Workplace Safety North

workplacesafetynorth.ca

Musculoskeletal Disorder Awareness Webinar

June 18, 2026

Welcome to the webinar

- Thank you for joining us! The webinar starts at **11:00 am ET**
- Please use the **Q&A** at the bottom of your screen for speaker questions and we will answer them at the end of the webinar.
- Please use the **Chat** for commentary or technical questions.
- A link to the webinar recording, a copy of the presentation slides, and reference materials will be emailed to you within a few days.

Speakers

Kim Meszaros
Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD)

Dana Greenly
Atlantic Packaging Products

Lisa Hooper
Ministry of Labour, Immigration, Training and Skills Development

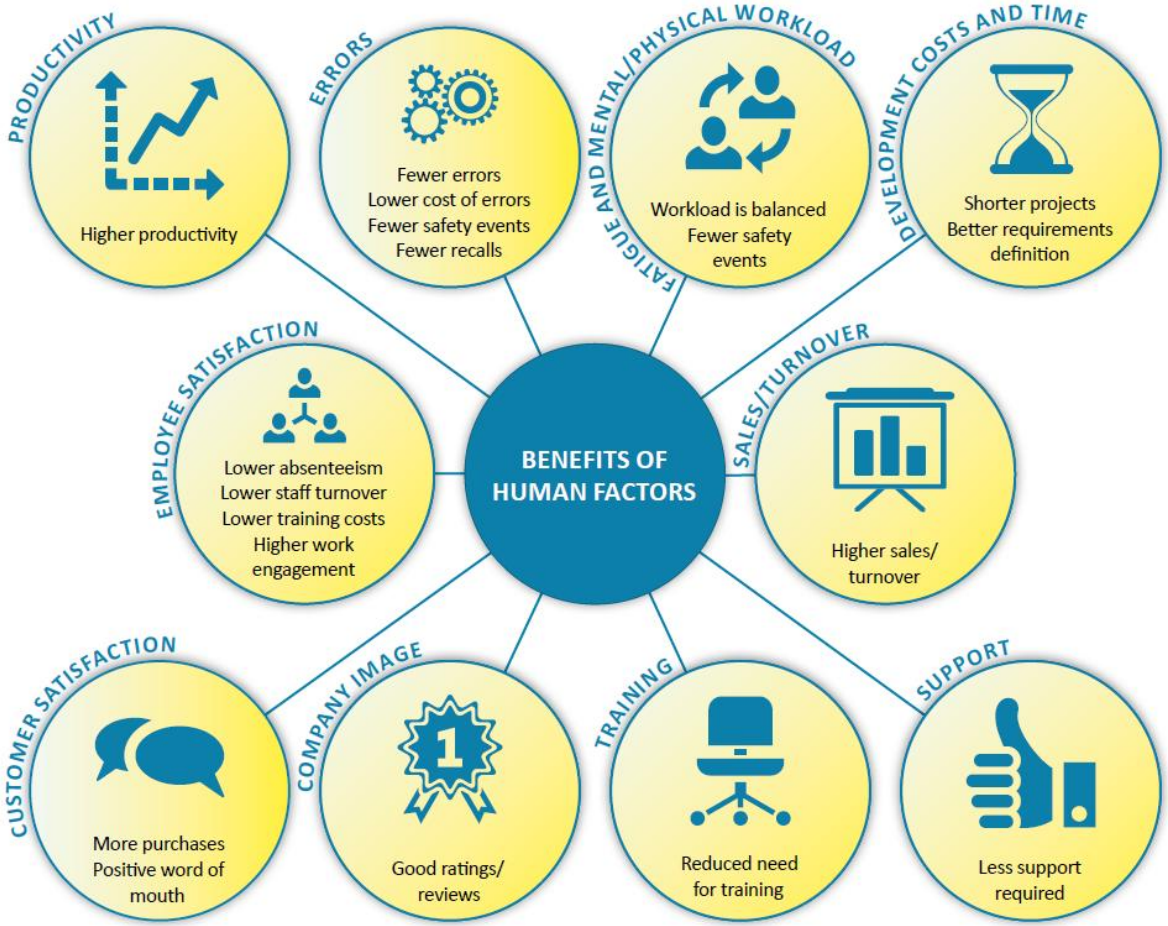
Tiana Larocque
Workplace Safety North

Injury characteristics: Year-by-year comparison

Nature of Injury	2023	2024	2025	2026
Sprains and strains	27,753	26,687	28,660	3,331
Bruises, contusions	7,198	6,890	7,118	623
Fractures	4,895	4,981	5,708	253
Concussion	4,687	4,762	7,978	343

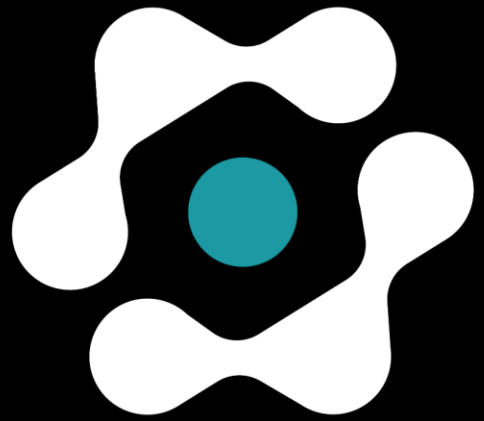
- Data current as of April 30, 2026. Full data for 2025 is not yet available.
- Selection taken from Provincial Statistics on WSIB Safety Check website

Human Factors & Ergonomics (HFE) is Good for Business



- **Improves Worker & System Performance**
- **Performance Consistency & Adaptability → Measurable Value**
  - Increased productivity
  - Reduced errors
  - Reduced injuries
  - Employee satisfaction

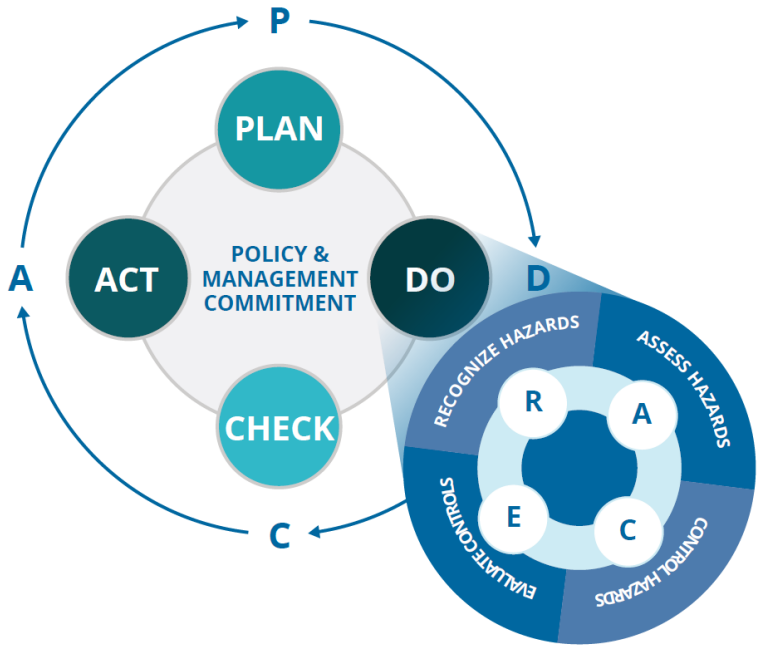
Sourced from: '*Ergonomics and human factors as a business resource*' published by the Chartered Institute of Ergonomics and Human Factors in collaboration with the International Ergonomics Association



MSD PREVENTION

GUIDELINE FOR ONTARIO

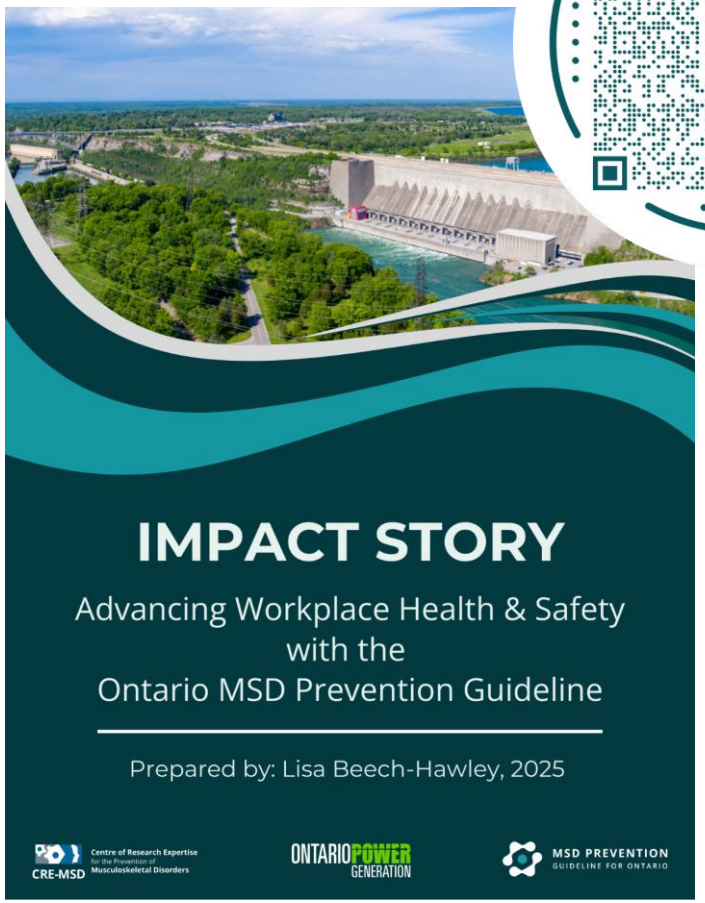
MSD Prevention Guideline for Ontario: 10 Step Roadmap

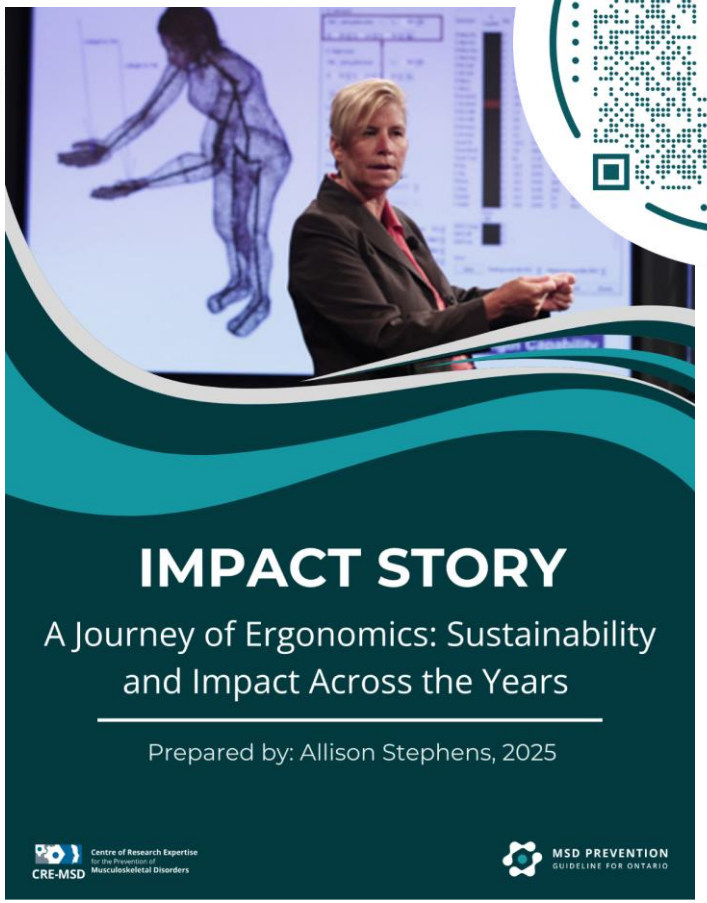


Resource: [Health & Safety Program Development – How to Include MSD Prevention]

MSD PREVENTION GUIDELINE FOR ONTARIO

Real-world MSD Prevention Impact Stories





CRE-MSD
Centre of Research Expertise for the Prevention of Musculoskeletal Disorders

MSD Prevention Guideline for Ontario: 3 Versions

Quick Start Guideline

- **Small or micro businesses**
- May have a Health and Safety Representative
- May not have much knowledge and few resources in Health and Safety and/or MSD
- General & Office

Basic Guideline

- **Medium to large companies**
- Have a Joint Health and Safety Committee (JHSC)
- Have a person or multiple people with knowledge, experience, and responsibility for Health and Safety
- Existing Health and Safety policy and program

Use the Guideline Selector

Comprehensive Guideline

- **Large companies**
- Have multiple people and/or a Department with knowledge, experience, and responsibility for Health and Safety
- Have a formal management framework that is used to oversee activities
- Have a Health and Safety management system
- Have comprehensive policies and procedures for health and safety

Quick Start Guidelines

General

Office

Basic & Comprehensive Guidelines

STEP 1

Demonstrate Management Commitment and Leadership

Management provides the leadership, vision, and resources needed to implement an effective MSD prevention program within the organization's overall occupational health and safety program.

Learn More

STEP 2

Facilitate and Encourage Workers' Participation

Workers should play an active role in MSD prevention by participating in training and awareness, recognizing hazards, planning, and using controls for hazards including those related to MSD.

Learn More

STEP 3

Plan Hazard Identification and Risk Assessment

The organization should set up a process for recognizing jobs with MSD hazards, even if there is no injury or discomfort reported by workers.

Learn More

STEP 4

Conduct Hazard Identification and Risk Assessments

Hazards, including hazards related to MSD, need to be proactively identified and assessed through a collaborative process.

Learn More

STEP 5

Develop a set of Targets and Goals to Eliminate Hazards & Control Risks

The next step in implementation of a successful OHS and MSD prevention program includes the development of a set of targets and goals to eliminate MSD hazards and control exposure to hazards.

Learn More

STEP 6

Control Hazards & Implement Changes to Achieve Targets & Goals

Regardless of the type of control action to be taken, the organization should implement necessary changes as outlined in Step 4.3.

Learn More

STEP 7

Provide Education and Training

MSD related education and training should be provided to all stakeholders to ensure they have knowledge and skills necessary to work safely, and be able to identify, report, and control MSD hazards.

Learn More

STEP 8

Evaluate Controls, the Program and the Organization's Performance

Similar to any other programs, it is important to evaluate the effectiveness of controls actions, the MSD prevention program, and organization's performance.

Learn More

STEP 9

Document Lessons Learned and Stakeholders' Feedback

The organization should review its MSD prevention program to identify gaps, barriers, and identify areas for improvement.

Learn More

STEP 10

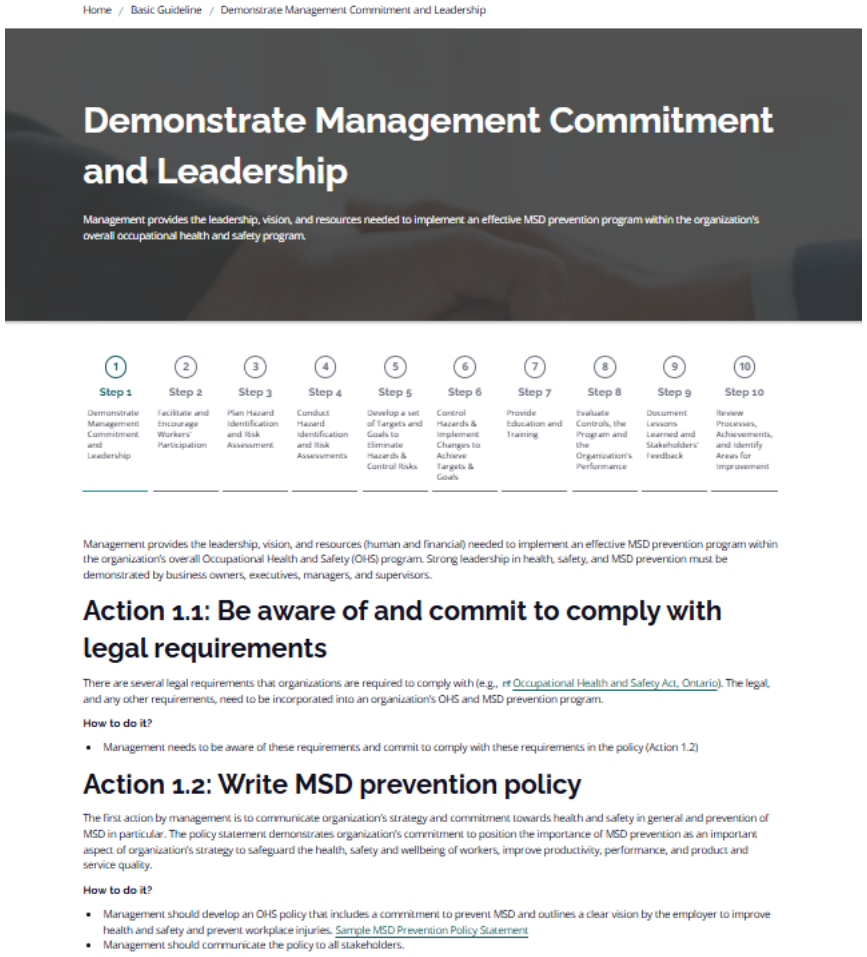
Review Processes, Achievements, and Identify Areas for Improvement

The organization should review its MSD prevention program in planned intervals to identify areas for improvement. This needs to be done by senior management.

Learn More

Basic Guideline

Comprehensive Guideline



Home / Basic Guideline / Demonstrate Management Commitment and Leadership

Demonstrate Management Commitment and Leadership

Management provides the leadership, vision, and resources needed to implement an effective MSD prevention program within the organization's overall occupational health and safety program.

1 Step 1 Demonstrate Management Commitment and Leadership
2 Step 2 Facilitate and Encourage Workers' Participation
3 Step 3 Plan Hazard Identification and Risk Assessment
4 Step 4 Conduct Hazard Identification and Risk Assessments
5 Step 5 Develop a set of Targets and Goals to Eliminate Hazards & Control Risks
6 Step 6 Control Hazards & Implement Changes to Achieve Targets & Goals
7 Step 7 Provide Education and Training
8 Step 8 Evaluate Controls, the Program and the Organization's Performance
9 Step 9 Document Lessons Learned and Stakeholders' Feedback
10 Step 10 Review Processes, Achievements, and Identify Areas for Improvement

Management provides the leadership, vision, and resources (human and financial) needed to implement an effective MSD prevention program within the organization's overall Occupational Health and Safety (OHS) program. Strong leadership in health, safety, and MSD prevention must be demonstrated by business owners, executives, managers, and supervisors.

Action 1.1: Be aware of and commit to comply with legal requirements

There are several legal requirements that organizations are required to comply with (e.g., the Occupational Health and Safety Act, Ontario). The legal, and any other requirements, need to be incorporated into an organization's OHS and MSD prevention program.

How to do it?

- Management needs to be aware of these requirements and commit to comply with these requirements in the policy (Action 1.2)

Action 1.2: Write MSD prevention policy

The first action by management is to communicate organization's strategy and commitment towards health and safety in general and prevention of MSD in particular. The policy statement demonstrates organization's commitment to position the importance of MSD prevention as an important aspect of organization's strategy to safeguard the health, safety and wellbeing of workers, improve productivity, performance, and product and service quality.

How to do it?

- Management should develop an OHS policy that includes a commitment to prevent MSD and outlines a clear vision by the employer to improve health and safety and prevent workplace injuries. Sample MSD Prevention Policy Statement
- Management should communicate the policy to all stakeholders.

MSD PREVENTION GUIDELINE FOR ONTARIO

MSD Prevention Guideline Website – Something for Everyone!

Introduction to the MSD Prevention Guideline for Ontario Website (video)

- Stakeholder pages on the top menu (e.g., I perform work, I supervise workers, I represent workers)
- Looking for more resources? Search the website for:
  - Posters, fact sheets, videos to increase awareness of MSD and approaches to prevention
  - Templates and checklists
  - Examples of solutions, case studies and impact stories

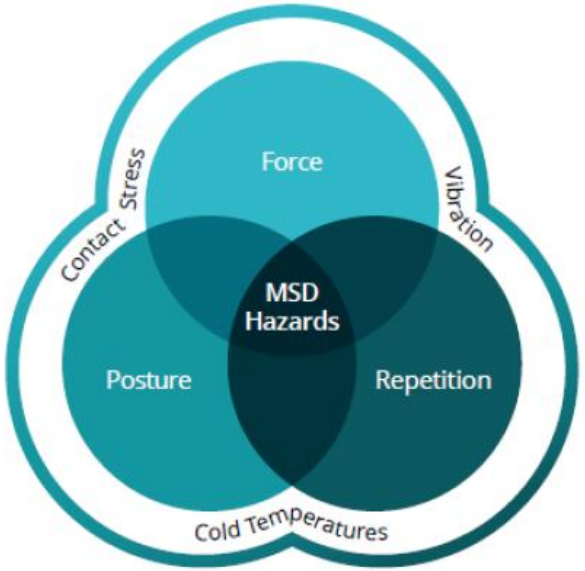
For more info visit:
msdprevention.com

MSD Awareness Resources (Understanding MSD)

What is an MSD? (video)

Types of MSD (interactive diagram)

MSD Hazards (webpage)

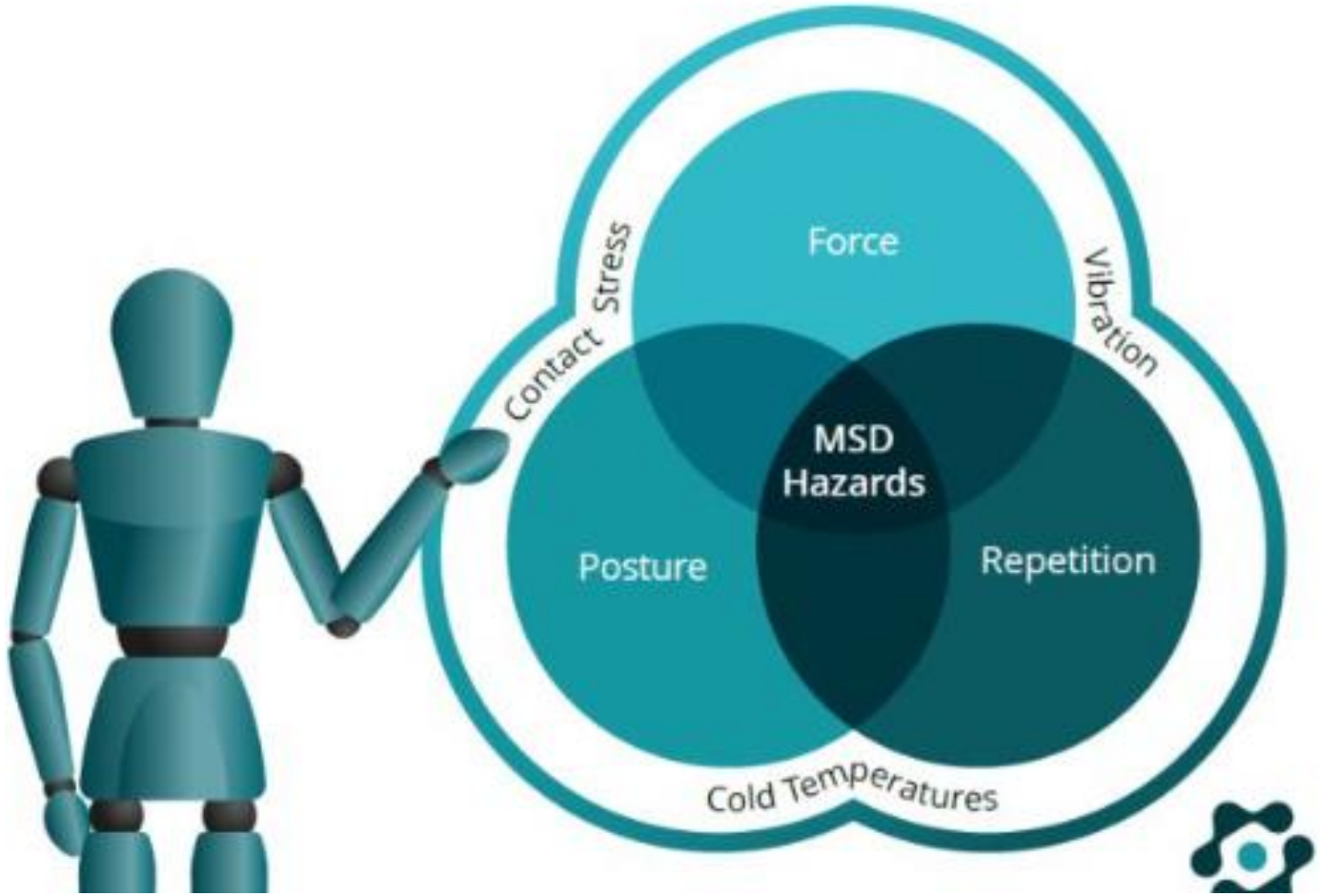


For more info visit:
msdprevention.com

Popular Resources

- **Most downloaded resources:**
  - MSD Hazard Summary Sheet
  - General MSD Hazard Identification Tool
  - MSD Hazard Identification Tool – Computer Workstation
  - Worker Discomfort Survey
  - Positioning the Body to Reduce MSD Injury Risk:
    - Focus on the Back
    - Focus on the Shoulder
    - Focus on the Knee
- **Top viewed videos:**
  - Manual Materials Handling (MMH) Solutions to Control MSD Hazards in Manufacturing & Warehousing
  - What is an MSD?
  - NIOSH: 6 Factors that Affect Lifting
  - Overhead Work

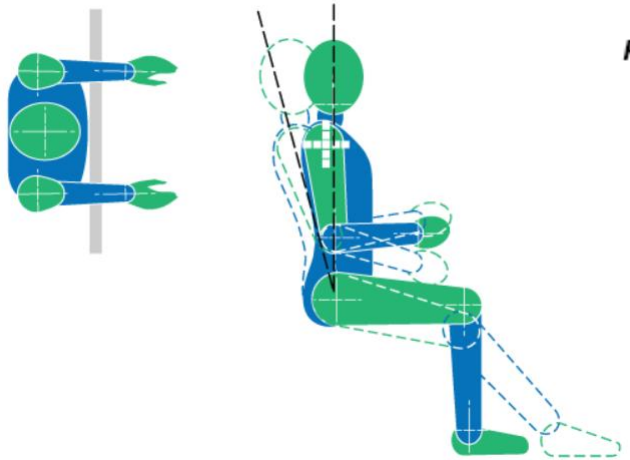
MSD Hazards

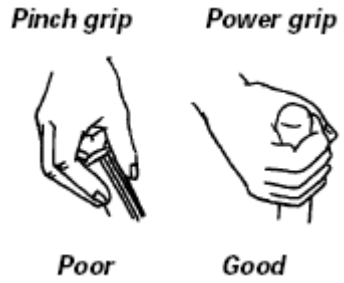


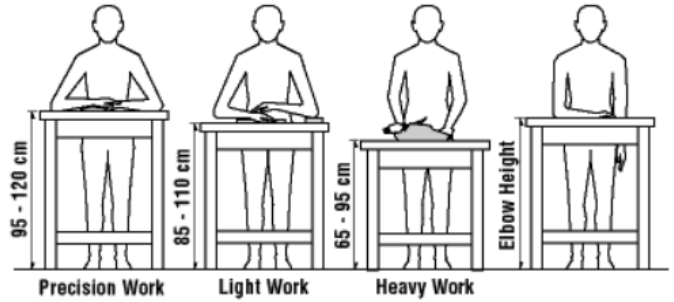
MSD PREVENTION GUIDELINE FOR ONTARIO

Atlantic Beyond the box™

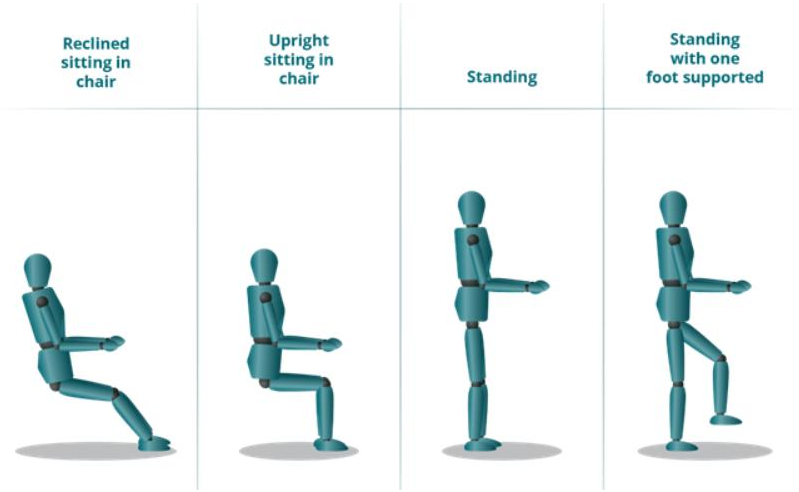
Neutral/Optimal Postures







Keep it close



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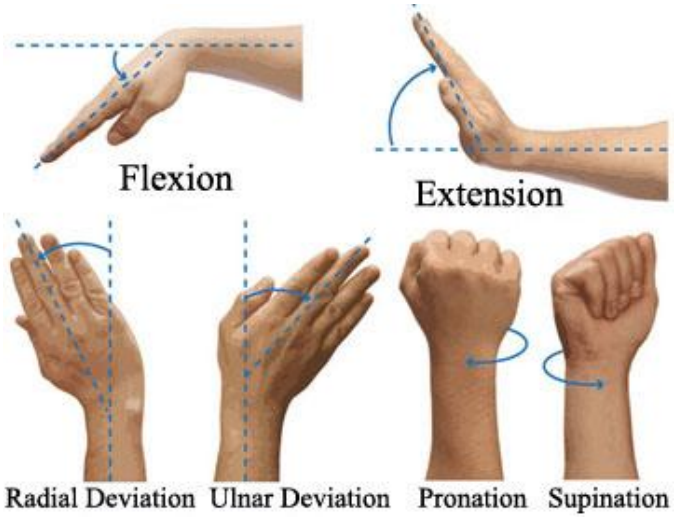
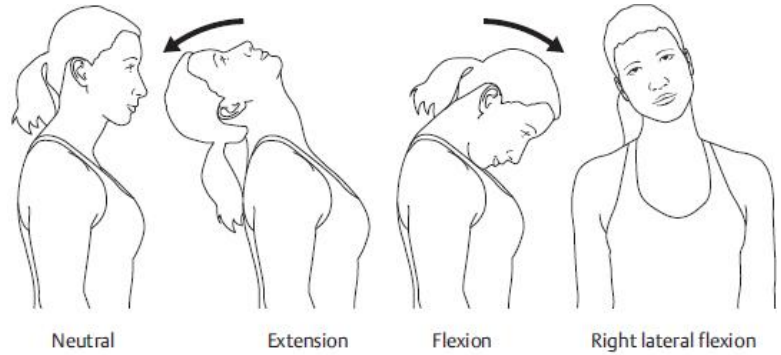
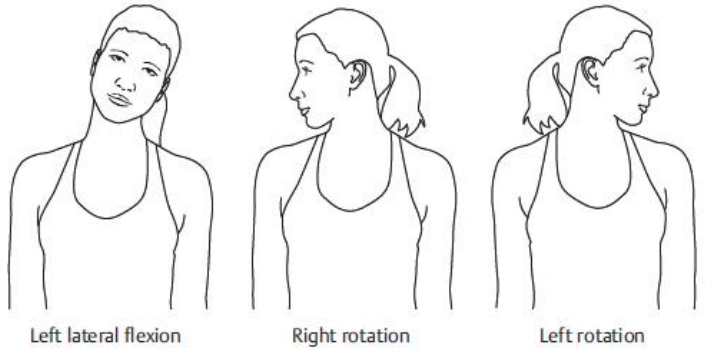
Grab a pen or pencil

Postures

For most joints, an optimal (neutral) posture means that joints are being used in the middle of the full range of motion where muscles are strongest. Risk increases as the joint moves farther away from neutral.







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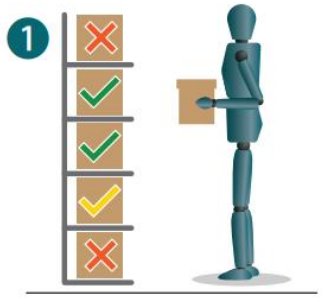
Postures

GREEN – No action required if tasks are not held or repeated for long periods and no MSD symptoms are reported. Continue to monitor for MSD symptoms and check after workplace or process changes.

YELLOW – Investigations and improvement needed in the longer term. Investigation and improvement needed immediately if MSD symptoms are present.

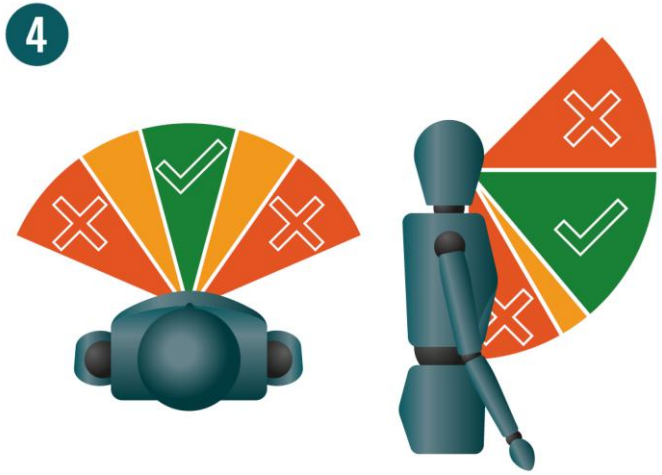
ORANGE – Further assessment or improvement needed immediately.



Store it off the floor

Keep it close

Hands below head



Repetition

Repetition is a concern when rest periods are insufficient to allow tissue recovery

- **Cycle time is < 30 seconds**
- **A fundamental task is more than 50% of the total cycle time.**

- **MSD Repetitive risk increases**
  - As number and speed of action increases
  - As force increases
  - When postures are awkward
  - Time between breaks increases.

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Can you lift 20 lbs?

Can you lift 20 lbs?

- Once, twice, or every minute?
- Total time on task - For 10 minutes, for an hour or 8 hours?
- At waist level? From the floor? Overhead?
- Small box? Big box?
- One-handed or two-handed lift?
- One or two handles? No handles?
- Wet? Slippery surface?
- Shape - Box? Round? Long? Small? Big?

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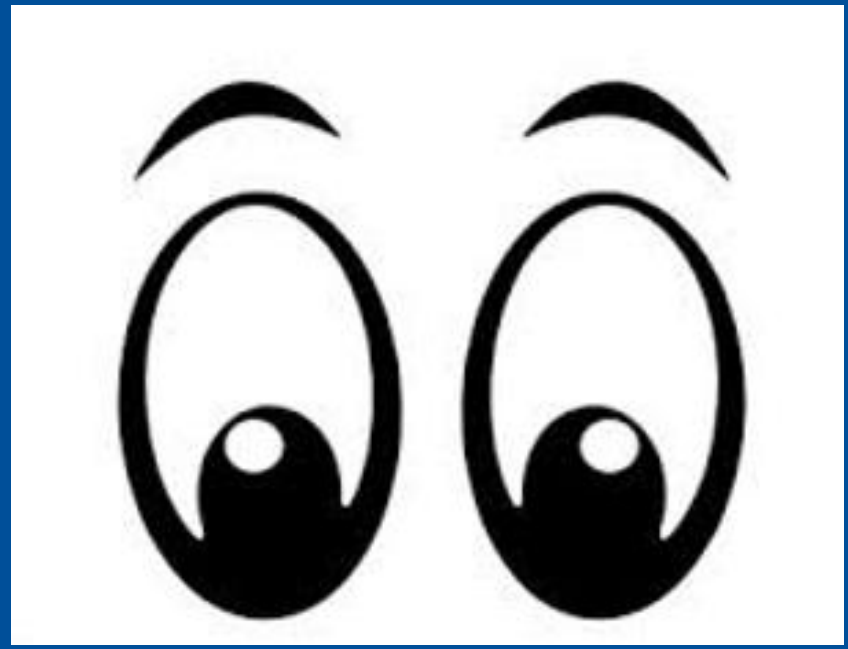
Beyond the box

Use Your Ergo Eyes and Spot the Risk Factors



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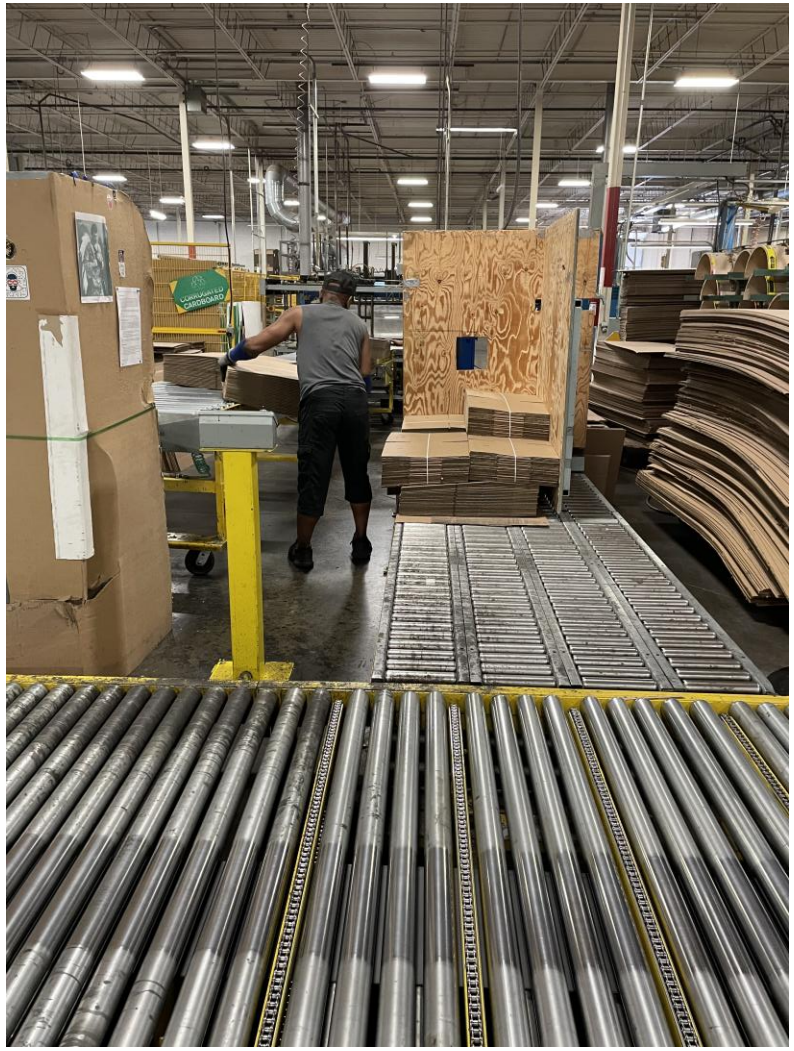


Case Study

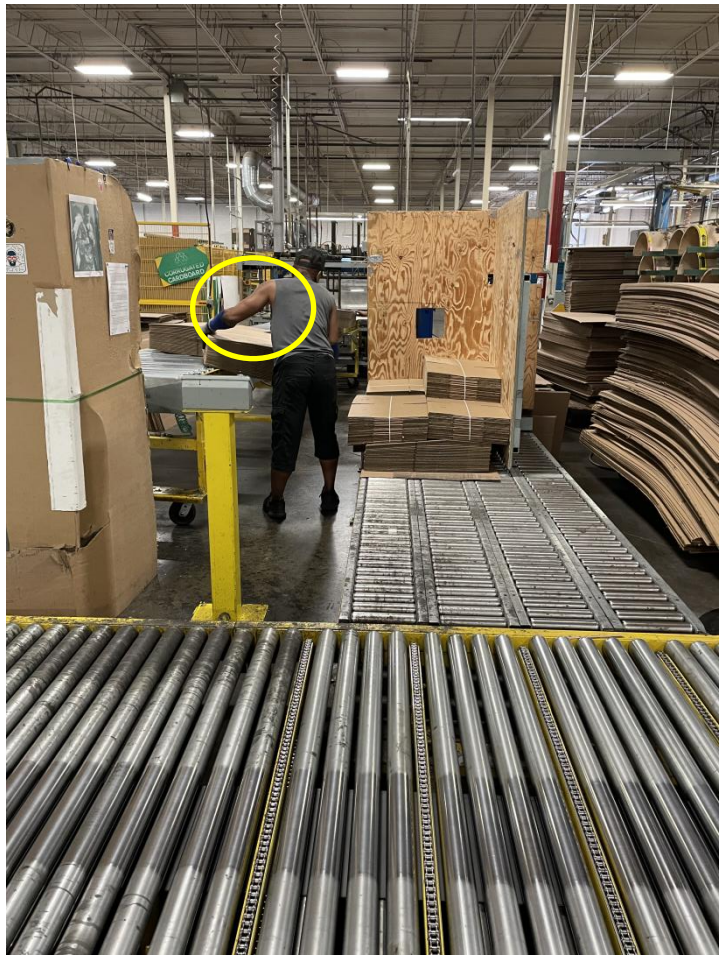
Details:

Weight = 8 lbs/3.6 kg

Twisting = Yes, up to 45 degrees

1 lift every 30 seconds

8-hour shift



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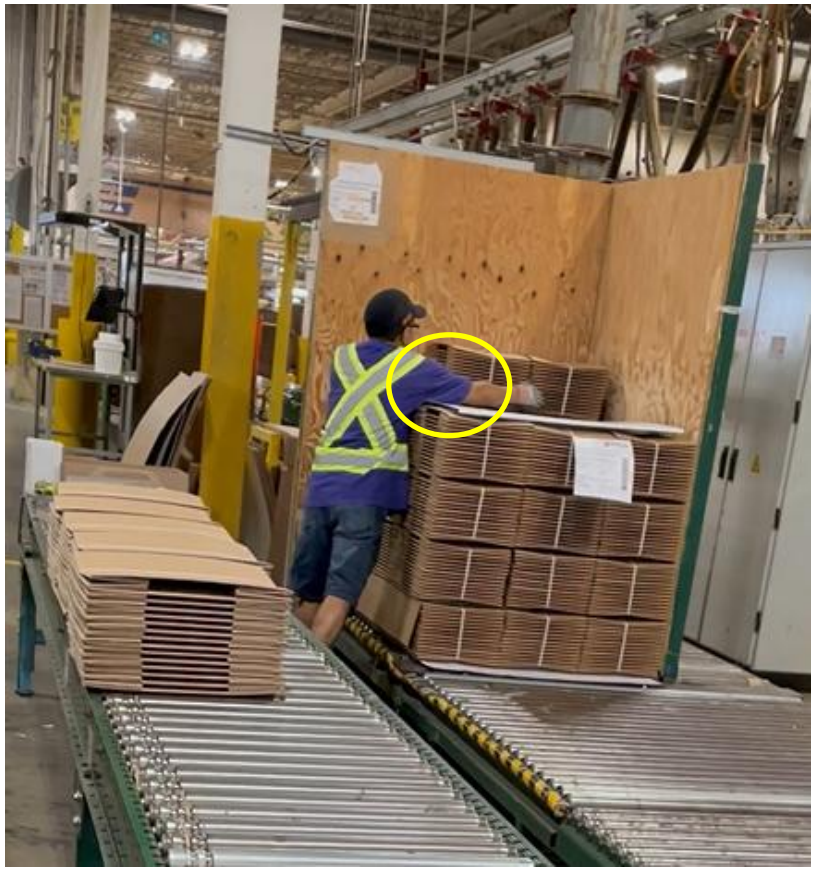

Is this a Safe Lift?

Table 2. Lift/lower weights (kg) – use when task performed by females only OR both males and females

Type of lift/lower	Hands and below knuckle height once every…						Hands end between knuckle and shoulder height once every…						Hands end above shoulder height once every…					
	15 sec	1 min	2 min	5 min	30 min	8 hr	15 sec	1 min	2 min	5 min	30 min	8 hr	15 sec	1 min	2 min	5 min	30 min	8 hr
Far – long	9	9	10	10	11	14	8	10	11	11	12	14	6	7	8	8	8	10
Far – short	11	11	12	12	13	18	9	12	13	13	14	17	8	9	9	9	10	12
Close – long	11	12	13	13	14	19	9	11	12	12	13	15	8	9	10	10	11	13
Close – short	13	14	15	15	17	23	11	13	14	14	16	18	9	12	12	12	14	16

Modified from Part 3B: MSD Prevention Toolbox – Beyond the Basics
Developed by Occupational Health and Safety Council of Ontario (OHSCO)

Step 2: Determine whether the lift/lower is close or far
Close – hands are 17 cm or less from body at all times during the lift/lower
Far – hands are more than 17 cm from the body at any time during the lift/lower
Step 3: Determine if the lift/lower is short or long
Short – the object moves up/down no more than 25 cm Long – the object moves up/down more than 25 cm
Step 4: Determine where the worker's hands end up at the end of the lift/lower. Below knuckle height, between knuckle and shoulder height, or above shoulder height

Actual Weight = 8 lbs/3.6 kg does not exceed the weights in this table.

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Driving a Lift Truck

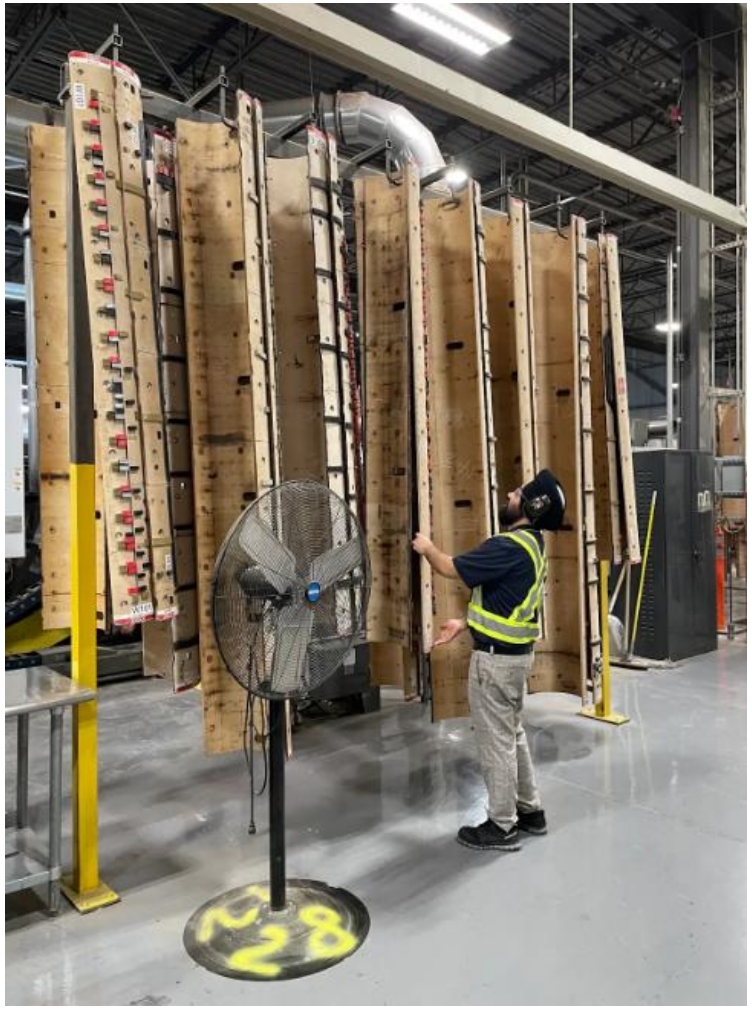
Beyond the box

Driving a Lift Truck

Did you remember vibration was a risk factor?

Beyond the box

Lifting and Installing Steel Dies



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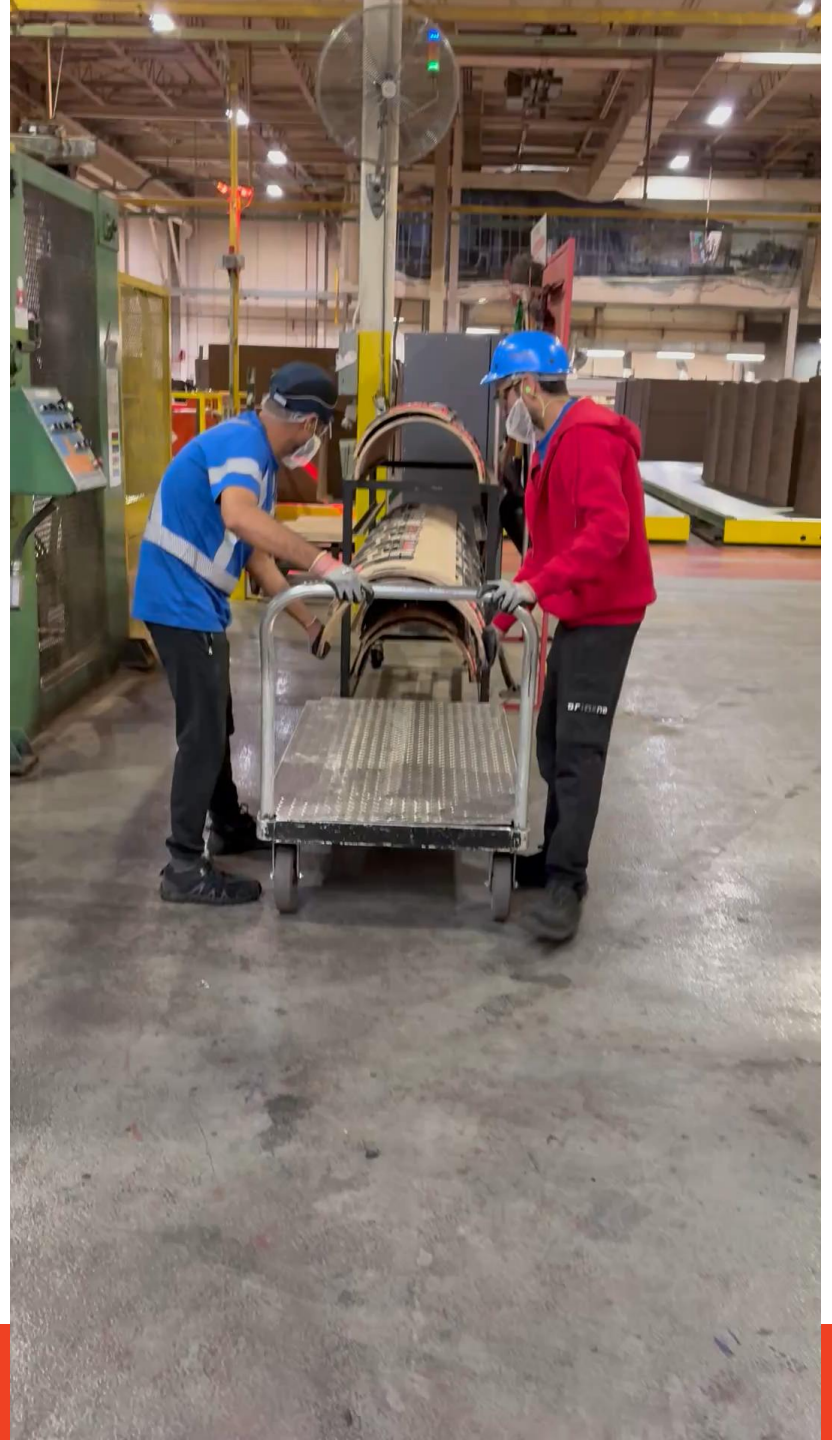
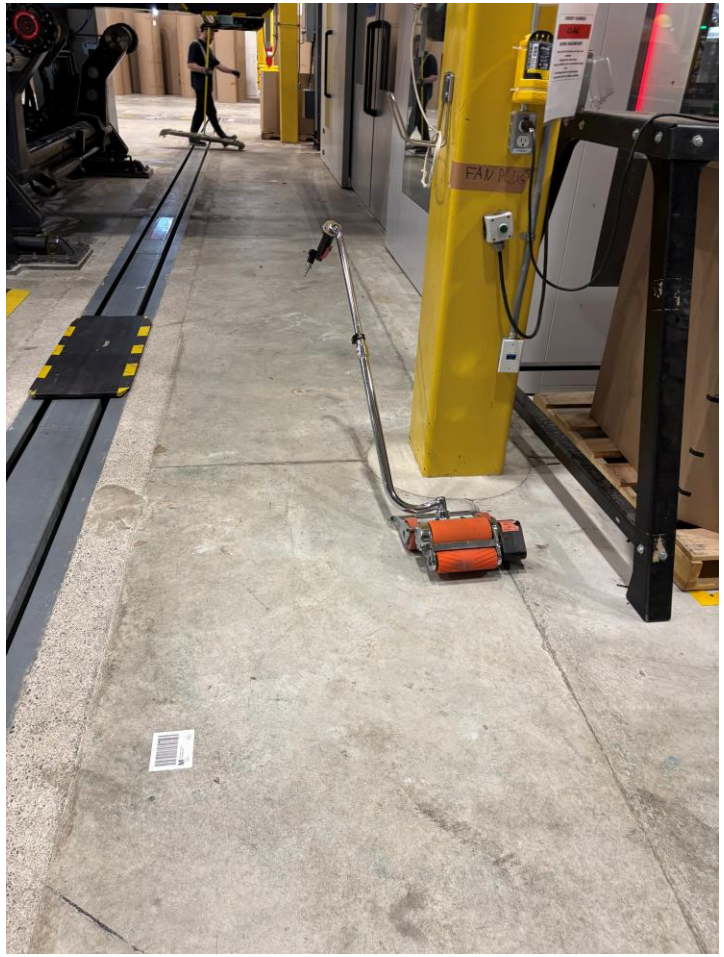
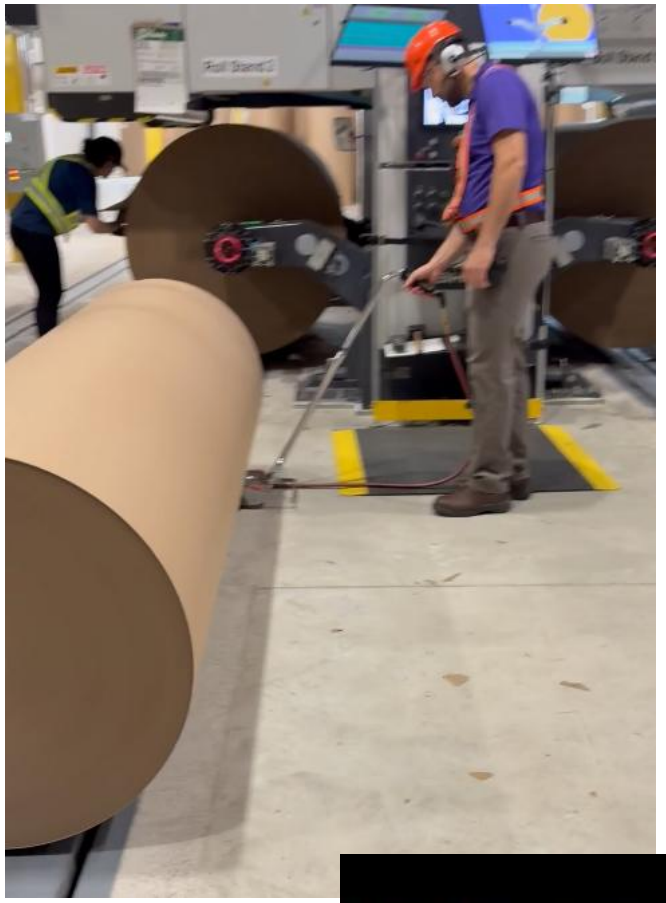


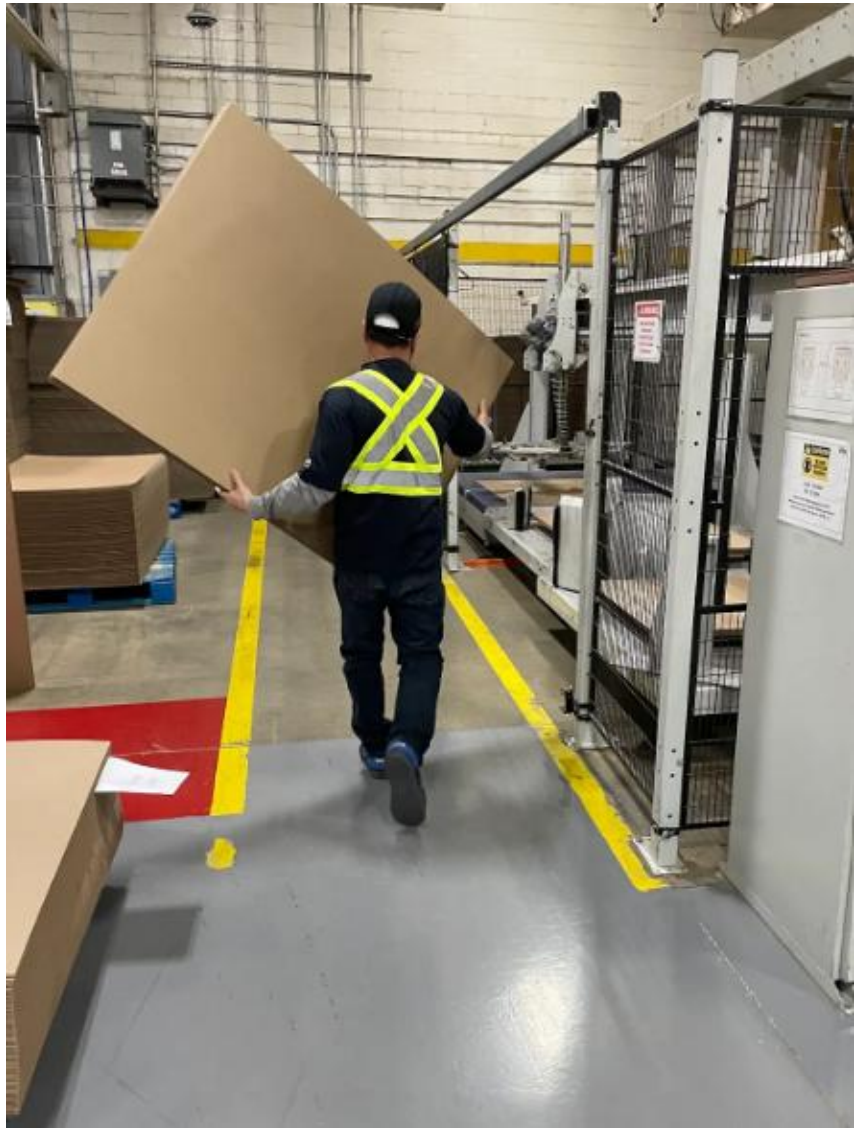

260
TWO
PERSON
LIFT
FEED
DIRECTION

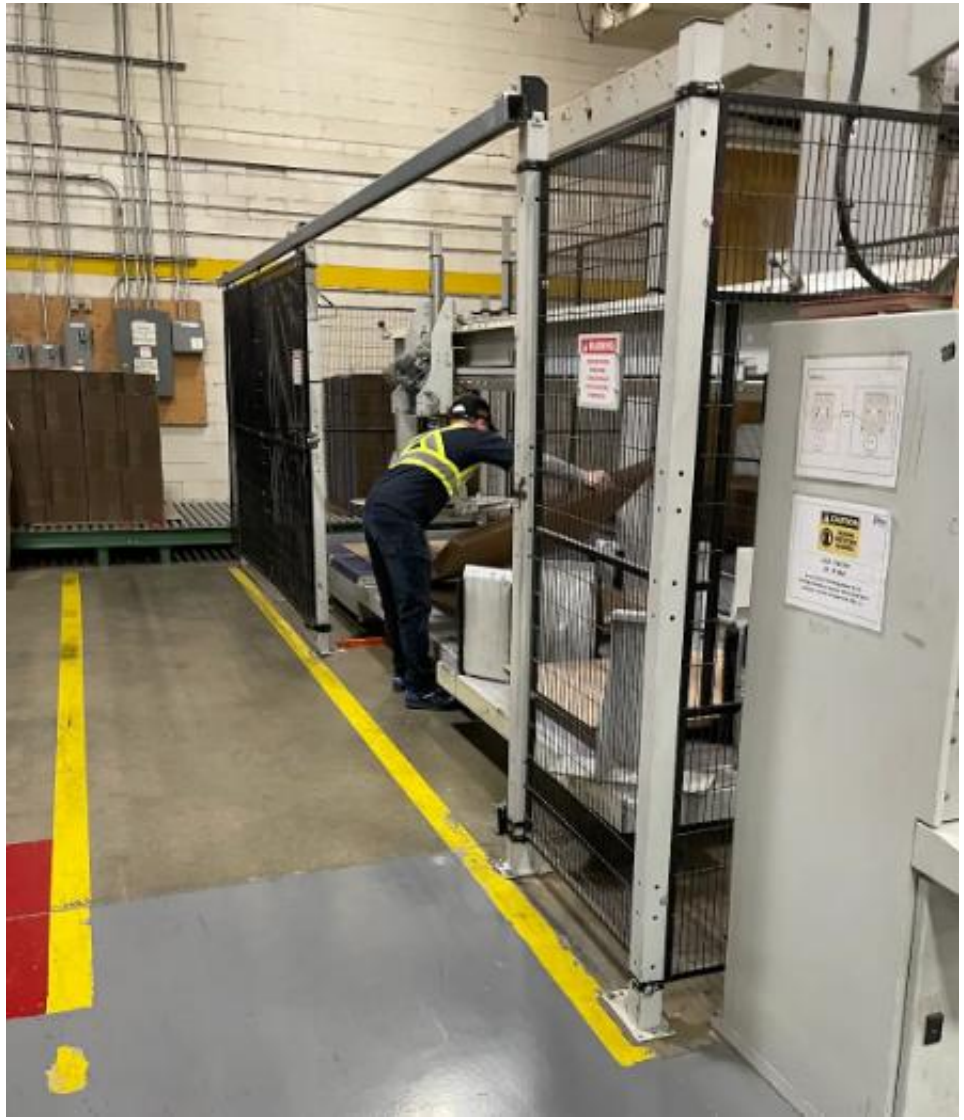

Roll Stand 3
Roll Stand 2
BHS

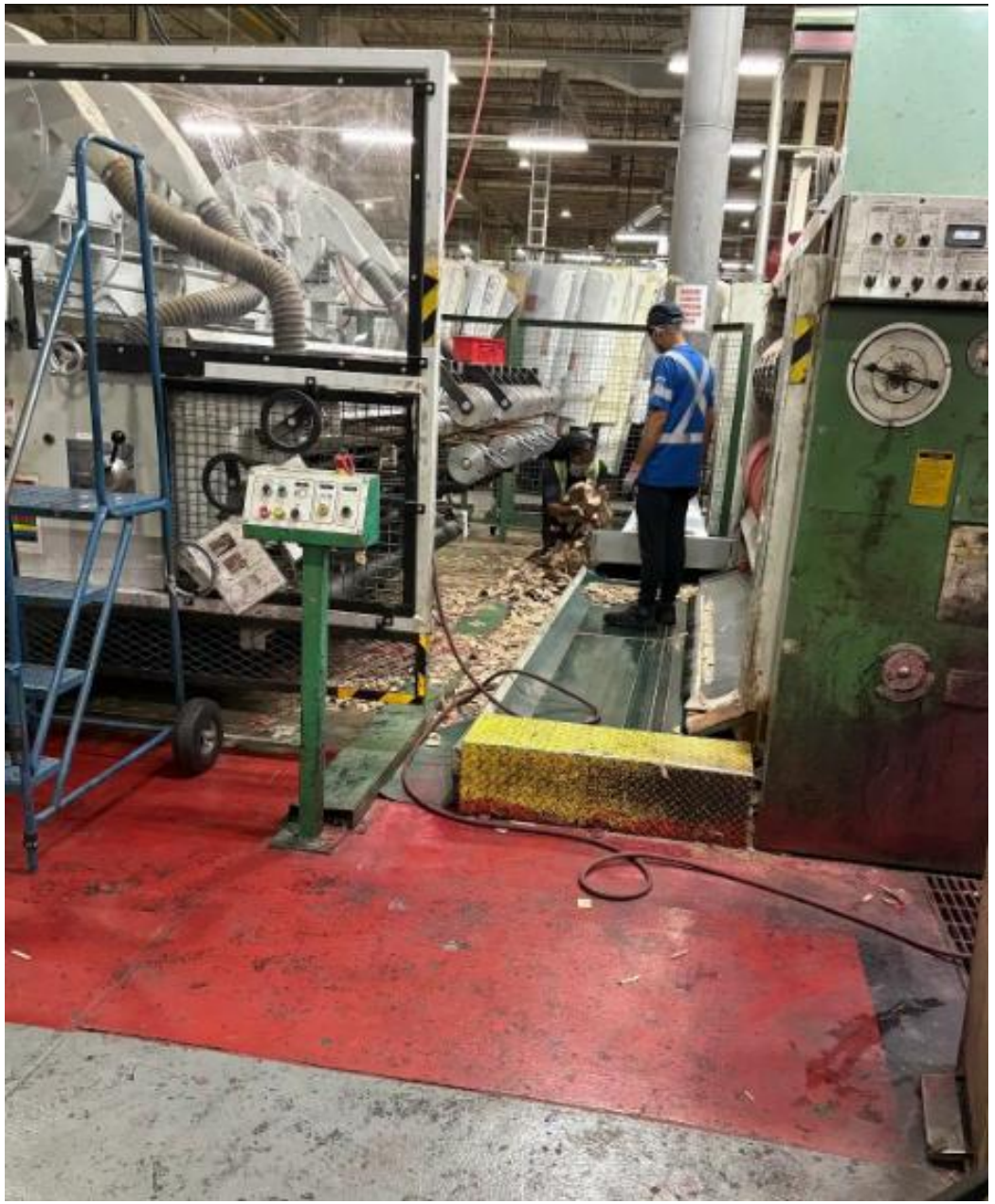
Solution

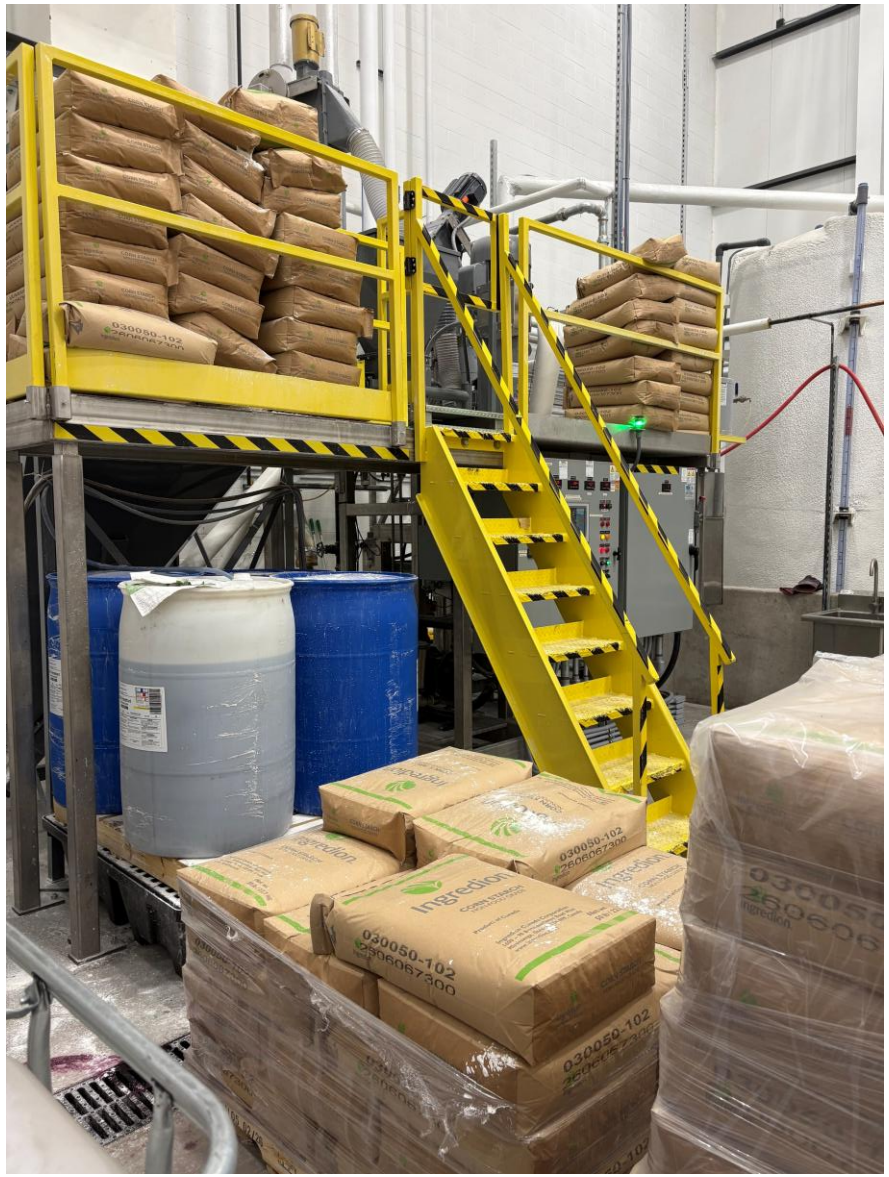








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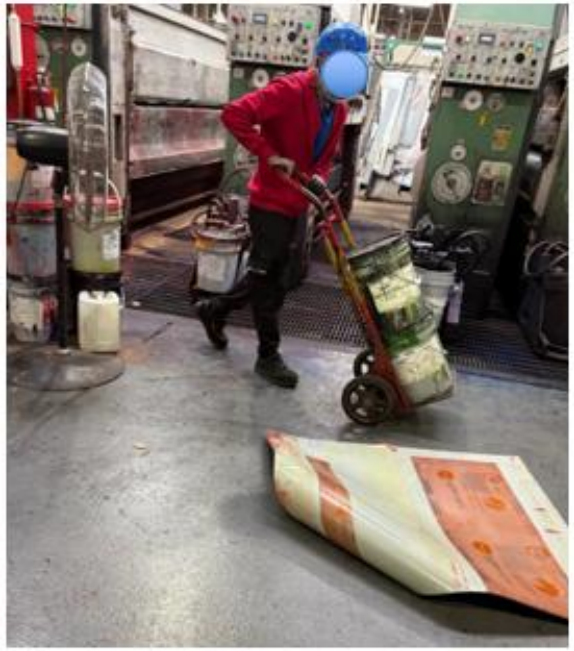
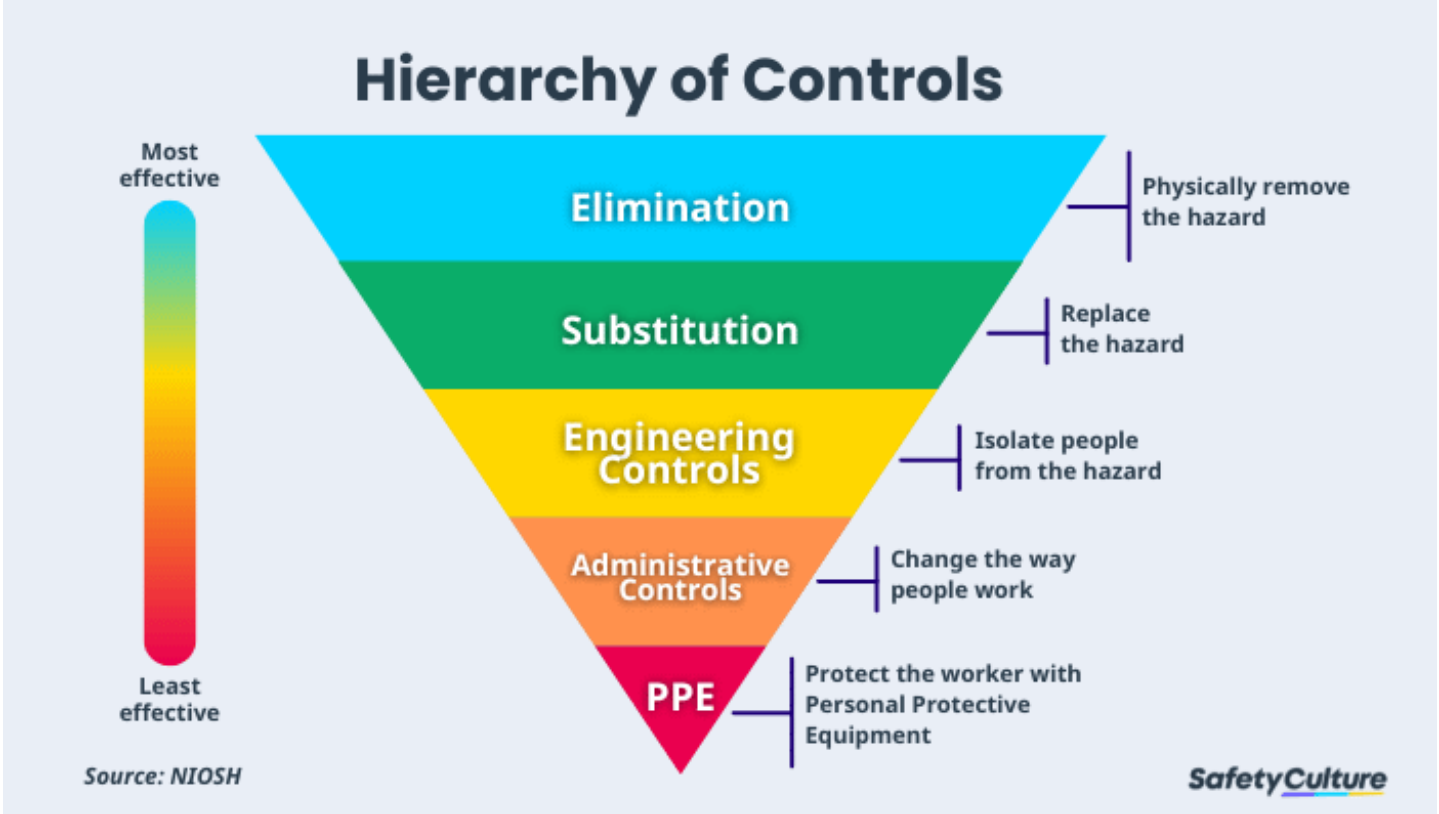




Eliminate – Eliminate the hazard – if possible, Design it out.
Substitution – Use something else or decrease the weight by splitting it into smaller loads. Or use a much bigger load with a hoist or lift truck.
Engineering – Modify worksite or equipment. Height adjustability. New/better designed tools. Mechanical assist.
Administrative – Job rotation, procedures, job enlargement, work techniques, and training.
PPE – Gloves (better grip),anti-vibration gloves, kneepads, stretching programs, anti-fatigue mats or insoles.

Applying the OHSA & Regulations for Industrial Establishment (O.Reg. 851) to MSD Hazards and Ergonomics

Ministry of Labour,
Immigration, Training and
Skills Development

Ontario

Ergonomics / Human Factors

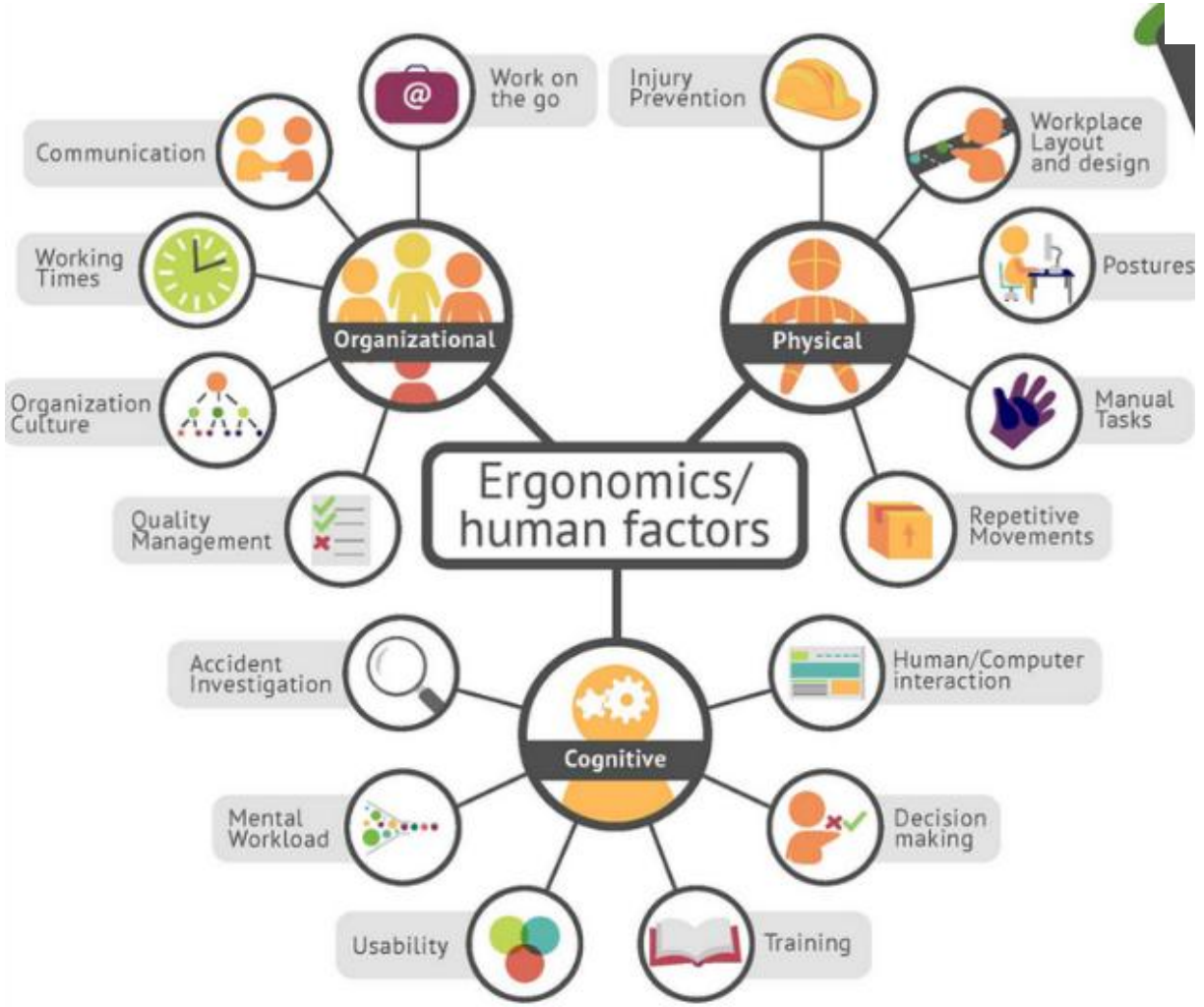
Ergonomics / Human Factors examines the interactions among humans and other elements of a system in order to optimize

- human well-being, and
- overall system performance

Ergonomics is the <u>solution</u> – the goal is to optimize the interactions the worker has in the system.

3 main domains in the field of ergonomics:

- Physical ergonomics
- Cognitive ergonomics
- Organizational ergonomics



Source: IEA

Ergonomics / Human Factors

- Is there an imbalance between the work demands and the worker capability / capacity / tolerances?
- What factors are impacting the worker or the demands?
- How can the worker interaction be optimized?

Note: AI Generated

Occupational Health and Safety Act (OSHA) and Ergonomics

Hazards related to poor ergonomics must be treated the same as any other workplace hazard

- Recognize and identify the hazard
- Assess the risk to workers
- Eliminate or control the risk from the hazard
- Evaluate to ensure risk has been controlled and there are no new hazards introduced

Ontario.ca
Ergonomics in the workplace: understanding the law

OHSA 25(2)(a) and 25(2)(d) Worker Training and Hazard Awareness

25(2)(a) Provide information, instruction and supervision to a worker to protect the health and safety of the worker

25(2)(d) Acquaint a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent

These sections apply where MSD hazards exist, and workers are not familiar with the hazards or the measures that can be taken to protect the worker.

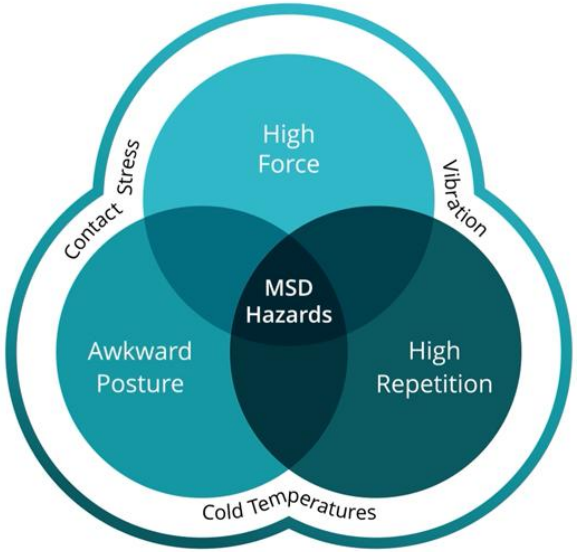
Examples:

- Manual material handling
- Safe ladder use practices
- Work methods for MSD prevention
- Pedestrian routes & safe practices
- MSD hazard awareness
- Whole body vibration
- Hand-arm vibration
- Equipment visibility hazards

OHSA – 25(1)(b) and 25(2)(h)

25(1)(b) An employer shall ensure that equipment, materials and protective devices provided by the employer are maintained in good condition.

25(2)(h) An employer shall take every precaution reasonable in the circumstances for the protection of a worker.



Source: MSD Prevention Guideline for Ontario

OHSA 52 (2) Notice of Occupational Illness

52(2) If an employer is advised by or on behalf of a worker that the worker has an occupational illness, or that a claim in respect to an occupational illness has been filed with WSIB by or on behalf of the worker, the employer shall give notice in writing within four days of being so advised.

- Reporting workplace incidents and illnesses | ontario.ca
- Hand-Arm Vibration Syndrome is an ergonomic related occupational illness when related to occupational exposure to vibrating hand and power equipment.
- Hand-Arm Vibration: Awareness | MSD Prevention Guideline for Ontario

O.Reg. 851 Regulation for Industrial Establishments

Section	Wording	Link to Ergonomic Issues
11(a)(i)(ii)	A floor or other surface used by any worker shall be kept free of obstructions, hazards	Obstructions during material handling create reaches and awkward postures that increase the demands on the worker
45(a)	Materials, articles or things required to be lifting, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards as will ensure that the lifting, carrying or moving of the material , articles or things does not endanger the safety of any worker.	Manual material handling tasks must be within the capabilities of the worker population to protect them from MSDs including overexertion. Lifting, lowering, carrying, pushing, pulling, grasping.
45(b)	Materials, article or things shall be transported, placed or stored so that the material, articles or things, will not tip collapse or fall, and can be removed or withdrawn without endangering the safety of any worker.	Manual transporting of loads – carts not overloaded. Storage practices – safe removal loads from storage – ladders use, reach requirements, material weights.

Workplace visits from MLITSD Ergonomists

Raise awareness of ergonomic related hazards in the workplace

- MSD hazards
- Visibility hazards
- Fall hazards (i.e. worker interaction with ladders, step stools, walking spaces)

Inform workplaces of their duties to protect worker health and safety

- Health and safety policy and program
- Address the ergonomic related hazards that are present in the workplace

Enforce the Occupational Health and Safety Act and related Regulations.

How WSN can support

Resources:

- MSD webpage: Links to info sheets, safety talks, videos, other resources
- Ergonomic assessments: Needs analyses, prevention audits
- Training: Sector-specific, JHSC, and supervisory due diligence focused courses with MSD content embedded throughout

Q&A session

Use the Q&A at the bottom of your screen for speaker questions.

Thank you for helping make workplaces safer

For additional information, please contact:

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