



ERGONOMICS AND MUSKULOSKELETAL INJURIES (MSI)

Preventing injuries by design.

"Ergonomics is the science of studying people at work and then designing tasks, jobs, information, tools, equipment, facilities and the working environment so people can be safe and healthy, effective, productive and comfortable." (Ergonomic Design Guidelines, Auburn Engineers, Inc., 1998)

Some of the tasks we perform at work – such as lifting, reaching, and repeating the same movements – can strain our bodies. In some situations, these tasks can result in an injury to the muscles, tendons, ligaments, nerves, blood vessels, and joints of the neck, shoulders, arms, wrists, legs, and back. This type of injury is called a musculoskeletal injury.

Musculoskeletal injuries, or MSI, are common and account for almost 40% of lost-time injuries that are received every year at the New Brunswick Workplace Health, Safety and Compensation Commission (WHSCC).

Ergonomics tries to match the job to the worker instead of forcing the worker to adapt to the job, and is key in the reduction or elimination of MSI.

The likelihood of developing an MSI depends on the magnitude (how much), frequency (how often) and duration (how long) one is exposed to associated risk factors.

RISK FACTORS

Risk factors for an MSI are the physical demands of a task, and include:

- Force
- Awkward postures
- Maintaining the same posture for extended periods of time
- Repetition
- Vibration

Exposure to these risk factors may result in the development of an MSI. There are many signs and symptoms that may indicate the development or presence of these injuries. Signs and symptoms of an MSI may appear suddenly – for example, from a single incident that causes an injury – or they may appear gradually over a longer period of time.

It is important for employers and employees to recognize the early signs and symptoms of MSI. If treatment is needed, it can be started right away. Steps can also be taken at the workplace to prevent the injury from getting worse.

SIGNS AND SYMPTOMS OF AN MSI:

- Tenderness
- Weakness
- Tingling
- Disturbed sleep
- Difficulty performing tasks or moving specific parts of the body
- Swelling
- Numbness
- Pain
- Unreasonable fatigue

Do not ignore signs and symptoms of an MSI! They should be reported to a supervisor immediately; otherwise, injuries generally persist and become more severe.

To minimize the extent of the injury, treatment should be sought right away. It will vary according to the type of MSI that is present, and can include the application of cold or heat,

medication, physical therapy, and even surgery. An MSI may be treated more effectively if it is discovered and reported early.

WHAT'S THE ANSWER?

WHSCC ergonomics consultants may be available to assist workplaces in identifying risk factors. The Commission does this by working with employees and employers to educate about MSI, evaluate root causes of MSI, and work as a team to find solutions for a particular job or work area.

Remember, proper use of ergonomics can:

- Prevent injury
- Improve quality and productivity
- Increase morale
- Increase work efficiency and effectiveness

For more information, please contact your regional ergonomics consultant.

Bathurst: 1 800 222-9775 or 506 547-7300
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