

Preventing Musculoskeletal Injury & Introduction to Ergonomics

Musculoskeletal Injury:

Injuries that affect our muscles and skeleton are referred to as musculoskeletal injuries or 'MSI'. For all ages of workers, across all industries, the most prevalent type of workplace injury in Nova Scotia is MSI. It is sometimes referred to as: sprains and strains, overexertion injury, soft tissue injury, or repetitive strain injury. Musculoskeletal injury affects young workers (14-25 yrs.) as often as older workers, and can damage:

- muscles
- tendons
- joints
- ligaments
- bones
- nerves
- blood vessels, and
- surrounding tissue

Musculoskeletal injury typically occurs over long periods of time. Its effect on the body is caused by the hazards of how work is designed and carried out. These include:

- awkward body posture - or working in the same body posture for long periods,
- high body force - such as lifting or carrying heavy loads, and
- high task repetition - for long periods of time.

By spotting and responding to these hazards, workers and employers can work together to prevent musculoskeletal injury. Fitting work to the workers is the most important way to fix these hazards and prevent this form of injury. Fitting work to workers, defines ergonomics.

Ergonomics:

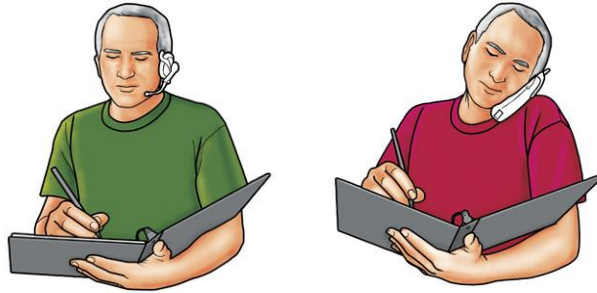
Ergonomics in the workplace is about understanding and designing things (tools, equipment, building design, environmental and work space, etc.) and understanding and designing process (how we do something, the thought and decision-making built around it, etc.) for the safest and most efficient 'fit' for workers. Thinking ergonomically requires us to ask *and act* on five questions:

1. What are the requirements of the work? - How is it performed step by step?
2. Who is doing the work? (Consider how people with different physical aspects, strengths and levels of experience can safely do the work.)
3. Where is the work being done? (What is the physical environment and is personal protective equipment required?)
4. What are the hazards and risks of the work? (Identify all potential hazards, including how excessive workload may result in unsafe short-cuts.)
5. What are the consequences of human error? (What needs to be done to avoid mistakes, to decrease consequences or error?)

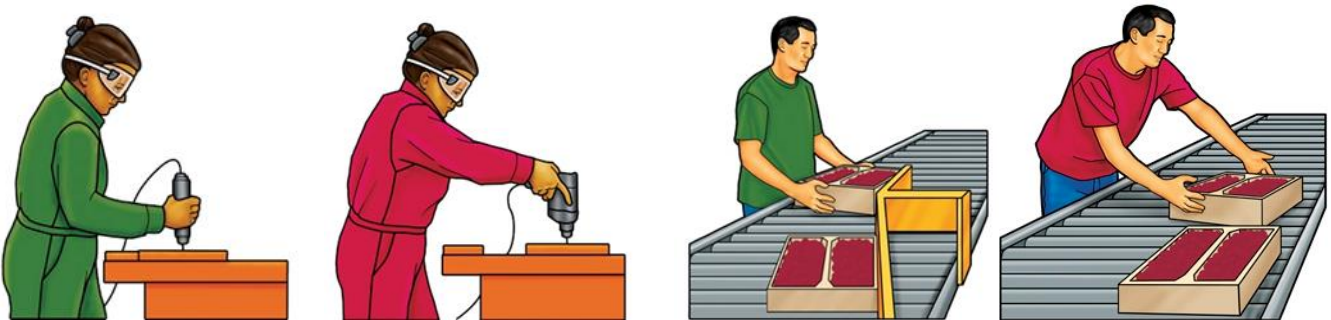
"Sprains and Strains: Preventing musculoskeletal injury through workplace design" p11-12

Suggested Resources:

- Play *Spot It. Fix It.* at <http://worksafeforlife.ca>



- See the WCBNS diagram-packed booklet “*Sprains and Strains: Preventing musculoskeletal injury through workplace design*” for real life ways to recognize and prevent MSI at http://www.wcb.ns.ca/wcbns/index_e.aspx?DetailID=1952



- Explore the Association of Canadian Ergonomists, <http://www.ace-ergocanada.ca>