

Using Ergonomics to Prevent Injuries

What is Ergonomics?

Ergonomics is the study of how to improve the fit between people and their tasks in the workplace. It involves applying knowledge about human characteristics (for example, strength, size, abilities, vision, etc.) to design better jobs. Ergonomics can improve both the health and well being of workers. Good ergonomics has been shown to reduce back pain, sprain and strain injuries, discomfort, fatigue, and accidents.

Ergonomics looks at all work characteristics such as

- Tools, equipment, machinery, tables, chairs, noise, and lighting;
- Pace of the work, how the work is organized and production requirements.
- Workstation layout and work procedures

"Ergonomics" comes from the Greek words "ergon" meaning "work" and "nomos" meaning "law"

Ergonomic Hazards

Ergonomic hazards increase your risk of injury at work. These hazards include

Using force (e.g., lifting, pushing, pulling)

Repetition - doing the same type of work or using the same limbs or muscles over and over

Awkward postures (e.g., bending, twisting, over reaching)

Static work - staying in one position for a long period of time

Vibration - from machinery

Contact stress - when a sharp edge of a tool or work station presses against a part of the body

What should your employer do?

Your employer is responsible to provide a safe and healthy work environment. Your employer

can prevent sprain and strain injuries by developing an ergonomics program with your workplace health and safety committee. Health and safety laws in Manitoba (Part 8 of the Manitoba Workplace Safety and Health Regulations 217/2006) require employers to:

- conduct a risk assessment when they have been made aware of a work activity that creates a risk of sprain and strain injury.
- if the risk assessment identifies a problem, the employer must implement measures to eliminate or reduce the risk of injury.
- monitor the effectiveness of the measure taken and inform exposed workers of the risk of injury, common signs and symptoms of injuries and provide instruction and training on the how to work to avoid injuries.

What is an Ergonomics Program?

A good ergonomics program is an organized approach to protecting workers while actively involving workers and management. It requires:

Management Commitment: to ensure that resources are available to improve the workplace

Worker Involvement: to ensure that workers participate in all parts of the program

Ergonomics Education: to explain injuries, hazard and how to work to avoid injuries.

Identifying problem Jobs: Looking at injuries/illnesses and identifying problem jobs and risk factors.

Solution Development: changing jobs to reduce or eliminate the hazards.

Medical Management: making sure that sick or injured workers get early, effective treatment, and making sure that workers report their injuries.

What can you do?

- ✓ Ask you health and safety committee or worker representative to review this fact sheet and identify ergonomic hazards at your workplace
- ✓ Report any pain or injury to your supervisor or employer immediately. This helps to identify hazards and correct working conditions before an injury occurs.

Some common job hazards and ways ergonomics can help you

Hazards and Body Part Affected	Examples on the Job	Possible Solution
Back		
Lifting	Moving heavy or awkward objects	Reduce the weight of objects, use lifting devices or re-position the object
Neck		
Working with head tilted down, up or twisted	Inspecting parts; looking at controls or a computer monitor	Tilt inspection table towards worker, place computer monitor at eye level
Shoulders		
Working with raised elbows	Sewing, inspection	Lower work table
Hands		
Rapid turning or bending of wrists	Sewing, poultry cutting, sorting, inspecting, assembly	Use tools that fit the hand and reduce wrist bending.
Hips/Legs		
Standing in the same position for long periods	Assembly, finishing, machine operation	Provide a chair, anti-fatigue matting.

The Occupational Health Centre's library and website has many resources about Ergonomics.

1. Small Business Ergonomic Case Studies
2. Small Workplace Ergonomics Resource Guide
3. Workplace Job Accommodations: Solutions for Effective Return to Work
4. Fact Sheets: Repetitive Strain Injuries, Lifting, Carpal Tunnel Syndrome, Lighting

If you need more information contact the

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