

Ergonomics and MSDs

Why it's important

Ergonomics can be defined as “fitting the workplace to the worker”. Musculoskeletal disorders (MSDs), also known as strains and sprains, occur when the demands of the work exceed the capabilities of the person doing the work.

MSDs account for more than half of all injuries in Ontario workplaces. Most of these injuries can be eliminated by applying ergonomic solutions to work practices and working conditions.

The four main ergonomic hazard factors for MSDs are force, posture, repetition and duration:

- When the amount of force required for a job or task is more than the muscles can handle, there is the risk of injury.
- Posture is the position of the different parts of the body relative to one another. The more extreme, awkward or unnatural the posture, the greater the risk of injury to the muscles, ligaments, tendons and nerves.
- Repetition is the number of times an action or body motion is performed over a given time period. Jobs that require repetitive motion increase the stress to the muscles and tendons because of fatigue and wear-and-tear.
- Duration is the length of time an activity or movement is performed, a posture is held or a worker is exposed to other ergonomic hazards such as force or repetition. Even though a movement or activity may be fairly comfortable, the duration of the task over a long period can lead to injury.

How to control the hazards

It is important that workers bring any concerns about health and safety to their supervisor and the joint health and safety committee or health and safety representative. This will give them important information to focus on for recommendations and changes.

During daily inspections by supervisors or the monthly physical conditions inspection by the JHSC or H&S representative, attention should be paid to any concerns from workers about ergonomic issues. Signs and symptoms to be aware of include workers who experience discomfort, pain, numbness, tingling, weakness and/or restrictions in movements. These can be early signs of MSDs.

Three different areas of MSD hazard control are:

- Engineering controls (providing new tools or equipment to reduce the demands)
- Administrative controls (job rotation through several jobs with different physical demands to reduce the stress on joints, ligaments and muscles)
- Personal protective equipment (for example, shock-absorbing insoles).

Workers need to be closely involved in addressing ergonomic issues, because they understand the job process. The cooperation of everyone in the development of controls will improve the potential of success of those controls.

Show and tell

- Among the early signs of worker MSDs are discomfort, pain, numbness, tingling, weakness and/or restrictions in movements.
- It's important that workers bring any concerns about health and safety to their supervisor and JHSC or H&S representative, so that they know what to focus on.
- Once ergonomic hazard controls have been put in place, they need to be monitored by supervisors and the JHSC or H&S representative.

Notes:
