

The *BSO Plus Safety Topic* is a review designed from the BSO Plus agenda. This safety topic is your way to stay current on the safety information over the 3 years, so please ensure you submit the completed test to your employer for record retention.

ERGONOMICS

What is it?

Ergonomics is the study of the kind of work you do, the environment you work in, and the tools you use to do your job. More specifically, it is the science of designing equipment and devices to fit the work to the worker; this means designing and arranging work so that the work is in harmony with the natural movements of the human body.

Why is it important?

Every day we use our muscles, tendons, ligaments and joints to lift, carry, sit, stand, walk, move and work. Sometimes the way we do these tasks can put too much strain on our bodies, causing pain and discomfort. This extra demand may also lead to more serious injuries called musculoskeletal disorders (MSD's). MSD's are injuries and disorders that affect muscles, tendons, ligaments, joints, nerves, and/or blood vessels. Examples of MSD injuries include: herniated disc, muscle sprains & strains, tendonitis, carpal tunnel syndrome, bursitis and tennis elbow.



According to the WSIB...

- Over the past 10 years, sprains and strains has continued to be the leading nature of injury and in 2014 represented 39% of all allowed lost time claims.

How are you exposed to ergonomic hazards?

Injuries can develop when the same muscles are used repetitively, or for a long time without adequate rest. This type of injury increases if the force exerted is high and/or the job requires awkward posture. Ergonomic hazards are a result of poor work design, which includes any of the following elements:

- Work station
- Tools and equipment
- Physical environment
- Organization of work

Poor design of any of these elements can put a physical strain on various parts of the body.



Hazard Management for Ergonomic Hazards

The effective management of ergonomics can help you be more comfortable at work. It can help lower stress and injury caused by awkward positions and repetitive tasks. When identifying and correcting ergonomic hazards in the workplace, it is important to include **both** the worker and management in the process. Often, the person with the most knowledge about the details of a job is the person doing it.

In order to effectively manage ergonomic hazards, they must first be identified, then assessed, and finally controlled.



Recognize: Identify the location and type of ergonomic hazards in your area.

- Workstation design (seating, standing surfaces, computer stations, placement of equipment)
- Equipment and tools design (grip, shock absorption, balance and torque)
- Environmental factors (temperature, lighting, and vibration)
- Work organization (rotation of repetitive tasks)
- Documentation of previously reported hazards (workplace inspections)



Assess: Determine the degree of each ergonomic hazard by assessing the following against company standards.

- **Repetition:** assess the frequency, speed and duration of the repetitive task
- **Posture:** look for awkward body positions, sustained or static posture, and overextended reaching
- **Force:** find out how much force is required to perform a task and the duration the force is exerted before a break.



Control: The ideal method of control is to completely eliminate a hazard. Where that is not possible, the hazard must be controlled through other means. Some controls to consider include:

- Design workstations and work processes using ergonomic principles
- Use well maintained equipment and tools that will decrease force or awkward positioning
- Provide lifting devices to eliminate heaving lifting
- Mechanize a repetitive task or process