

Lakehead University Workplace Risk Assessment Guideline

(Reference Guide for Supervisors, Instructors, Personnel, and Students)
(Updated September 15, 2026)

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Introduction

Purpose

This guideline provides practical direction for conducting workplace risk assessments to identify, evaluate, and control health and safety risks before harm occurs.

Risk assessment is a proactive step in maintaining a safe learning and working environment and fulfills the due diligence responsibilities under Ontario's **Occupational Health and Safety Act (OHSA)** and its regulations.

By completing a risk assessment, Supervisors/Instructors and Personnel/Students can ensure that workplace hazards are effectively managed, controls are in place, and activities proceed safely. Sharing the results of these risk assessments with staff and students can assist in training and understanding of the importance of following established safe work practices.

Scope

This guideline applies to all activities conducted at Lakehead University that may expose individuals to physical, chemical, biological, ergonomic, or environmental hazards. It does **not** cover workplace violence risk assessments, which must be completed using the separate tool available on the [Workplace Violence Prevention Program page](#).

Responsibilities

Supervisors/Instructors

- Lead the risk assessment process for their area of responsibility.
- Engage personnel and students who perform the work to identify hazards.
- Provide training to personnel and students.
- Review completed assessments annually.
- Ensure identified controls are implemented and maintained.
- Reassess risks following incidents, near misses, or changes to work activities.

Personnel/Students

- Participate actively in identifying hazards and suggesting controls.
- Follow all established safe work procedures and use required protective equipment.
- Report unsafe conditions or hazards immediately to the Supervisor/Instructor.

Health, Safety, & Wellness

- Provide guidance, forms, and support upon request (risk assessments not required for submission).

Supervisors/Instructor Tip

Encourage open participation. Those doing the work often recognize hazards that may not be immediately visible to others. Treat the process as a conversation, not a checklist.

What Is a Risk Assessment?

A **risk assessment** is a systematic process used to identify potential hazards, analyze their likelihood and potential severity, and determine appropriate measures to control them. Risk assessment is a part of overall risk management and involves the following steps:

- 1) Identification of the hazards
- 2) Assess likelihood of adverse event
- 3) Assess adverse event consequences
- 4) Determine initial risk
- 5) Mitigate hazards
- 6) Determine residual risk
- 7) Identify gaps requiring further mitigation

Key Definitions

- **Hazard:** Anything with the potential to cause injury, illness, or damage.
- **Initial Risk:** The combination of the likelihood and severity of harm occurring.
- **Control (Mitigation):** An action or measure taken to eliminate or reduce risk.
- **Residual Risk:** The combination of the initial risk and control effectiveness.

Why Conduct Risk Assessments

- To prevent injury or illness.
- To plan and organize work more effectively.
- To evaluate whether existing controls are effective.
- To comply with the OSHA and University requirements.

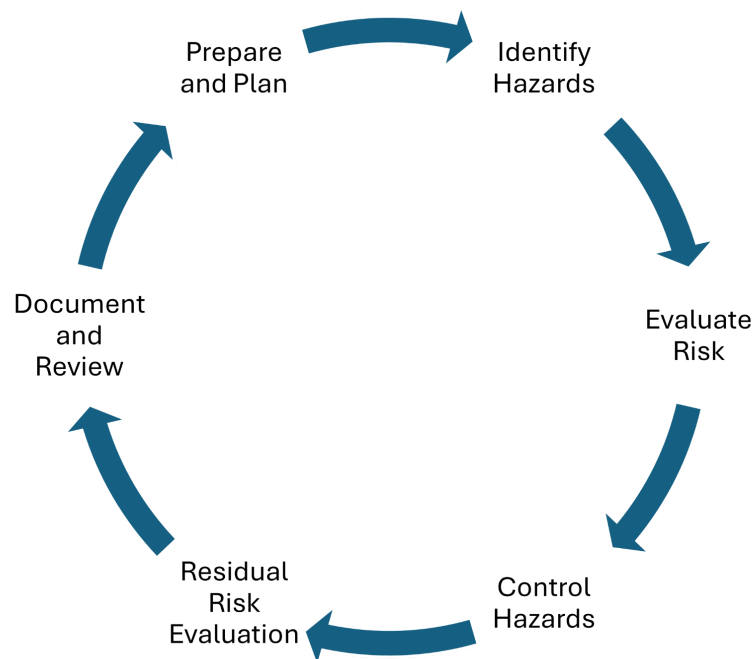
A risk assessment template (including examples and a walkthrough guide) has been developed to make the risk assessment process a clear, consistent process when completing area-specific risk assessments.

The Risk Assessment Process Overview

Each risk assessment follows six key steps:

1. **Preparation and Planning**
2. **Hazard Identification**
3. **Initial Risk Evaluation** (Likelihood × Severity)
4. **Control and Mitigation Measures**
5. **Residual Risk Evaluation** (Initial Risk × Control Effectiveness)
6. **Documentation, Review, and Follow-Up**

Figure 1: The Risk Assessment Cycle



Step 1: Preparation and Planning

Objective: Establish the scope, context, and team before identifying hazards.

Actions

- Define the activity or task to be assessed.
- Review relevant policies, SDSs, and equipment manuals.
- Determine who will be involved.
- Identify the physical location and duration of the task.
- Collect any prior incident reports or inspections related to the activity.

Supervisor/Instructor Tip:

Schedule risk assessments early—before activities begin or when new equipment or substances are introduced.

Step 2: Identifying Hazards

Objective: Recognize what could cause harm.

Common Hazard Categories

Type	Examples
Physical	Slips, trips, noise, vibration, moving machinery
Chemical	Exposure to solvents, gases, corrosives
Biological	Contact with infectious materials
Ergonomic	Repetitive motions, awkward postures
Environmental	Heat, cold, weather, wildlife
Psychosocial	Fatigue, workload, isolation (if relevant to physical risk)

Methods to Identify Hazards

In Step 1, identify the activity or task. Think about the environment, equipment or any other potential hazards that may be encountered when completing the task. Recording each of these hazards in the risk assessment template within the context of the task or process, enables a clear determination of any risks involved. It is important to remember that the activity, person, or equipment that we've identified to potentially lead to harm is not the hazard. For example, a course may have a higher enrollment than normal, this may lead to more students being present in a lab section. More students in a space could lead to *an over-crowding hazard* which may in turn increase the chance of an adverse event (e.g. someone spills a chemical when bumped). While the increased number of students is not a hazard itself, it is an important factor to consider when determining likelihood in the next step.

- Observe the task being performed.
- Ask personnel/students what hazards they notice.
- Review past incidents and near-miss reports.

- Use checklists or standard forms.

Supervisor/Instructor Tip:

Ask “what if?” questions—what could go wrong if something fails, spills, or moves unexpectedly?

Step 3: Evaluating Risk (Likelihood and Severity)

Objective: Determine how serious each hazard could be and how likely it is to occur. Then the likelihood and severity to calculate initial risk.

How to Calculate Risk

Use the **Risk Rating Matrix** (see Table 1 below). When determining likelihood, one factor to think about is whether the incident has already occurred within Lakehead or at other universities. If the incident has occurred previously, then the likelihood is increased.

Multiply the **Likelihood (1–5)** by the **Severity (1–5)** to obtain an **Initial Risk Score**.

Table 1: Risk Rating Matrix

Likelihood	Description
1	Rare – Very unlikely to occur
2	Unlikely – Could happen, but not expected
3	Possible – Might occur occasionally
4	Likely – Expected to occur
5	Almost Certain – Happens frequently

Severity	Description
1	Insignificant – No injury
2	Minor – First aid only
3	Moderate – Medical attention required
4	Major – Serious injury or illness
5	Catastrophic – Fatality or multiple serious injuries

Initial Risk Level = Likelihood × Severity

Score	Risk Level
1–4	Very Low
5–8	Low
9–14	Medium
15–24	High
25	Very High

Step 4: Control and Mitigation Measures

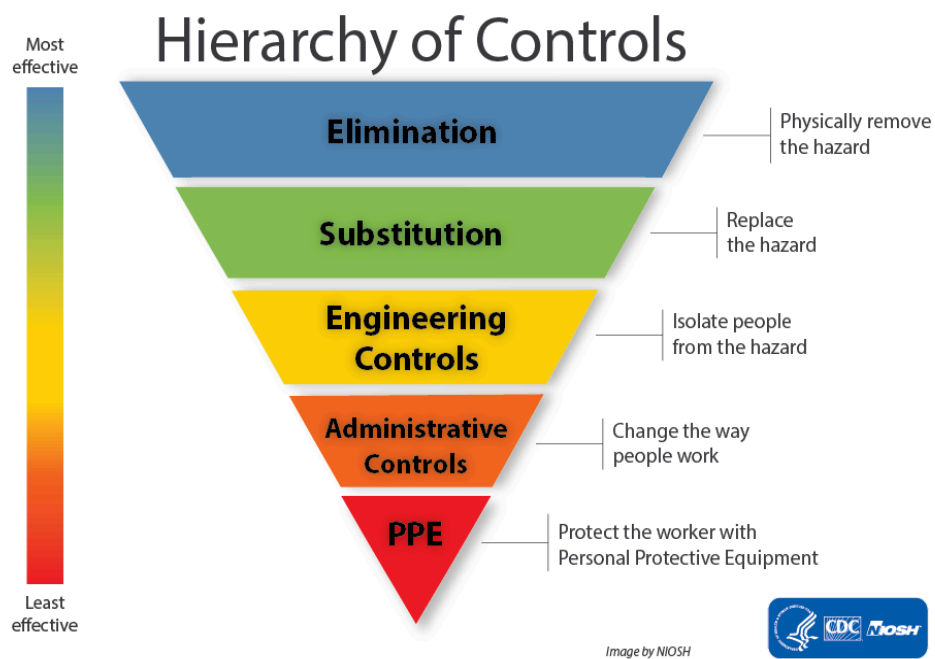
Objective: Identify and apply practical measures to reduce the risk. Then determine the effectiveness rating of the control and mitigation measures using the control effectiveness scale.

Hierarchy of Controls

Control Type	Examples
Elimination	Remove the hazard (don't use hazardous substance)
Substitution	Replace with safer alternative
Engineering Controls	Guarding, fume hoods, ventilation
Administrative Controls	Safe work procedures, signage, training
PPE	Gloves, goggles, hearing protection

When determining control measures start at the top of the hierarchy and work down. PPE should never be the only control measure.

Figure 2: Hierarchy of Controls Pyramid

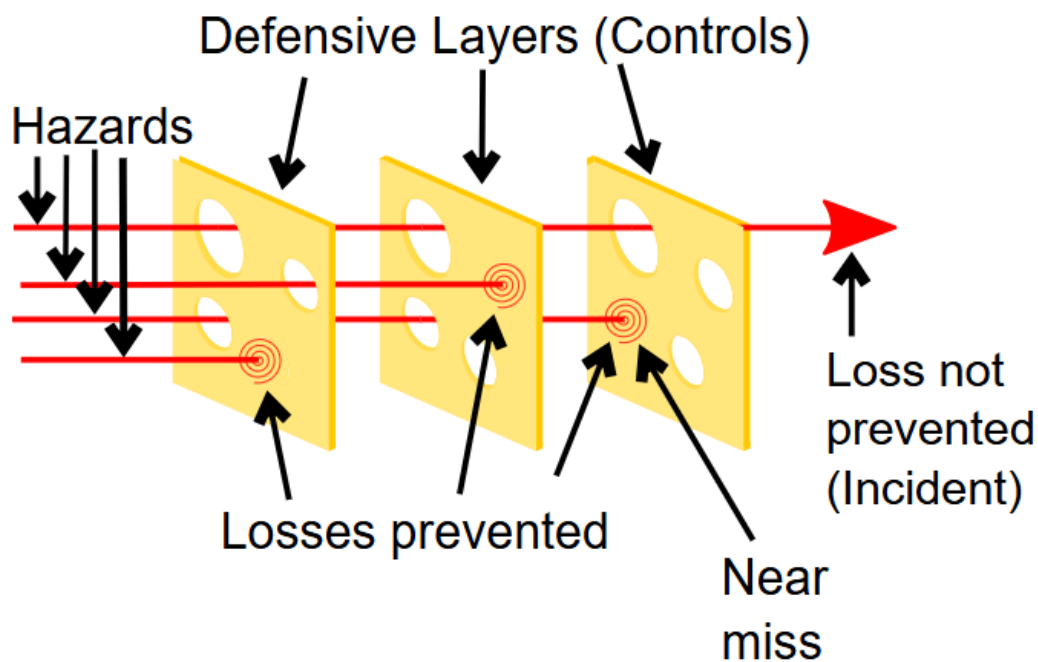


Supervisor/Instructor Tip:

When reviewing controls, ask “Can we remove the hazard altogether?” before adding more PPE or procedures.

Swiss Cheese Model

Another model to think about mitigation measures is the Swiss Cheese Model. This approach looks at each mitigation measure as a layer of protection between the hazard and the individual. Like Swiss cheese, each mitigation measure layer has “holes” and may not protect an individual fully, but by layering these measures the hazard may be prevented from getting through and causing harm. This model works in tandem with the hierarchy of controls; measures that are more effective according to the hierarchy have less “holes” and better prevent harm from reaching the individual. While measures that are less effective will have more “holes” and require additional layers of protection to prevent harm. It is important to note that more mitigation measures do help reduce risk, but there are no impervious barriers other than removal of the hazard.



Source: “Swiss Cheese Model” by Ben Aveling, [Wikimedia Commons](#), [CC BY-SA 4.0](#)

Control Effectiveness Scale

Rating	Meaning
1	Very Effective – Hazard fully controlled
2	Effective – Controls working well
3	Somewhat Effective – Some gaps exist
4	Ineffective – Poorly applied controls
5	No Controls – Hazard unmanaged

Step 5: Determine Residual Risk

Objective: Determine how well control and mitigation measures impact the risk.

How to Calculate Residual Risk

Use the **Control Effectiveness Scale** (see above).

Multiply the **Initial Risk (1–25)** by the **Effectiveness Rating (1–5)** to obtain an **Residual Risk Score**.

Residual Risk Level = Initial Risk × Effectiveness Rating

Score	Risk Level
1–12	Very Low
13–25	Low
26–40	Medium
41–74	High
75–125	Very High

Determining if the risk level is acceptable requires an understanding of all available mitigation measures, the ability to implement them, and the level of need to perform an activity. Under the Occupational Health and Safety Act, a supervisor has the obligation to take all reasonable precautions to protect workers. This means regardless of the risk level that is determined, it is important to determine if the obligations have been met and all available safety precautions have been implemented. Generally a risk level of High or Very High would not be an acceptable

level to continue an activity. In this case if there are no further mitigation measures that can be implemented, a supervisor and/or Health and Safety may need to be consulted about how to move forward if a task is required. A Medium risk level may be acceptable, but it is necessary to ensure that all reasonable mitigation measures available have been implemented and the risk has been reduced as much as possible.

Step 6: Documentation and Review

Objective: Record findings, assign responsibilities, and establish follow-up.

How to Document

Use the **Risk Assessment Tool**. For each hazard, include:

- Task/Activity
- Hazard Description
- Likelihood and Severity
- Initial Risk
- Control Measures
- Control Effectiveness
- Residual Risk
- Additional Action Required
- Completion/Review Date

Sign-Off and Communication

Supervisors/Instructors should review completed assessments with affected personnel/students to confirm that controls are understood and applied.

Roles and Responsibilities Summary

Role	Key Responsibilities
Supervisor/Instructor	Lead assessments, train personnel, review annually, maintain documentation.
Personnel/Student	Participate in assessments, follow controls, report hazards.
Health, Safety & Wellness	Provide guidance, forms, and support upon request (risk assessments not required for submission).

Review and Continuous Improvement

Supervisors/Instructors should review completed assessments to verify:

- Controls remain effective.
- No new hazards have emerged.
- Personnel/Students are trained and competent.

When to Review

Risk assessments should be reviewed:

- Annually.
- After any incident or near-miss.
- When introducing new equipment, chemicals, or processes.
- When changes to workspace or personnel occur.

Encourage open discussion about near-misses or concerns. Updating risk assessments regularly demonstrates proactive safety culture and due diligence.

References and Resources

- **Ontario Occupational Health and Safety Act and Regulations**
<https://www.ontario.ca/laws/statute/90o01>
- **Lakehead University Health and Safety Policies and Procedures**
<https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety/tb/policies-procedures>
- **Risk Assessment Template (Excel Tool)**
https://docs.google.com/spreadsheets/d/1ho-9VnzVyJ1XDTqIfkhmRGE4QUdc71Jcdov_hLAsYh0/copy
- **Risk Assessment Page**
<https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety/tb/occupational-health/risk-assessment-tool>
- **Contact:** Health, Safety & Wellness, Lakehead University – 807-343-8010 ext. 8671 or 8806 (for urgent inquiries).

Appendix A: Quick Reference Checklist

1. Define the task and participants.
2. Identify all potential hazards.
3. Rate likelihood and severity (before controls).
4. Identify and apply control measures.
5. Assess residual risk (after controls).
6. Document findings and assign responsibilities.
7. Communicate results and train personnel.
8. Review and update regularly.