

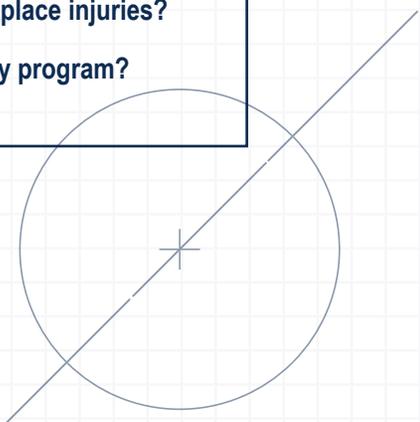
# Guide to **Improving Worker Safety** in Industrial Environments

Organizations across Canada are busy focusing on their core business objectives to succeed in today's competitive environment. However, it is crucial for organizations to create and promote a safe environment for their most valuable resource: **their workers**.

This is particularly critical in an industrial environment where risk of workplace injuries and fatalities can be staggeringly costly – both in terms of personal impact to injured workers and their families but also to employee morale and financial costs to the organization.

That's why Tuff Grade has created this **Guide to Improving Worker Safety in an Industrial Environment**. The guide outlines:

- **What is worker safety and why is it important?**
- **What direct and indirect costs are associated with workplace injuries?**
- **Who is responsible for worker safety and what part can each individual play?**
- **What are common workplace hazards and how can organizations prevent them?**
- **What safety products are crucial to preventing workplace injuries?**
- **How can organizations implement an effective safety program?**





# Introduction to Worker Safety

Developing and improving a health and safety program for your workplace is critical to protecting your most valuable asset: **your workers**. Worker injuries and illness can result in losing your workers, even for a short time. This can mean significant business disruption and cost/loss in revenue for your business including:

**Employee morale**  
**Worker productivity**  
**Employee turnover, and**  
**Company/brand reputation**

Clearly creating a culture promoting a safe working environment prevents loss to your company and your workers' families.



## According to the Occupational Safety and Health Administration (OSHA)...

Traditional approaches are often reactive—that is, actions are taken only after a worker is injured or becomes sick.

Finding and fixing hazards **before they cause injury or illness** avoids the direct and indirect costs of worker injuries and illnesses and promotes a positive work environment. This is the essence of worker and workplace safety.





# Why is Worker Safety **Important** for Your Business?

## Direct and Indirect Costs of Workplace Injuries

Direct costs such as medical or rehab are only the beginning of how the bottom-line is impacted after a worker's injury. The indirect costs of an injury generally cost between 4 – 10 times the amount of the direct costs. This includes costs like:

- + **Lost productivity including production time, productive time by the injured employee and other employees and supervisors who help the injured worker**
- + **Cleanup and startup of operations**
- + **Hiring and training for injured employee**
- + **Resources and costs for repair/replacement of affected equipment and supplies**
- + **Cost of injured employee's wages and compensation**
- + **Reduced morale and productivity of other employees**
- + **Administrative costs of documenting accident**
- + **OSHA penalties**

Most organizations do not know what accidents and ill-health really cost them in time and money. Few bother to examine costs even when they investigate accidents and incidents.



So, let's look at an example and **some calculations** – if direct costs of an injury are \$5,000, then you could safely assume up to another \$50,000 for indirect costs. This is just the cost of a single worker injury. The cost of a well-funded H&S program is significantly cost-effective, in comparison.

It is often **assumed that most accident and incident costs are recoverable through insurance** – this is simply not the case.



## Why is Worker Safety **Important** for Your Business?

### 3x Return for Health & Safety Programs



#### According to the Canadian Centre for Occupational Health and Safety (CCOHS)...

Canadian workplace health promotion programs cut absenteeism rates to half of the national average and bring cost benefits of 3 times return for every dollar invested. These statistics provide powerful arguments for the business case for organizations to invest in health and wellness promotion for their employees.

### Legal Responsibility for Health & Safety Violations

#### Westray Bill (Bill-C45)

These provisions of the criminal code affect all organizations and individuals who direct the work of others, anywhere in Canada. Implemented in 2004, it made violations to health and safety a criminal offence for everyone from the direct supervisor to the CEO, if there is an injury or death. In 2016, a Canadian manager in Ontario was held criminally responsible and sentenced to prison for 3 ½ years for his actions which resulted in the deaths of four workers under his watch.

### Safety-Focus Affects Your Organization's Brand

Brand and sales benefits result from your customers and prospects – those who only want to deal with suppliers that have a safety-conscious workplace so that they don't have to worry about liabilities when working together. When your company can boast about its safety record because of continuous improvement practices, your company is more competitive in the marketplace.





# Employers and Employees Need to **Work Together** to Ensure a Safer Work Environment

As the people actually working in the environment, employees and managers are the best suited to understanding, recognizing and resolving health and safety issues. The Canada Labour Code – Part II points to both employers and employees as the primary resources in a strong health and safety program.

## Health and Safety Responsibilities of Employers, Managers and Supervisors

Senior management needs to lead the health and safety culture within an organization. It is up to them to demonstrate commitment to continuous improvement in health and safety and to ensure strong and consistent communication about program expectations and responsibilities to workers.

It is the responsibility of all managers and supervisors to establish health and safety goals and objectives and provide resources and training. This means that management needs to set up an open communication plan, so workers can feel confident participating in the health and safety program including reporting safety issues.

It's the responsibility of management to ensure that employees are aware of hazards and are trained and protected from injury. Hazard warning signs should be strategically posted to remind workers of risks in each area as they move from location to location. Language on signs and posters should be inclusive and sensitive to workers' language; warnings should be bilingual or even trilingual to ensure the message is optimally communicated. Management should also ensure that everyone knows the location of first aid kits, eyewash stations and AED's (Automated External Defibrillators).



## Employers and Employees Need to **Work Together** to Ensure a Safer Work Environment

### Employees' Health and Safety Rights and Responsibilities

To ensure that a health and safety program works well, it is crucial to gain employee buy-in and participation. That means that workers should be involved in all aspects of the program including setting health and safety goals, identifying and reporting hazards, investigating incidents, and tracking progress.

It's important that employees and contract/temporary workers understand that all of their workers, including contractors and temporary workers, should understand the part they play in the health and safety program at the organization so that they can successfully participate. Employees should feel comfortable reporting health and safety concerns without concern of negative impact.

### What are the employees' rights and responsibilities?

**CCOHS** identifies the following employee responsibilities:

- Work in compliance with OH&S acts and regulations.
- Report workplace hazards and dangers to the supervisor or employer including reporting missing or defective equipment or personal protective equipment and devices.
- Work in a safe manner as required by the employer and use the prescribed personal protective equipment and clothing.

**CCOHS** also outlines employees have the following three basic rights:

- Right to refuse unsafe work.
- Right to participate in the workplace health and safety activities through the Health and Safety Committee (HSC) or as a worker health and safety representative.
- Right to know, or the right to be informed about, actual and potential dangers in the workplace.



## Employers and Employees Need to **Work Together** to Ensure a Safer Work Environment

### Your Organization's Health & Safety Committee – **Management & Employees Working Together to Reduce Risk of Injuries**

Joint health and safety committees play a pivotal role in preventing work-related injuries and diseases. These representatives make up a part of the internal responsibility system. The requirements for a health and safety committee is dependent on how many workers are in the organization and specific provincial legislation.



To find requirements for your work environment, [check out CCOHS – Joint Health and Safety Committee.](#)

**Health and safety committees have many duties that can vary by jurisdiction. CCOHS identifies the following tasks H&S committees perform to help employers improve workplace safety:**

- Recognize workplace hazards.
- Evaluate the risk of accidents/incidents, injuries and illness.
- Participate in development and implementation of programs to protect the employees' safety and health.

- Respond to employee complaints and suggestions concerning safety and health.
- Ensure the maintenance and monitoring of injury and work hazard records.
- Monitor and follow-up hazard reports and recommend action.
- Set up and promote programs to improve employee training and education.
- Participate in safety and health inquiries and investigations, as appropriate.
- Consult with professional and technical experts.
- Participate in resolving workplace refusals and work stoppages.
- Make recommendations to management for accident prevention and safety program activities.
- Monitor effectiveness of safety programs and procedures.

Companies that implement the recommended practices put forth by your H&S committee benefit directly and indirectly including reduced worker injuries and insurance premiums, increased employee satisfaction, and improved productivity. Additionally, the organization become a more attractive employer because of the reputation of being a safe workplace environment. Similarly, worker retention improves, saving hiring and training costs.



## Employers and Employees Need to **Work Together** to Ensure a Safer Work Environment

### Health and Safety **Hazard & Incident Reporting**

Any health and safety incidents (including close calls) must be reported. The Ministry of Labour (via the [Health & Safety Contact Centre](#)), the joint health & safety committees and the union (if there is one) must be notified immediately. This needs to be reported by telephone or other immediate means. Additionally, within 48 hours, the employer must also document the incident in writing to a director of the Ministry of Labour.

Plan Brothers, a company that develops safety reporting and management software, provides an [excellent list of why incident reporting is essential](#):

### 7 Reasons Why Incident Reporting is Critical

- 1 The insights that are collected are very important to discover why incidents occur. They help safety, security, environmental, quality and facility managers to identify where additional support is required to help ensure no major incidents happen.
- 2 More incidents and observations mean more data to analyze.
- 3 Incidents and observations keep us aware.
- 4 Incident reporting provides a way to encourage employee participation in improvement whether it's about safety, quality, environmental or security.
- 5 The gathered data can be used for comparisons both within and between organizations and industries.
- 6 Reporting is cheaper than the costs of a major incident.
- 7 Incident reporting is a key habit that creates a positive health and safety culture.



# Workplace Hazards

## 5 Common Plant Hazards

### + Lifting

According to OSHA, approximately 36% of all work-related injuries involve injury to the shoulder and/or back that often result from heavy lifting. Workers are susceptible to injury by lifting or pushing/pulling objects that are too heavy for them. Resulting injuries can be long-term health issues. There are several lift-assist products sold as safety products in the material handling field. Also, manual material handling carts should be designed to consider usage and the [Liberty Mutual Tables](#). Some considerations should include handle height and [casters](#).

### + Fatigue

When employees, especially those who work long hours or perform manual labour, fail to take appropriate breaks, they are prone to accidents. To demonstrate the effects of fatigue, being awake for 17 hours is the equivalent of having a blood alcohol level of 0.05. Being awake for 20 hours is the equivalent of having a blood alcohol level of 0.1. The risk of accident increases 27.5% for employees working a 12-hour shift vs. an 8-hour shift.

### + Dehydration

Dehydration can cause heat related worker injuries/illnesses and lost productivity. Employees who don't stay hydrated can face short or long-term impact including heat stroke or cardiac conditions. At just 1% dehydration, workers begin experiencing decreased cognitive abilities, reduced concentration and alertness, and slower reaction times resulting in a 12% decrease in productivity. At 3-4%

dehydration, this increases to 25-50%. The likelihood of this risk is elevated in hot working environments. Rehydration drinks replace electrolytes and help to restore minerals and fluids lost through dehydration, physical exertion and stress.

### + Hazardous Materials & PPE

Improper handling of hazardous materials or not wearing [personal protective equipment \(PPE\)](#) is another common cause of accidents in the workplace. In 2016 alone, the [Association of Workers' Compensation Boards of Canada \(AWCBC\)](#) reported that there were 241,508 lost time claims in Canada across all industries. Workers need to be provided appropriate personal protective equipment and must be appropriately trained to use the equipment correctly.

### + Slips, Trips, and Falls

Slips, trips and falls cause a significant number of workplace injuries across Canada each year. According to a [report by the Ministry of Labor](#), the most common causes of these injuries were:

1. Floors not clear of hazards including garbage, snow and ice,
2. Equipment, materials and protective devices not properly maintained, and
3. Failure to provide adequate health and safety training and communication.



# Top 10 Safety Products to Keep Your Employees Safe

When a company purchases PPE (personal protective equipment) to protect against hazards, there are many options to consider. All PPE should adhere to appropriate [performance standards like CSA and ANSI](#). Reliable PPE is critical to worker safety so it's wise to look for quality industrial products to suit your organization's needs.

- 1 First aid kits** are provincially mandated and must adhere to the provincial codes. AEDs (Automated External Defibrillator) are also an essential first aid product.
- 2 Signs and identification products** (like pipe markers) are very useful tools to quickly and efficiently communicate crucial information including text and commonly understood icons. Photoluminescent signs can be used for dark areas or power loss.
- 3 Respirators and safety masks** are used for specific contaminants. It is crucial to conduct safety mask fit testing for each employee who wears one. For extreme environments, respirators can be hooked up to supplied air with hoses or SCBA (self-contained breathing apparatus).
- 4 Hard hats** must be clean of stickers and only logos that are pad-printed by the manufacturer are acceptable for safety inspection and manufacturer's warranty. CSA Type 1 hats protect from top down blows and CSA Type 2 hats protect from lateral and top down blows using a foam insert.
- 5 Face protection** products range from [safety glasses](#) to goggles to face shields. Face protection should be chosen based on the specific use and work environment.
- 6 Hearing protection** needs are based on [NRR \(noise reduction rating\)](#) and are available in different forms depending on the needs of the business and the user – ear plugs, semi-insert ear plugs, and ear muffs.
- 7 Protective apparel** is varied to the application – options include fire resistant, fire retardant, chemical resistant, weather, etc. Protective apparel includes a variety of products including [disposable coveralls](#), [balaclavas](#), [raingear](#) and more.
- 8 Protective footwear** that keeps workers' feet and toes safe with steel inserts. Most job sites won't allow anyone onto the site without them. Some protective footwear is also chemical-resistant. Optional strap-on cleats are available for icy conditions.
- 9 Hand protection** is the most common PPE. [Safety gloves](#) and sleeves come with dozens of coatings for thousands of applications including: Nitrile, Latex, Butyl, Neoprene, PVC, Rubber, leather, disposable, cut-resistant Kevlar, impact resistant and more.
- 10 Traffic Control Safety** products are for workers on job sites where vehicles are present. Many workers must wear [traffic vests](#) for purposes ranging from identification or full reflective taped vests to the CSA standard of a reflective value of over 300 lumens for safety. Other traffic control products to keep traffic and workers safe: [traffic cones](#), [delineator posts](#) and [barricade tape and bars](#).



# Implementing an **Effective** Safety Program

**OSHA advises** that implementing health and safety best practices brings significant benefits including:

- Preventing workplace injuries and illnesses
- Improving safety compliance with laws and regulations
- Reducing costs, including significant reductions in workers' compensation premiums
- Engaging workers
- Enhancing their social responsibility goals
- Increasing productivity and enhance overall business operation



**[Download the complete Recommended Practices for Safety and Health Programs from OSHA to get started.](#)**

OSHA has recently updated the **[“Recommended Practices for Safety and Health Programs”](#)** to reflect changes in workplaces and developing health and safety issues. The recommended practices present a step-by-step approach to implementing a health and safety program, built around seven core elements that make up a successful program:

1. Management leadership
2. Worker participation
3. Hazard identification & assessment
4. Hazard prevention & control
5. Education & training
6. Program evaluation & improvement
7. Communication and coordination for employers, contractors and staffing agencies

The concept is to start out with a basic program, achievable goals and continuously improve. By focusing on achieving goals, auditing performance, and assessing outcomes, the workplace can progress to higher levels of health and safety achievement.



## Implementing an Effective Safety Program

### OSHA's 10 Easy Steps to Getting Your Health and Safety Program Started Now

- 1 Set health and safety as a top priority by demonstrating your commitment to getting them home safely.
- 2 Lead by example by practicing safe behaviours.
- 3 Implement a reporting system that is simple and ensures no risk of retaliation.
- 4 Provide training to employees on how to identify, report and control safety risks.
- 5 Conduct inspections using checklists to help identify safety issues.
- 6 Collect hazard control ideas from workers who know the environment best.
- 7 Implement hazard controls in partnership with workers.
- 8 Address emergencies including instructions on what to do and post them in a visible location.
- 9 Seek input on workplace changes from workers before implementing.
- 10 Make improvements by dedicating time to discuss health and safety issues with solutions-based goals.

### Find Safety Experts to Help

As you are working to improve health and safety for your organization, it is important to reach out to experts who can help you make the best decisions for your employees.

There a variety of health and safety consultants who have deep knowledge in the industry and can help apply their expertise to your particular organization.

It's also important to have a relationship with industrial health and safety suppliers who are knowledgeable about the safety products you need. Tuff Grade offers an exclusive line of competitively priced industrial and safety products. Tuff Grade is backed by the most knowledgeable network of distributors in the Canadian market. With Tuff Grade, at least one part of your safety program just got easier.



**Find a Tuff Grade Distributor near you today!**

# Sources

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[WSIB](#)



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