NATIONAL INSTITUTE FOR OCCUPATIONAL HEALTH
Division of the National Health Laboratory Service

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Guidance on the management of risks and risk assessments at places of work

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DISCLAIMER

- This webinar aims to assist self-employed persons and owners of small, medium, and micro-enterprises (SMME's) in the risk assessment and management process with a specific focus on those who do not have access to or cannot afford comprehensive occupational health services.
- This webinar should not be considered as exhaustive for the risk assessment and management process, but as a foundation to increase the level of competency in the risk assessment and management process at places of work, irrespective of the current level of competency.
- Considering legislative requirements together with the potential complexity of places of work with reference to hazards and risks, there may be a need for a risk assessment to be conducted by an external competent person.
- This webinar/guidance does not exempt an employer (self-employed person or owner of a SMME) from this statutory requirement.

1. Introduction

- As an employer (owner of a SMME) or a self-employed person you are required by the Occupational Health and Safety Act (Act number 85 of 1993) and its Regulations to protect your employees, and others, from harm at the place of work.

- The risk assessment is just one part of the risk management process which is used to eliminate or reduce health and safety risks in the place of work and to improve the overall health, safety and wellbeing of your employees.

- The minimum that you as an employer or self-employed person must do, consists of taking reasonable (reasonably practicable) steps to eliminate or reduce (mitigate) any hazard or potential hazard to the safety and/or health of your employees, before resorting to the use of personal protective equipment (PPE).

- This means that you should organise your place of work and work procedures in such a way that it will not negatively affect the safety and health of your employees.

1. Introduction

- This includes the following:
  - Identify what could cause accidents, injury, or illness/disease at your place of work (hazards);
  - Decide how likely it is that someone could be harmed by these hazards, and if so, how serious (risk); and
  - Take action to eliminate the hazard, or if it is not possible, to reduce the risks in your place of work.
- The aim of this webinar is to assist owners of SMME's and self-employed persons in implementing basic health and safety risk assessment procedures and to help prioritise the implementation of control measures to eliminate or reduce health and safety risks.
  - In other words, to eliminate or reduce work-related accidents, injuries, and illnesses/diseases.
- Upon completion of this webinar/training, the owner of a SMME or a self-employed person should be able to implement a basic risk management programme using 5 steps.

2. Definitions : Table 2.1 Terms and definitions

Term	Definition (Description)
Competent person	The Department of Employment and Labour has compiled a document to assist employers in identifying and appointing a competent person. The document is available at the following link: https://lnkd.in/er_aZVUa In short, a competent person is someone who has, in respect of the work to be performed, the required knowledge, training, and experience in a specific field, and who is familiar with the Occupational Health and Safety Act (85 of 1993) and its Regulations. Each Regulation under the Occupational Health and Safety Act (85 of 1993) refers to the specific fields of competency required. For example, the Regulations for Hazardous Biological Agents (2022) refers to a competent person as a person who has required knowledge, training, and experience specific to hazardous biological agents such as viruses and bacteria.

This definition can change depending on the situation

- ***A competent person to do an ergonomic risk assessment in an office will not necessarily be the same as the competent person on a packing warehouse.***

2. Definitions : Table 2.1 Terms and definitions

DEPARTMENT OF EMPLOYMENT AND LABOUR

COMPETENT PERSON

GUIDELINE

AIM

To provide supplementary information to employers and employees, to assist in identifying and appointing a competent person.

HOW DOES OCCUPATIONAL HEALTH AND SAFETY LEGISLATION DEFINE A COMPETENT PERSON?

Regulations currently refer to a competent person to assist an employer to perform certain work or tasks required by the regulations. The requirements for specific competent persons are defined within each regulation and must be used to identify and appoint the competent person to perform the work or task required. The definitions within the regulations have two aspects for competent person:

1) has in respect of the work or task to be performed the required knowledge, training and experience in a "specific field"* and, where applicable, the relevant qualifications specific to a "specific field"*: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and
2) is familiar with the Act and the applicable regulations made under the Act;

The first part of the definition in point 1 above allows for two scenarios:

a) for persons with previous knowledge, training and experience, but do not have a formal qualification, and
b) for persons with a formal qualification, as well as knowledge, training and experience.

*** NOTE:**

please refer to each regulation for the specific fields of competence required.

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COMPETENT PERSON

GUIDELINE

WHAT MAKES A PERSON COMPETENT

It is the responsibility of both the employer and person being appointed as competent, to ensure that the level of competence is appropriate, according to the criteria listed above. The employer must require the person to demonstrate the appropriate level of competence that is appropriate for the complexity of the work or task. While one person may be deemed competent, it may be beneficial and encouraged by the Department, to draw on the knowledge and competencies of associated fields of competence, to effectively manage Health and Safety using a multidisciplinary approach.

For a person to be regarded as competent in the health and safety aspects of their work, they will have at least the following requirements:

a) be qualified through knowledge, training, and experience, and where applicable a formal qualification to do the assigned work or tasks;
b) have knowledge about the hazards and risks associated with the work or the tasks to be performed;
c) know how to recognize, evaluate and control these hazards and risks; and
d) have knowledge of the laws and regulations that apply to the work or tasks.

The abilities to satisfy competency can be learned or acquired through a combination of a person's knowledge, skills and experience. Some abilities will be gained through experience and practice, other abilities may be learned through informal and formal education and training. The person must have training that is appropriate to the work or tasks to be executed or plant and machinery that will be used. Employers can prepare a person or persons to be competent by facilitating the appropriate education, training, skills development and experience. Methods of gaining experience can include, but not limited to, mentorship, assistance from senior employees, scenario-based training and observation.

Knowledge can be defined as knowing both what to do as well as how to do it.

Skill can be defined as having the ability to perform the activity correctly. Skills often require technical know-how, expertise, practice, measurement and feedback to develop into ability.

Formal qualifications required by the competent person are usually earned through a formal education programme, training course, etc., or a combination of education and practical experience.

The abilities to satisfy competency can be learned or acquired through a combination of a person's knowledge, skills and experience.

The employer is responsible for evaluating and deciding if a person is competent, according to the hazards and risks associated with their specific workplace and the level of complexity of the required work or tasks. This evaluation of competency does not replace the process of registration with a professional organisation for professional certification.

CONCLUSION

The person deemed competent will need to demonstrate the appropriate level of competence, keeping in mind that the level of competency required, will depend on the complexity of the work or tasks. The person appointed as the competent person does not have to be a full-time employee. A mandatary, as defined in the Occupational Health and Safety Act, 85 of 1993 as amended, who can demonstrate an appropriate level of competence with the hazards, risks and tasks of that workplace, may also be appointed.

It is not possible for the Department of Employment and Labour to provide a general list of professions and the exact knowledge, training, and experience required. Every employer must determine their own requirements for each level of competency required for work or tasks to be performed, however the Department may require an employer, industry or sector to improve their competency requirements where health and safety standards may be compromised.

In general, the employer should be able to defend their reasons for selecting a competent person and the person claiming to be competent should also be able to appropriately defend their level of competency.

Term	Definition (Description)
Consequence or severity of exposure	Injury and illness/disease following exposure to a hazard. The consequence of exposure can be classified as having a high, medium or of low severity: • High severity refers to major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease; • Medium severity refers to sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work; and • Low severity refers to an injury that requires first aid only, short-term pain, irritation, or dizziness.

For example: The consequence of exposure to asbestos is much worse than dishwashing soap.

Term	Definition (Description)
Exposure	Exposure means that you are exposed to a certain hazard (chemical, virus, etc.) whilst at a place of work.
Exposure routes	The exposure route refers to the site where a hazard enters the body and may be one or more of the following exposure routes: • Inhalation – breathing in a hazard (e.g., inhalation of dust or respiratory droplets containing a virus); • Skin – skin contact with a hazard (e.g., skin contact with an acid); • Ingestion – ingesting a hazard and absorption through the gastro-intestinal tract (e.g., eating with contaminated hands and accidentally ingesting a chemical or bacteria); and • Injection – a hazard (chemical or virus) can be transported directly into the blood through a cut in the skin or needle prick.

The exposure route will determine the control measure used to reduce the exposure.

Term	Definition (Description)
Hazards	A hazard can be anything - whether work materials, equipment, work methods or practices - that has the potential to cause harm. Possible hazards in the workplace include: • Confined spaces (e.g., pits and trenches, silos and tanks, sewers and drains, poorly ventilated rooms); • Excessive noise (e.g., manufacturing, and fabricating processes); • Extreme temperatures (hot and cold conditions); Hazardous biological agents (e.g., food preparation, waste handling, viruses, bacteria, and fungi); • Hazardous chemicals (e.g., airborne dusts, fumes, gasses, and vapours as well as skin contact); • Inadequate illumination (e.g., Glare, Stroboscopic effects, poor illumination of moving machinery, stairs, and walkways); • Inadequate ventilation (e.g., confined spaces, recirculating air-conditioners); • Manual tasks (e.g. awkward body position, high or sudden force, repetitive movements, or vibration); • Psychosocial (e.g., bullying, fatigue and excessive time pressure), and • Safety hazards (e.g., poor housekeeping, electrical installations and mechanical machinery, stairways, and ramps without railings, falling objects and potential slips, trips, and falls of persons).

Term	Definition (Description)
Reasonably practicable	According to the Occupational Health and Safety Act (85 of 1993) every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his workers. A reasonable person would take the following into account when determining if something is practical: • the severity and scope of the hazard or risk concerned (if the hazard can cause serious harm, then a reasonable person will take steps to reduce the risk of exposure to that hazard); • the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk (if knowledge is available to reduce the risk, then a reasonable person will take steps to reduce the risk of exposure to that hazard); • the availability and suitability of means to remove or mitigate that hazard or risk (if means to reduce the risk is readily available, then a reasonable person will take steps to reduce the risk of exposure to that hazard); and • the cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from (if the cost to reduce the risk is affordable then a reasonable person will take steps to reduce the risk of exposure to that hazard).

Term	Definition (Description)
Risk assessment	Risk assessment is the process of evaluating risks to workers' safety and health from workplace hazards. It is a systematic examination of all aspects of work that considers: • what could cause injury or harm; • whether the hazards could be eliminated and, if not; • what preventive or protective measures are, or should be, in place to control the risks.
Risk management	The process of identifying, assessing, and controlling risks to the health and safety of workers.
Risks	A risk is the chance, (high, medium, or low) that somebody may be harmed by the hazard. Risk increases as exposure to the hazard increases. For example, a machine that emits high noise levels is a hazard and a worker who works right next to the machine has a higher risk of hearing loss compared to a worker who works far away from the machine.
Self-employed person	A self-employed person works for themselves, rather than working for an employer that pays regular wages or a salary.
SMME's	Small, medium, and micro-enterprises

Questions?

Summary of the steps to be followed during the risk assessment process

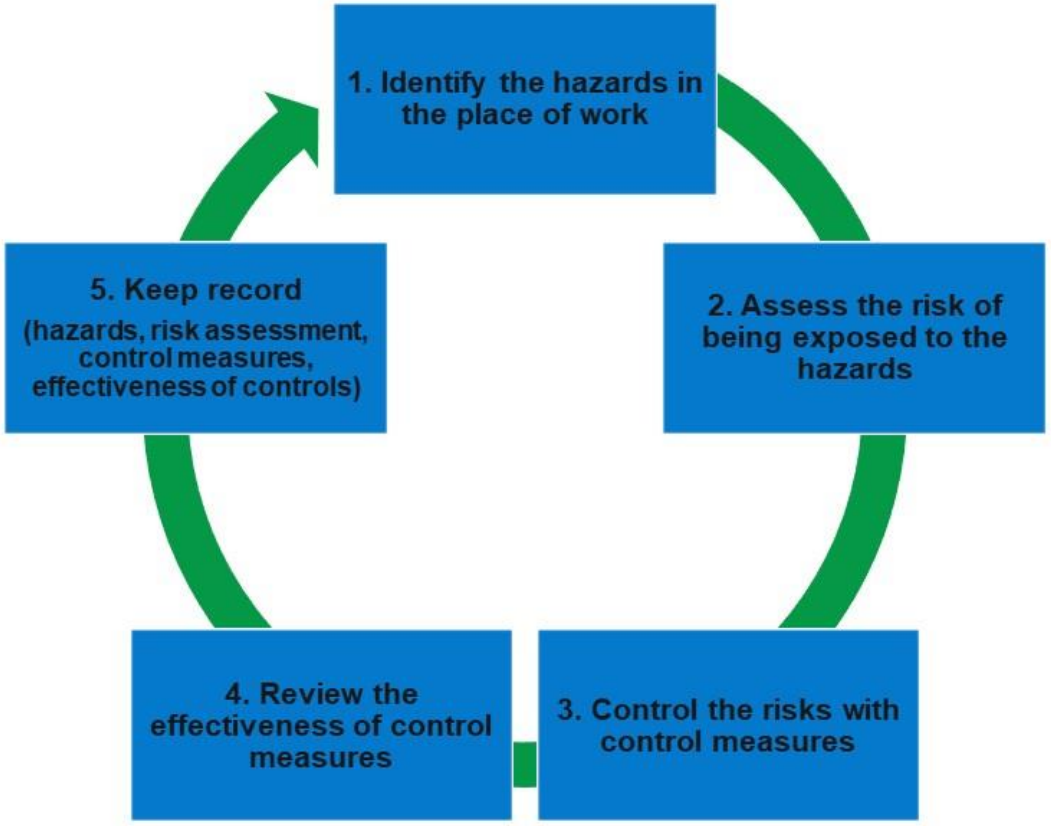


Figure 3.1 Risk assessment process

STEP 1: Identify the hazards in the place of work

Hazard categories:

- Physical Hazards (Noise, extreme temperature, poor ventilation)
- Chemical Hazards (Cleaning substances, paint, fuel)
- Biological Hazards (Virus, bacteria, fungi)
- Psychosocial Hazards (Stress, long hours)
- Safety Hazards (Slippery surfaces)

Hazard Identification

Anticipate

Recognise

Consider the following:

- How do employees work and how is equipment used?
- What substances and chemicals are used?
- Are general work practices safe/unsafe?
- Do non-routine tasks, such as maintenance or changes in production, change the risk to employees?
- What accidents and illnesses may have happened in your place of work in the past?
- How can employees, contractors and visitors be harmed if exposed to each of the hazards that were identified?

- Are there any vulnerable employees, such as new/inexperienced employees, pregnant/lactating mothers, older employees and employees making use of chronic medication that may be more vulnerable to the negative effects of exposure?
- Talk to employees. Can they help identify hazards that you may have missed?

Table 3.1 may be used as a template for the risk assessment process. The reader is directed to the areas marked in **pink** as a focus for the hazard identification phase of the risk assessment, and taking note of the following:

- In order to enable effective record keeping, it is essential that the company name, date of assessment and the details of the person conducting the risk assessment be recorded on each page of the risk assessment; and
- Examples of physical, chemical, biological, psychological and safety hazards are provided in Table 3.1, with potential risk factors. Note that this is a list of general risks in places of work and does not contain all possible workplace risks.

Table 3.1 Examples of hazards

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (task that could cause harm)	Work Area	Who may be harmed	Control measures already in place	Probability	Severity	Risk rating
Physical	Noise	Discomfort or hearing damage when working with noisy equipment such as angle grinders or drills						
Physical	Poor lighting	Eye strain from struggling to see in poor light; or workers may trip over objects						
Physical	Ergonomics	Body/muscle pains from handling heavy objects, doing repetitive tasks and using awkward positions						
Physical	Extreme temperatures	Uncomfortable in the cold winter months						
Physical	Extreme temperatures	Construction work in the sun during summer causing heat stroke						
Physical	Poor ventilation	Increased exposure to hazardous chemicals or biological agents indoors						
Physical	Poor ventilation	Increased exposure to hazardous chemicals while working in confined spaces						

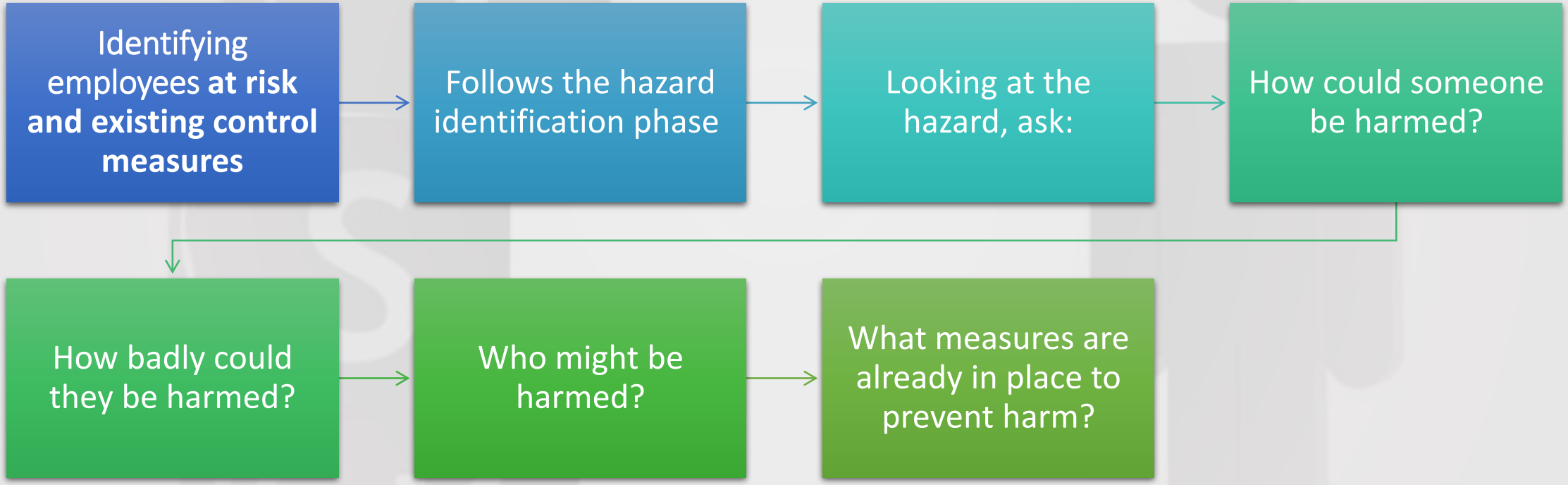
Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (task that could cause harm)	Work Area	Who may be harmed	Control measures already in place	Probability	Severity	Risk rating
Chemical	Dust	Respiratory irritation while doing dusty tasks						
Chemical	Gases and Vapours	Respiratory irritation or dizziness following spray painting						
Chemical	Welding fumes	Respiratory irritation or fever from welding						
Biological	Viruses	COVID-19 or flu after being infected by other employees						
Biological	Bacteria	Bacterial diseases following exposure to bacteria						
Biological	Mould	Damp and mouldy environments can cause irritation of the airways, eyes and skin						
Psychosocial	Long hours	Exhaustion from long work hours						
Safety	Slips and trips	Bruises, cuts or fractures from slipping on spilled liquids or slippery surfaces, or tripping over objects						

Note: If the SMME is unsure if all relevant hazards specific to their operation is addressed, a specialist can be contacted to advise.

Questions?

STEP 2: Assess the risk of being exposed to hazards



Step 2: Assess the risk of being exposed to hazards

Determine Probability and Severity

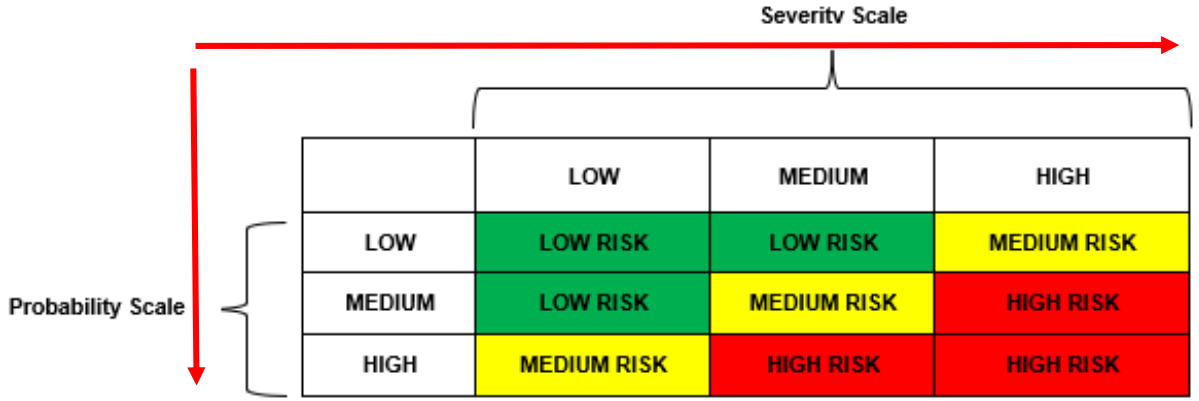
Next step is to assess:

how likely (probable) someone is to be harmed, and;

how serious (severity) it could be

Consider the following:

- What is the likelihood of injury/illness resulting from exposure?
- How severe will the consequence be if the worker is exposed to high levels of the hazard?



Consider the Risk Matrix which illustrates the relationship between probability and severity.

Step 2: Assess the risk of being exposed to hazards

Assign an overall Risk Ranking to the identified risks

Considers both probability and severity

The assignment of risk rankings assists in the prioritisation of risks; and,

Informs action plans to deal with the highest risks first

Notes:

The SMME owner or self-employed person must determine which technique will work best for each situation.

If the risks in the workplace are unclear, then an objective judgement by a competent person might be necessary.

For simple or less complex situations, an assessment can be a discussion with employees based on knowledge and experience.

Probability and Severity Scales

Probability

Low: Activity does not occur regularly / exposure is expected to be low

Medium – Activity occurs from time to time / Exposure is possible; and

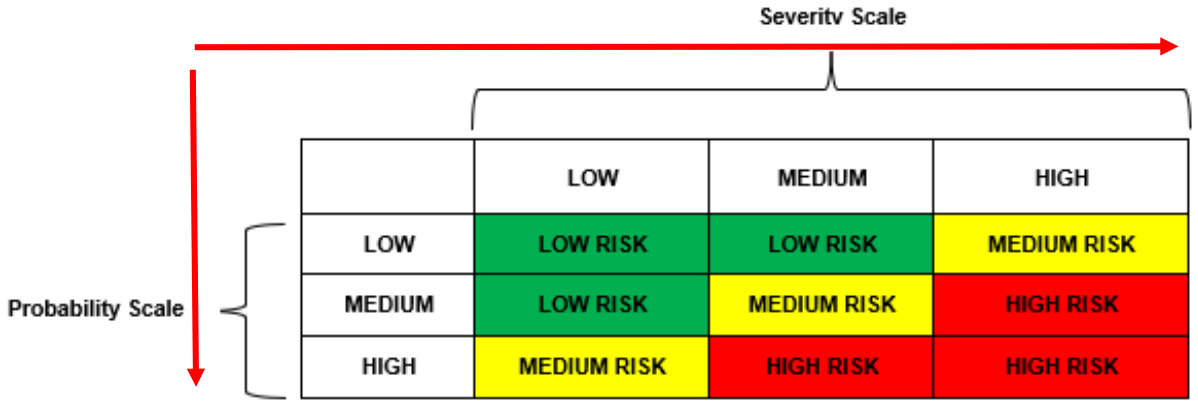
High – Activity occurs regularly / exposure is expected to be high.

Severity

High: Irreversible health effects / disease of concern that may be life threatening (major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease);

Medium: Severe reversible or irreversible health effects of concern (sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work); and

Low: Reversible health effects of no or little concern (an injury that requires first aid only; short-term pain, irritation, or dizziness).



The Severity and Probability Risk Matrix

Severity

High: Irreversible health effects / disease of concern that may be life threatening (major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease);

Medium: Severe reversible or irreversible health effects of concern (sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work); and

Low: Reversible health effects of no or little concern (an injury that requires first aid only; short-term pain, irritation, or dizziness).

Probability

Low: Activity does not occur regularly / exposure is expected to be low

Medium – Activity occurs from time to time / Exposure is possible; and

High – Activity occurs regularly / exposure is expected to be high.

	LOW	MEDIUM	HIGH
LOW	**LOW RISK**	**LOW RISK**	**MEDIUM RISK**
MEDIUM	**LOW RISK**	**MEDIUM RISK**	**HIGH RISK**
HIGH	**MEDIUM RISK**	**HIGH RISK**	**HIGH RISK**

Risk Ranking and actions to be taken

Description	Actions to be taken
HIGH RISK	Investigate the process and implement controls immediately
MEDIUM RISK	Keep the process going; however, a control plan must be developed and should be implemented as soon as possible
LOW RISK	Keep the process going but monitor regularly. A control plan should also be investigated

Risk assessment process - example scenario

Example scenario

When painting a room, a step stool or ladder must be used to reach higher areas. It is assumed that the individual will not be standing higher than 1 meter at any given time during painting activities. The assessment team reviewed the situation and agreed that working from a step stool/ladder at 1 meter is likely to:

Cause a short-term injury such as a strain or sprain if the individual falls. A severe sprain may require days off work. Considering the Risk Ranking Table, the outcome is considered as a MEDIUM severity rating.

	Severity High: Irreversible health effects / disease of concern that may be life threatening (major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease); Medium: Severe reversible or irreversible health effects of concern (sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work); and Low: Reversible health effects of no or little concern (an injury that requires first aid only; short-term pain, irritation, or dizziness).			
Probability Low: Activity does not occur regularly / exposure is expected to be low Medium – Activity occurs from time to time / Exposure is possible; and High – Activity occurs regularly / exposure is expected to be high;		**LOW**	**MEDIUM**	**HIGH**
	LOW	**LOW RISK**	**LOW RISK**	**MEDIUM RISK**
	MEDIUM	**LOW RISK**	**MEDIUM RISK**	**HIGH RISK**
	HIGH	**MEDIUM RISK**	**HIGH RISK**	**HIGH RISK**

- Occur once in a working lifetime as painting is an uncommon activity for this organization. This criterion is considered as a LOW probability rating.

Probability	Severity: LOW	Severity: MEDIUM	Severity: HIGH
Low: Activity does not occur regularly / exposure is expected to be low Medium – Activity occurs from time to time / Exposure is possible; and High – Activity occurs regularly / exposure is expected to be high;		High: Irreversible health effects / disease of concern that may be life threatening (major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease); Medium: Severe reversible or irreversible health effects of concern (sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work); and Low: Reversible health effects of no or little concern (an injury that requires first aid only; short-term pain, irritation, or dizziness).	
LOW	LOW RISK	LOW RISK	MEDIUM RISK
MEDIUM	LOW RISK	MEDIUM RISK	HIGH RISK
HIGH	MEDIUM RISK	HIGH RISK	HIGH RISK

- From the above table, which considers the severity and probability associated with room painting, it can be concluded that the employee is presented with a LOW RISK (intercept of MEDIUM severity and LOW probability). Finally, referring to the "Actions" table, the employer is advised to keep the process going but monitor regularly, and may require the development and implementation of a control plan.

Description	Actions to be taken
HIGH RISK	Investigate the process and implement controls immediately.
MEDIUM RISK	Keep the process going; however, a control plan must be developed and should be implemented as soon as possible.
LOW RISK	Keep the process going but monitor regularly. A control plan should also be investigated.

Table 3.5: Examples of areas, hazard categories, employee categories, existing control measures and risk ranking

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Probability	Severity	Risk rating
Physical	Noise	Discomfort or hearing damage when working with noisy equipment such as angle grinders or drills	Workshop	Welder	Welders make use of hearing protection when using noisy equipment	HIGH	MEDIUM	HIGH
Physical	Poor lighting	Eye strain from struggling to see in poor light; or workers may trip over objects	Warehouse	All employees	All lights are regularly cleaned and replaced if broken	HIGH	LOW	MEDIUM
Physical	Ergonomics	Body/muscle pains from handling heavy objects, doing repetitive tasks and using awkward positions	Warehouse	Delivery workers	Delivery workers help each other with lifting heavy objects	HIGH	MEDIUM	HIGH

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Probability	Severity	Risk rating
Physical	Extreme temperatures	Uncomfortable in the cold winter months	All Areas	All employees	Employees wear jackets	MEDIUM	LOW	LOW
Physical	Extreme temperatures	Construction work in the sun during summer	Yard	Construction workers	Workers drink water and take regular breaks	HIGH	MEDIUM	HIGH
Chemical	Dust	Respiratory irritation while doing dusty tasks	Yard	Construction workers	Employees wear respirators while doing dusty tasks	HIGH	MEDIUM	HIGH
Chemical	Gases and Vapours	Respiratory irritation or dizziness following spray painting	Paint Shop	Spray painter	Spay painters wear respirators while spraying objects	HIGH	HIGH	HIGH
Chemical	Welding fumes	Respiratory irritation or fever from welding	Workshop	Welder	Welders wear respirators while welding	HIGH	MEDIUM	HIGH
Chemical	Poor ventilation	Increased exposure to hazardous chemicals or biological agents indoors	Administration	All employees	Windows are opened to increase airflow	HIGH	MEDIUM	HIGH
Chemical	Poor ventilation	Increased exposure to hazardous chemicals while working in confined spaces	In-Field Projects (Random and remote work areas)	Maintenance workers entering a sewer	Worker wears a harness and is attached via a rope to an assistant outside the sewer	HIGH	HIGH	HIGH

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could	Work area	Who may be harmed	Control measures already in place	Probability	Severity	Risk rating
Biological	Viruses	COVID-19 or flu after being infected by other employees	All indoor spaces (Administration, Production, Workshop, Warehouse)	All employees	Employees are asked to stay at home if sick. Good ventilation indoors. Employees are vaccinated.	MEDIUM	MEDIUM	MEDIUM
Biological	Bacteria	Bacterial diseases following exposure to bacteria	Kitchen	Kitchen staff	Regular hand washing and personal hygiene	LOW	HIGH	MEDIUM
Biological	Mould	Damp and mouldy environments can cause irritation of the airways, eyes and skin	Storeroom	All employees	Regular cleaning and good housekeeping	Low	MEDIUM	LOW
Psychosocial	Long hours	Exhaustion from long work hours	All	All employees	Employees take regular breaks to rest during their	HIGH	MEDIUM	HIGH
Safety	Slips and trips	Bruises, cuts or fractures from slipping on spilled liquids or slippery surfaces, or tripping over objects	All	All employees	Good housekeeping; worker training and supervision	LOW	MEDIUM	LOW

Questions?

STEP 3: Control the risks with control measures

Once you have conducted the risk assessment, you can use the risk rating to prioritise which risks should be addressed first. Consider the following when controlling risks in the workplace:

- What you are already doing, and what control measures are already in place (Table 3.5 indicated in **blue**)?
- Can you get completely rid of the hazard?
- If not, how can you control the risks so that harm is unlikely?
- When deciding on a plan to control a risk in the workplace, the hierarchy of control should always be followed (Figure 3.2). This strategy can be applied to most risks in the places of work.
- What else must be done to control the hazard? Consider implementing additional control measures such as redesign, replacing materials/machinery or processes, and providing personal protective equipment (Table 3.5 indicated in **grey**).

- Who should implement additional control measures and by when should it be done (Table 3.5 indicated in **grey**)?

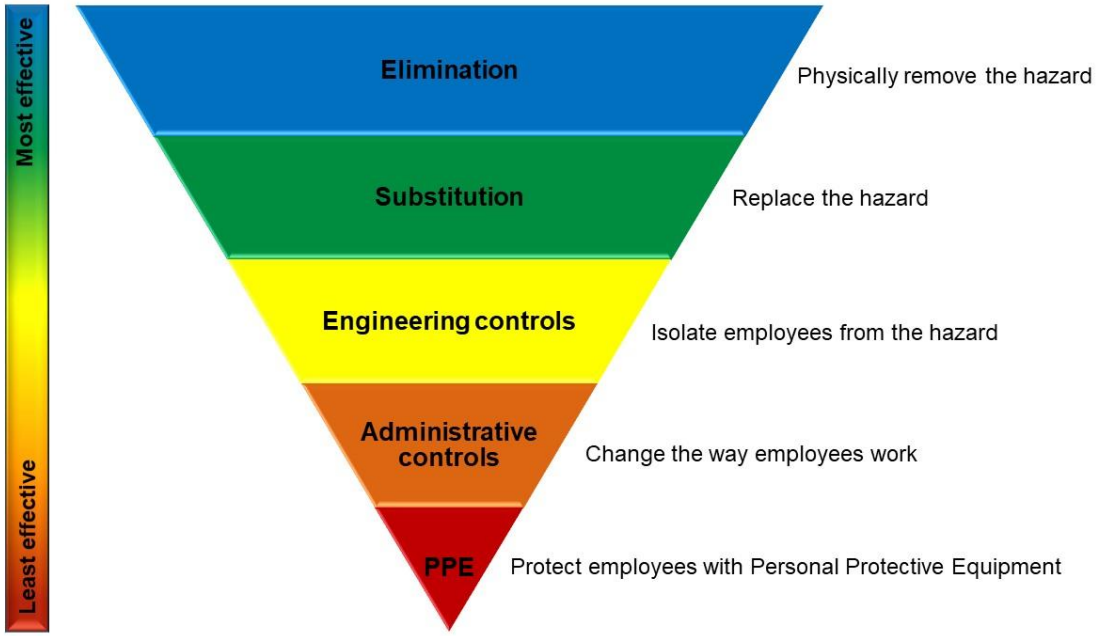


Figure 3.2 Hierarchy of control measures (adapted from https://www.cdc.gov/niosh/topics/hierarchy/default.html)

Implement the control measures you have identified. It is not always possible to eliminate all risks, but you need to do everything 'reasonably practicable' to prevent harm to employees, contractors, and visitors by reducing (mitigating) the risks. This means balancing the level of risk against the risk control measures in terms of cost, time, and/or effort.

Table 3.5: Examples of additional control measures to reduce exposure

Once the additional control measures have been implemented, the risk assessment should be updated to include the improvements.

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Risk ratings	Additional control measures	Responsible person and date of completion
Physical	Noise	Discomfort or hearing damage when working with noisy equipment such as angle grinders or drills		Welder	Welders make use of hearing protection when using noisy equipment	HIGH	Audiometric tests to monitor hearing Regular breaks to reduce exposure time	Employer, within one month Welder, immediately
Physical	Poor lighting	Eye strain from struggling to see in poor light; or workers may trip over objects		All employees	All lights are regularly cleaned and replaced if broken	MEDIUM	Regularly clean lights	Designated employee, monthly

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Risk ratings	Additional control measures	Responsible person and date of completion
Physical	Ergonomics	Body/muscle pains from handling heavy objects, doing repetitive tasks and using awkward positions		Delivery workers	Delivery workers help each other with lifting heavy objects	HIGH	Use manual handling aids such as trolleys	Delivery workers, immediately
Physical	Extreme temperatures	Uncomfortable in the cold winter months		All employees	Employees wear jackets	LOW	Current control measure is adequate	
Physical	Extreme temperatures	Construction work in the sun during summer		Construction workers	Workers drink water and take regular breaks	HIGH	Training to recognise heat stroke; regular breaks in the shade; water	Employer, one month
Chemical	Dust	Respiratory irritation while doing dusty tasks		Construction workers	Employees wear respirators while doing dusty tasks	HIGH	Improve ventilation if possible; use water to reduce airborne dust	Construction workers, one week

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Risk ratings	Additional control measures	Responsible person and date of completion
Chemical	Gasses and Vapours	Respiratory irritation or dizziness following spray painting		Spray painter	Spay painters wear respirators while spraying objects	HIGH	Spray booths with local extraction ventilation	Spray painters, three months
Chemical	Welding fumes	Respiratory irritation or fever from welding		Welder	Welder wear respirators while welding	HIGH	Improve ventilation by opening bay doors; local extraction ventilation;	Welder, immediately Three months
Chemical	Poor ventilation	Increased exposure to hazardous chemicals or biological agents indoors		All employees	Windows are opened to increase airflow	HIGH	Improve ventilation	Employees, immediately

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Risk ratings	Additional control measures	Responsible person and date of completion
Chemical	Poor ventilation	Increased exposure to hazardous chemicals while working in confined spaces		Maintenance workers entering a sewer	Worker wears a harness and is attached via a rope to an assistant outside the sewer	HIGH	Use a breathing apparatus	Maintenance worker, immediately
Biological	Viruses	COVID-19 or flu after being infected by other employees		All employees	Employees are asked to stay at home if sick. Good ventilation	MEDIUM	Increase ventilation by open windows	Employees, immediately
Biological	Bacteria	Bacterial diseases following exposure to bacteria		Kitchen staff	Regular hand washing and personal hygiene	MEDIUM	Current control measure is adequate	
Biological	Mould	Damp and mouldy environments can cause irritation of the airways, eyes and skin		All employees	Regular cleaning and good housekeeping	LOW	Current control measure is adequate	

Company name:	Date of assessment:	Assessment done by:

Hazard category	Specific hazard	Identify the risk (Task that could cause harm)	Work area	Who may be harmed	Control measures already in place	Risk ratings	Additional control measures	Responsible person and date of completion
Psychosocial	Long hours	Exhaustion from long work hours		All employees	Employees take regular breaks to rest during their shift	HIGH	Monitor worker mental health; Wellness programme	Employer, monthly
Safety	Slips and trips	Bruises, cuts or fractures from slipping on spilled liquids or slippery surfaces, or tripping over objects		All employees	Generally good housekeeping (e.g., cleaning spilled liquids and storing objects correctly) Employees wear safety shoes	LOW	Current control measure is adequate	

Questions?

STEP 4: Review the effectiveness control measures

Once you have your control measures in place, you must ensure that they are effective. This is done through regular review to ensure that the risk assessment is kept up to date as the nature of the place of work changes. When evaluating the effectiveness of control measures consider the following:

- Use your senses to determine if there is an improvement. For example, improvement in noise levels (lower noise levels), temperature and ventilation can be noticed using your senses;
- Use of low cost instruments available that could be used for a rough estimate of the effectiveness of controls, e.g. smoke tube for ventilation assessment
- Monitor the workers' health/experience. If workers are still experiencing negative health effects, the control measures are not effective;
- If accidents are still occurring, then the control measures are not effective;

- You must also review the assessment if the control measures are no longer effective, or there are changes in the place of work that could create new risks, or if there have been any accidents or near-misses;
- Also update your risk assessment record when you make any such changes to the work process; and
- Contact a competent person to review the risk assessment if necessary.

STEP 5: Keep record of the risk assessment

You must keep record of the following:

- What hazards are present in the workplace and what is the risk to workers?
- Who may be exposed/harmed?
- What control measures were put in place and when?
- When were control measures tested/reviewed?
- This record must be made available to employees (and health and safety representatives) to improve health and safety communication in your place of work.

If it is not recorded, then it did not happen...

STEP 5: Keep record of the risk assessment

Example:

Hazards present?		**Ergonomics**
What is the risk?		Body/muscle pains from handling heavy objects, doing repetitive tasks and using awkward positions
Who is exposed?		Delivery workers
Control measures:	What?	Purchased trollies to move heavy objects
	When?	XX-XX-2023
	Tested / Reviewed?	XX-XX-2024 Are they still doing the job effectively?
Communication with employees		Communicated at the health and safety meeting on XX-XX-2023

4 Conclusion

- In this webinar you as an employer (owner of a SMME) or self-employed person was introduced to the risk assessment and risk management process.
- That risk assessment and management in a place of work is a legal requirement and it is used to eliminate or reduce health and safety risks in the place of work and ultimately to improve the overall health, safety and wellbeing of your employees.
- How to implement a basic health and safety risk assessment procedure by following 5 steps:

STEP 1: Identify hazards and current control measures in the place of work;
STEP 2: Assess the risk of employees being harmed by hazards;
STEP 3: Implement basic control measures according to the priority list to reduce risk;
STEP 4: Review the risk assessment at regular intervals; and
STEP 5: Keep records of risks and implemented control measures.

5 Additional resources

The following resources contain additional templates and examples to help guide the risk assessment process:

- Canadian Centre for Occupational Health and Safety. Risk Assessment Fact Sheet https://www.ccohs.ca/oshanswers/hsprograms/risk_assessment.html
- Health and Safety Executive (United Kingdom). Managing risks and risk assessment at work https://www.hse.gov.uk/simple-health-safety/risk/risk-assessment-template-and-examples.htm#article
- Health and Safety Executive (United Kingdom). Health and safety risk assessment and management video https://www.youtube.com/watch?v=xyANahuhGs0
- Health and Safety Executive (United Kingdom). Examples of a Risk Assessment:
  - Food preparation https://www.hse.gov.uk/simple-health-safety/risk/foodprep.pdf
  - Office-based business https://www.hse.gov.uk/simple-health-safety/risk/office.pdf
  - Vehicle mechanic https://www.hse.gov.uk/simple-health-safety/risk/mvr.pdf
  - Factory maintenance work https://www.hse.gov.uk/simple-health-safety/risk/factory.pdf
  - Warehouse https://www.hse.gov.uk/simple-health-safety/risk/warehouse.pdf

Questions?

6 References

- European Agency for Safety and Health at Work. 2007. Safety and health at work is everyone's concern. Risk assessment essentials. https://osha.europa.eu/en/publications/risk-assessment-essentials
- Health and Safety Executive (United Kingdom). 2014. Health and Safety Toolbox. https://www.hse.gov.uk/pubns/priced/hsg268.pdf
- Health and Safety Executive (United Kingdom). 2019. Managing risks and risk assessment at work https://www.hse.gov.uk/simple-health-safety/risk/risk-assessment-template-and-examples.htm#article
- Safe Work Australia. 2018. How to manage work health and safety risks. Code of Practice. https://www.safeworkaustralia.gov.au/doc/model-codes-practice/model-code-practice-how-manage-work-health-and-safety-risks.

7 Contributors

This Guidance on the management of risks and risk assessments at places of work was compiled by the Occupational Hygiene and Health Research Initiative of the North-West University, Apex Environmental and D'Sayensi Occupational Hygiene for the Compensation Commissioner for Occupational Diseases (National Department of Health).

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Thank You!