



# Ergonomics

## Information for SIAST Students

### 1. What is ergonomics?

Ergonomics is the science of fitting people and their work. It puts workers first, taking account of their capabilities and limitations. Ergonomics aims to ensure that the design and arrangement of tasks, equipment, machinery, information, and the work environment suit each worker. Paying attention to ergonomic issues can make the workplace safer and more productive.

### 2. What are musculoskeletal injuries (MSIs)?

Workers can get musculoskeletal injuries if ergonomic issues are ignored. A musculoskeletal injury (MSI) is an injury or disorder of the muscles, tendons, ligaments, nerves, blood vessels, joints, or other soft tissues. Injuries may be caused or aggravated by any of the following:

- repetitive motions;
- forceful exertions;
- vibration;
- sustained pressure on hands, wrists, arms, legs, etc.;
- sustained or awkward postures;
- limitations on motion or action;
- cold or wet working conditions;
- conditions where the speed of work is controlled by machines; or
- other ergonomic stressors.

MSIs often progress in three stages:

1. **Early stage:** The body hurts or feels tired at work. Symptoms do not interfere with the ability to work and cease when the sufferer is away from work.
2. **Intermediate stage:** The injured area hurts or feels weak from the time that work starts until well after work has ended. Work is more difficult.

3. **Late stage:** The injured area hurts or feels weak even at rest. Sleep may be affected. At this stage the injury may not heal completely.

Not every sufferer goes through these stages in the same way. It may be difficult to say when one stage ends and the next stage begins.

Three examples of musculoskeletal injuries are:

1. **Carpal tunnel syndrome** – numbness, pain, and weakness in one or both hands caused by compression of a nerve that passes through the wrist into the hand.
2. **Tendonitis** – an inflammation of a tendon caused by repetitive use or pressure on a tendon.
3. **Synovitis** – an inflammation of the inner lining of the membrane surrounding a joint.

### 3. What are the symptoms of MSIs?

The physical effects of MSIs range from minor discomfort to disability. Symptoms are not always confined to the injury site. Pain is the most common symptom. Other symptoms include:

- numbness, burning, or a 'pins and needles' feeling
- joint stiffness
- muscle weakness or tightness
- redness and swelling
- other changes in skin colour
- a tired feeling in the MSI area
- difficulty in grasping and holding objects

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To contact the Occupational Health and Safety Division:

Visit our website: [www.labour.gov.sk.ca](http://www.labour.gov.sk.ca)

**Regina** call: 1-800-567-7233 (toll-free) **Saskatoon** call: 1-800-667-5023 (toll-free)

#### **4. What can I expect from my employer?**

Section 81 of *The Occupational Health and Safety Regulations, 1996* require your employer to protect you from ergonomic hazards. Your employer must work with the workplace's occupational health committee to regularly review work that may cause or aggravate musculoskeletal injuries. Where a risk is identified, your employer is required to:

- inform each worker that he or she may be at risk of developing a musculoskeletal injury and of the common symptoms of any musculoskeletal injuries associated with that worker's work; and
- provide effective protection.

Protective measures may include:

- providing equipment that is designed, constructed, positioned, and maintained to reduce the harmful effects of the work being done;
- implementing appropriate work practices and procedures to reduce the potential harm of a job or task; or
- implementing work schedules that incorporate rest and recovery periods, changes in workload or other arrangements for alternating work to reduce the risks of harm.

You should be instructed how to safely perform your job so you can reduce your risk of developing a musculoskeletal injury. Training should include how to use appropriate work practices, equipment, and personal protective gear.

If you have the symptoms of musculoskeletal injury, your employer is required to:

- advise you to consult a physician;
- review your job's tasks to identify the potential causes of your symptoms; and
- take corrective measures to avoid further injuries.

#### **5. How can I protect myself?**

- A. Use the training in ergonomics provided by your employer.
- B. Find out as much as you can about how to protect yourself from ergonomic hazards in your job. For example:
  - familiarize yourself with the requirements of the Occupational Health and Safety Division's publications: *A Code of Practice for Video Display Terminals*; and *Musculoskeletal Injuries: Recognition, Symptoms, Causes/Risk Factors, Prevention* (download copies through Saskatchewan's Labour's website at: [www.labour.gov.sk.ca](http://www.labour.gov.sk.ca) or pick them up from the Division)
  - visit the Worksafe Saskatchewan website at: [www.worksafesask.ca](http://www.worksafesask.ca)
- C. See your doctor if you develop symptoms of a musculoskeletal injury.
- D. Report concerns to your supervisor.
- E. Tell your occupational health committee member, or occupational health and safety representative (if possible) that you are experiencing the symptoms of an MSI.