, equipment for handling fuses and protective shielding.
- Reduce the accumulation of electrostatic charges by using a ground.
- Post the presence of electrical equipment and lines and the associated risks.
- Establish safety perimeters during electrical work.
- Develop and implement an electrical safety program.
- Train workers in the electrical safety program and safe work methods.
- Restrict access to electrical equipment.
- Require work permits for live-line work and keep logs.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

THERMAL RISKS

- Design safe processes, tools and equipment.
- Modify processes, tools and machinery to reduce heat emissions.
- Eliminate exposure to radiant heat emitted by hot surfaces (e.g. screens).
- Reduce heat caused by convection (e.g. temperature controls, ventilation, air-conditioned cabs).
- Use handling equipment to reduce the workload and the amount of effort required.
- Cover metal hand holds and hand rails with thermal insulation.
- Post preventive measures and safe work methods.
- Train workers in safe work methods, and health and safety rules and risks.
- Allow workers to become acclimatized before working a full shift.
- Reduce exposure time to cold or heat.
- Organize work based on climatic and atmospheric conditions.
- Ensure access to drinking water.
- Set up heated or air-conditioned rest areas.
- Wear the appropriate clothing for the job.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

NOISE

- Design and purchase less noisy equipment, machinery and processes.
- Modify or replace particularly noisy equipment, machinery and processes.
- Reduce the noise level of existing equipment, machinery and processes (e.g. encase, insulate, soundproof).
- Post work methods, the necessary PPE, the presence of noise.
- Train workers in safe work methods and health and safety risks.
- Reduce exposure time to noise.
- Implement a program to monitor noise levels and workers' health.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

VIBRATIONS

- Design processes, tools, machinery and vehicles that produce less vibration.
- Modify processes, tools, machinery and vehicles to reduce vibration.
- Mechanically insulate the source of the vibration or the vibrating surface.
- Use an insulated cab or platform.
- Post safe work methods and the necessary preventive measures.
- Post information mentioning that the equipment, tool, machinery or process emits vibrations.
- Use safe work methods.
- Train workers in safe work methods and health and safety risks.
- Reduce exposure time to vibrations.
- Take regular breaks.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

OTHER PHYSICAL RISKS (MAGNETIC RISKS, IONIZING OR NON-IONIZING RADIATION, INFRARED LIGHT)

- Design safe processes, tools, equipment and machinery.
- Eliminate or reduce the use of ionizing radiation.
- Apply the ALARA radiation safety principle.
- Use other, safer techniques.
- Move the source further away.
- Insulate the source of ionizing radiation (e.g. shielding).
- Use radiation-absorbent screens.
- Block radiation.
- Set up controlled-access areas (hot zones).
- Install an interlock system (sources of UV radiation are off when the protective wall is disengaged).
- Post warning signs (e.g. audible or visual alarm).
- Use radiometers.
- Use safe work methods.
- Train workers in safe work methods, and health and safety rules and risks.
- Develop and implement a radiation protection program.
- Develop and implement a program for outdoor activities.
- Limit exposure time.
- Monitor work environment quality.
- Monitor workers' health.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other



ERGONOMIC RISKS

- Design ergonomic workstations and tools.
- Use handling equipment.
- Configure and adjust workstations.
- Use ergonomic accessories (e.g. anti-fatigue mats, sitting/standing stools).
- Post appropriate procedures (e.g. how to lift a box, adjust a workstation).
- Ensure task rotation.
- Provide equipment that is in good repair
- Use safe work methods.
- Train workers in safe work methods, health risks, handling techniques and the use of handling equipment.
- Do an ergonomic analysis of the different workstations.
- Adopt a program for purchasing ergonomic equipment.
- Wear comfortable PPE adapted to the job.
- Other

PSYCHOSOCIAL RISKS

- Advertise zero tolerance for violence and worker harassment.
- Implement fair and equitable management practices.
- Develop and implement a policy on workplace harassment and violence.
- Manage conflicts.
- Define roles and responsibilities.
- Plan and organize the work.
- Analyze jobs and tasks and develop safe work methods.
- Train workers.
- Plan orientation activities for new workers and workers returning to work.
- Offer a worker assistance program (EAP).
- Establish regular breaks.
- Hold individual and team meetings.
- Other

SAFETY RISKS

GENERAL MECHANICS

- Design safe machinery.
- Install guards.
- Install protection devices (e.g. safety light curtains, two-hand controls, surface detectors).
- Install warning devices (e.g. flashing lights, audible alarms, posters).
- Use safe work methods.
- Use lockout/tagout procedures.
- Train workers in safe work methods, safety risks and PPE use and maintenance.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

MOVING PARTS, TOOLS AND VEHICLES

- Design safe machinery (e.g. eliminate pinch points and sharp edges, limit the possibility of being dragged).
- Install guards (movable, fixed, with locking or interlocking devices).
- Install protection devices (e.g. safety light curtains, two-hand controls, surface detectors, pressure mats, validation devices).
- Install devices to insulate, switch off, stop and release hazardous energy sources.
- Install flashing lights, audible alarms and posters.
- Define traffic areas.
- Use safe work methods.
- Use lockout/tagout procedures.
- Train workers in safe work methods, safety risks and PPE use and maintenance.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

FALLS AND FALLING OBJECTS

- Work on the ground.
- Use lifting devices.
- Install guardrails.
- Install movement limitation systems.
- Use collective protective measures (e.g. safety nets).
- Install warning devices (e.g. posters).
- Lay out traffic routes.
- Use safe work methods.
- Train workers in safe work methods, safety risks and traffic rules.
- Maintain the premises on a regular basis.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

CONFINED SPACES

- Avoid designing confined spaces and modify existing areas to eliminate them.
- Reduce the need to enter confined spaces (e.g. by using robots, cameras or mechanisms on rails).
- Ensure adherence to current regulations and standards respecting confined spaces.
- Install adequate ventilation.
- Use a gas detection system before entering a confined space.
- Install warning devices (e.g. alarms, posters).
- Develop and implement a program for managing confined spaces, including entry permits.
- Ensure ongoing supervision, implement a rescue procedure and lockout/tagout procedures.
- Train workers in the program for managing confined spaces, safe work methods, lockout/tagout procedures and health and safety risks.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

FIRES AND EXPLOSIONS

- Design buildings, warehouses and equipment that adhere to standards.
- Replace products, equipment and procedures at high risk for fire or explosions.
- Ensure adequate ventilation of the premises.
- Provide explosion-proof equipment and motors.
- Use detectors and devices to detect and reduce propagation.
- Install warning devices (e.g. alarms, posters, data safety sheets, material safety data sheets).
- Use safe work methods.
- Train workers in safe work methods, health and safety risks, WHMIS and the emergency measures plan.
- Maintain the premises to avoid the accumulation of flammable products on surfaces and in the ventilation system.
- Store flammable products in accordance with standards.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

VIOLENCE

- Organize the workplace to ensure worker protection.
- Develop and implement safe work methods.
- Train workers in safe work methods and health and safety risks.
- Use safe work methods.
- Make sure workers are monitored when they are working alone or in an isolated place.
- Post instructions for workers and, if applicable, for clients.
- Advertise zero tolerance for violence against workers.
- Provide the necessary PPE and make sure it is properly used, maintained and stored.
- Other

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APPENDIX 4 – EXAMPLES OF CONTROLS

TEN CONTROLS

1. Information
2. Training, refresher training
3. Inspection
4. Supervision
5. Preventive maintenance
6. Purchase policy
7. Outsourcing policy
8. Engineering policy
9. Monitoring of workplace quality
10. Monitoring of workers' health

