

WSN ERGONOMIC SAFETY TALK #1

Supervisor orientation of workers to ergonomics and musculoskeletal disorders

What is a safety talk?

This safety talk is one of a series of brief meetings held on regular basis with workers and their supervisors to discuss problems and concerns about health and safety. All safety talks involve an informal presentation on a specific subject to the group by a person chosen to lead the session, followed by a discussion of the topic, how it fits into your workplace and what it means to the people who work there.

This document consists of the information with which the person who's delivering the safety talk needs to be familiar, followed by a Presentation Guide which can be used during the actual safety talk.

Background information

Ergonomics and safety

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 job exceed the capabilities of the person doing the job.

MSDs account for over half the lost-time and no-lost-time injuries in Ontario workplaces. In 2006, MSDs accounted for:

- 51% of all lost-time injuries in the veneer/plywood industry
- 38% of all lost-time injuries in the sawmill industry
- 31% of all lost-time injuries in the logging industry
- 26% of all lost-time injuries in the silviculture industry

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

- Force is generated by muscles to lift, lower, push, pull or hold objects. 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.

Other ergonomic hazard factors include contact stress, vibration, temperature, work organization and work methods.

Just because one person can do a particular job without the risk of injury doesn't mean everyone can. Variations in workers' size, strength and endurance have to be taken into account to determine if the job is suitable in terms of the physical demands it places on an individual worker.

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Occupation Health and Safety Act and ergonomics

The Ontario Occupational Health and Safety Act and Regulations for Industrial Establishments states in Section 45 (a) of the Regulations:

- Material, articles or things required to be lifted, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards, including protective clothing, guards or other precautions as will ensure that the lifting, carrying or moving of the material, articles or things does not endanger the safety of any worker;

The Ontario Occupational Health and Safety Act and Regulations states in section 25(2)(h) of the Act:

- An employer shall take every precaution reasonable in the circumstances for the protection of the worker:

The Ontario Occupational Health and Safety Act and Regulations states in section 27(2)(c) of the Act:

- A supervisor shall take every precaution reasonable in the circumstances for the protection of the worker.

The Ontario Occupational Health and Safety Act and Regulations states in section 28(1) of the Act:

- A worker shall,
 - (a) work in compliance with the provision of this Act and the regulations;
 - (b) use or wear the equipment, protective devices or clothing that the worker's employer requires to be used or worn;
 - (c) report to his or her employer or supervisor the absence of or defect in any equipment or protective device of which the worker is aware and which may endanger himself, herself or another worker; and
 - (d) report to his or her employer or supervisor any contravention of this Act or the regulations or the existence of any hazard of which he or she knows.

Recognizing hazards

Recognition, assessment and control of potential ergonomic hazards are the keys to MSD prevention. Workers, supervisors and the JHSC or H&S representative need to be involved in recognizing potential areas of concern and addressing these hazards.

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.

Some other factors to consider in recognizing MSD-related problems include reviewing other sources of information such as injury reports, work-site adaptations, the introduction of new equipment and absenteeism records.

These proactive observations can address MSD concerns before they result in injury. The reality is that MSDs cost companies hundreds of thousands of dollars because most of them are not reported in the early stages, when prevention is still possible.

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Assessing ergonomic concerns

It is important that workers bring any concerns about health and safety to their supervisor and the JHSC or H&S representative. This will give them important information about what to focus on for recommendations and changes. When completing a physical workplace inspection, your supervisor or JHSC/H&S representative is looking for any concerns, including ergonomic problems. Many tools can be used to help address ergonomic concerns, from MSD workplace checklists to a physical demands analysis (PDA).

Controls and ergonomics

Once an ergonomic risk assessment is completed in your workplace, it is the responsibility of your JHSC or H&S representative to work on controls to reduce the exposure to risks. Three different areas of 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 involved in addressing ergonomic issues, because they understand the job process. The involvement of all related workplace parties in the development of controls will improve the potential of success of any controls.

Follow-up

Once the ergonomic controls have been implemented, it is important that worker input be monitored by supervisors and your JHSC or H&S representative. This review will ensure that the controls have not created new hazards and have adequately addressed the concern. This is where workers have an opportunity to communicate any further concerns or comments regarding the changes.

The ergonomic controls should be reviewed regularly by the supervisor and within a six-week period by the JHSC or H&S representative for any further areas of concerns. Workers should inform their supervisor of any concerns on a daily basis as they are identified.

To sum up: It's everyone's job to ensure that ergonomics are addressed in the workplace. Early reporting of any MSDs or sprain or strain-type injuries can be addressed immediately to avoid any further discomfort or time off work.

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Presentation guide

Ergonomics and safety – explain the dangers

- Ergonomics involves “fitting the workplace to the worker”.
- Musculoskeletal disorders (MSDs), also known as strains and sprains, are the leading cause of injury in Ontario workplaces, including forestry.
- MSDs occur when the demands of the job exceed the capabilities of the person doing the job.
- Just because one person can do a job without risk of injury doesn't mean everyone can. Variations in worker size, strength and endurance need to be taken into account in terms of the physical demands it places on an individual worker.
- The four main ergonomic hazard factors are force, posture, repetition and duration.
 - **Force** is generated by muscles to lift, lower, push, pull or hold objects. 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 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 a worker is exposed to any ergonomic hazard. Even though a movement or activity may be fairly comfortable, the duration of the task over a long period can lead to injury.
- Other ergonomic hazard factors are contact stress, vibration, temperature, work organization and work methods.

Recognizing ergonomic hazards

A common ergonomic problem that is easy to recognize is awkward or unnatural postures. Often workers have to extend their neck (look up) toward a monitor to see the flow in a mill. Other times workers have to flex their neck (look down) to complete the task required at their workstation. Both of these movements can cause strain on the neck, shoulders and upper back. Reaching above your head when completing a task causes awkward postures, placing strain and stress on the upper back, shoulders, elbows and wrists.

- MSD prevention requires the recognition, assessment and control of ergonomic hazards. Everyone needs to be involved in this process.
- During inspections, attention should be paid to any concerns from workers about ergonomic issues or signs of a potential injury.
- Among the early signs and symptoms of worker MSDs are discomfort, pain, numbness, tingling, weakness and/or restrictions in movements.

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Assessing ergonomic hazards

- 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.
- Potential ergonomic problems need to be part of regular workplace inspections.
- Tools are available to help assess ergonomic concerns, such as MSD workplace checklists and physical demands analysis (PDA) forms for specific jobs and tasks.

Controlling ergonomic hazards

- Once an ergonomic risk assessment has been done, the JHSC or H&S rep needs to be involved in developing ways to controls any hazards.
- Three different forms of ergonomic hazard control are:
 - Engineering controls (for example, providing new tools or equipment to reduce the demands)
 - Administrative controls (for example, periodic job rotation to less physically demanding tasks).
 - Personal protective equipment (for example, shock-absorbing insoles)
- Your input as workers on how to address ergonomic issues is valuable because you understand the job process and you will probably have useful suggestions.
- The more everyone works together on the development of ergonomic hazard controls, the greater the chances of coming up with effective controls.

Follow-up – explain the importance

Follow-up is important, as this is where any further ergonomic problems can be noted. It is important to remember that MSDs may still be reported even after a control is in place. It takes time to develop a MSD and new cases can result from exposures to hazards before the control was implemented. However an effective control will stop the development of new MSDs.

- Once ergonomic hazard controls have been put in place, they need to be monitored by supervisors and JHSC or H&S representative.
- Purpose of monitoring is to make sure the controls have adequately addressed the problem and haven't created any new hazards.
- Worker input is very important at this stage to communicate any concerns or comments regarding the change. Workers should inform their supervisor of any concerns as soon as they are identified.
- The ergonomic controls should be reviewed regularly by the supervisor and within a six-week period by the JHSC or H&S rep.

To sum up: It's everyone's job to ensure that ergonomic hazards are controlled. Early reporting of potential hazards or the first signs and symptoms of injury can prevent MSDs.