



Huron-Superior Catholic

DISTRICT SCHOOL BOARD

PROCEDURAL GUIDELINES MUSCULOSKELETAL DISORDERS' (MSD) PREVENTION

Purpose

The purpose of this procedure is to ensure that all workers are educated on Musculoskeletal Disorders (MSD) hazards and how to prevent them by:

- recognizing MSD hazards proactively
- eliminating or controlling MSD hazards
- evaluating the effectiveness of individual interventions as well as organizational initiatives
- developing a process that promotes continuous improvement in the efficiency, comfort, and well-being of all employees through management and employee involvement.

The Occupational Health and Safety Act recognizes poor ergonomics as a hazard in the workplace that must be treated the same as any other workplace hazard.

Related Documents

HSCDSB Policy 6003 – Occupational Health and Safety

Ontario Occupational Health and Safety Act R.S.O. 1990

Definitions

In this guideline:

Ergonomics – the science of fitting the work environment to the people who do the work. It looks at the interaction between humans and other aspects of the work environment and strives to match the abilities and characteristics of people with the tasks they perform.

Hazard – a source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.

Job Hazard Analysis (JHA) – a procedure which helps integrate accepted health and safety principles and practices into a particular task or job operation. In a JHA, each basic step of the job is to identify potential hazards and to recommend the safest way to do the job.

Musculoskeletal Disorders (MSDs) – a condition that affects the musculoskeletal system, including Injuries or disorders of the muscles, tendons, ligaments, joints, nerves or supporting blood vessels caused or aggravated by work activities. The conditions can be the result of chronic or sudden exposure to a person that exceeds the capacity of musculoskeletal structures.

Physical Demands Analysis (PDA) – systematic procedure to quantify and evaluate all of the physical and environmental demand components of all essential and non-essential tasks of a job. PDA is a process of establishing what a job is in its entirety in a way that complies with the Ontario Human Rights Code. A PDA is a foundation of the analytical process used to determine compatibility between a worker and a specific job.

Risk – the chance or probability that a person will be harmed or experience adverse health effect if exposed to a hazard. It may also apply to situations with risk of property loss and equipment.

Background

Musculoskeletal disorders (MSDs) are injuries and disorders of the musculoskeletal system. They may be caused or aggravated by various hazards or risk factors in the workplace.

MSDs can occur in:

- Muscles
- Tendons and tendon sheathes
- Nerves
- Bursa
- Blood vessels
- Joints/spinal discs
- Ligaments

MSDs do not include musculoskeletal injuries or disorders that are the direct result of a fall, struck by or against, caught in or on, vehicle collision, and/or violence. They are caused by overuse of the musculoskeletal system, whether it be during a single forceful exertion, or through repeated use of the same joint over time. They are often known as “sprains and strains”.

MSDs can affect many body parts. The back is the most common, but the shoulders, neck, elbows, hands and wrists are also frequently involved. MSD-related pain and discomfort can also occur in the hips, knees, legs and feet. The incidence of tendonitis increases with age as muscles and tendons lose some of their elasticity.

A number of medical diagnoses are covered by the term MSD, including:

- Carpal tunnel syndrome (wrist/hand)
- Epicondylitis (tennis or golfer’s elbow)
- Muscle strain
- Rotator cuff disorder or syndrome (shoulder)
- Tension neck syndrome
- Tendonitis or tenosynovitis (anywhere in the body)
- Back pain

While different body parts can be affected by these disorders, the symptoms of MSDs are similar no matter where they occur.

The symptoms generally include:

- Pain with or without movement
- Swelling and tenderness

- Reduced range of motion and/or stiffness, and
- Tingling and/or numbness in nerve-related injuries or disorders

Hazard Overview

There are three main risk factors that can contribute to MSDs in material handling tasks. They are:

Force

- Refers to the amount of effort made by the muscles and the amount of pressure on a body part.
- All work tasks require some level of force; however, if the required force is higher than the capability of the muscle, it can damage muscles or associated tendons, ligaments, and joints.
- Injury can occur from a single action that requires a very high level of force, or more commonly, can occur because of moderate to high forces generated over long duration, and is more likely when the body is in an awkward posture.

Fixed or Awkward Postures

- Is the position of the joints of the body during an activity.
- In “neutral posture”, the joints work near the middle of their normal range of motion.
- MSD injuries can occur when the joint is not in “neutral posture”, when the joint moves toward the end of the normal range of motion.
- The more awkward the posture, the more strain on the joints, ligaments, discs (in the spine) and muscles, and the higher the risk of injury.
- A “fixed posture” refers to staying in the same position for a long period of time, and injuries occur as the tissue fatigues while exerting effort to maintain the posture.

Repetition

- High repetition of the same task or movement can lead to fatigue and microscopic tissue damage.
- If no recuperation of the tissues is allowed through rest or task rotation, injury can occur.
- Rest allows specific body parts to recuperate.
- If the posture is awkward, fatigue occurs much more quickly.
- Combining the risk factors of force, awkward posture and repetition increases the risk of injury.

Responsibilities

Role of Employer

The Employer shall:

- Provide resources to develop, implement, maintain, and continually improve the MSD prevention program
- Ensure compliance with procedures and program
- Provide resources for training and necessary equipment
- Ensure employees and management receive adequate training

Role of Human Resources Staff

Human Resources Staff shall:

- Advise the Health and Safety Officer about MSD hazards identified through WSIB reporting.
- In consultation with the Health and Safety Officer, recommend appropriate measures to reduce exposure to MSD hazards for workers who require workplace accommodation based on MSD symptoms.

Role of the Health & Safety Officer

The Health & Safety Officer shall:

- Perform Job Hazard Analysis and document controls
- Perform and/or arrange Ergonomic Assessments and make recommendations
- Ensure that all the procedures and practices are communicated to principals, supervisors and workers
- Maintain all records associated with this procedure
- Maintain or replace relevant equipment
- Purchase appropriate and adequate equipment considering safety and reduction of MSD risk factors in consultation with the Health and Safety Department
- Provide guidance as required

Role of Supervisors

Supervisors shall:

- Implement the program through regular monitoring strategies such as management workplace inspections, auditing of worker safe practices, performance management, etc.
- Encourage employees to report hazards and MSD symptoms proactively and to report accidents and incidents to the supervisor immediately
- Conduct MSD hazard, accident and incident investigations, and implement corrective actions
- Seek assistance and/or internal/external consultation when solutions and controls are not promptly identified
- Communicate solutions and controls to employees in a timely manner
- Ensure all new and existing staff completes MSD prevention/ergonomics training
- Encourage employee participation in hazard identification, equipment trials and brainstorming control solutions
- Purchase appropriate and adequate equipment considering safety and reduction of MSD risk factors in consultation with the Health and Safety (OHS)
- Maintain or replace relevant equipment
- Role of Workers

Role of Workers

Workers shall:

- Participate in MSD hazard recognition, assessment, control, and evaluation of effective controls as required
- Comply with policy and procedures
- Cooperating by safely using any specialized equipment, materials, or furniture that has been purchased for and/or issued to them.

- Attend MSD prevention training as established by the employer
- Inspect, properly use and maintain relevant equipment provided by the employer
- Not remove or adjust any specialized equipment
- Report any MSD concerns, hazards, symptoms, incidents, or accidents to their principal / supervisor immediately
- Co-operate with MSD hazard, accident and incident investigations as required
- Be aware of the potential negative effect that factors outside of the workplace might have on employment and/or how they might aggravate ergonomic hazards (e.g., employees who work in sedentary jobs during the work week might wish to avoid or limit sedentary activities on weekends).
- Taking ergonomic breaks, as appropriate. This may amount to pausing one activity to focus on a different task, rest one's eyes, change positions, and/or take a two-minute walk in the workplace setting.

Procedures

The employer will provide training for management, supervisors, employees and JHSC members on MSD awareness, risk factors and controls.

The employer will identify MSD hazards with the help of the JHSC through:

Workplace inspections

- The JHSC is encouraged to identify and address ergonomic issues while performing workplace inspections, to record findings and or request an ergonomic assessment where required.

Employee observations

- All staff, including management, are encouraged to observe and correct ergonomic hazards e.g., improper workstation setup, improper posture or procedure.

Job hazard analysis (JHA)

- The employer, in consultation with affected staff and the JHSC may identify ergonomic hazards through the JHA process, eliminate hazards where possible or implement controls as required.

Physical Demand Analysis (PDA)

- If necessary, the employer may use a PDA to identify essential and non-essential job duties in the return-to-work process.

The employer will implement controls for MSD hazards through:

- Safe purchasing
- Consideration shall be given to ergonomic compliance of equipment, and devices as per CSA Z 412-17 (Office Ergonomics) and the HSCDSB Purchasing Procedural Guideline – 4013.
- Consideration shall be given to ergonomic compliance of tools and utensils used for tasks other than office-related tasks e.g. custodial, maintenance, etc. in compliance with the OHSA.

Preventive Maintenance

- Equipment will be maintained in safe working condition
- Preventive maintenance programs will be carried out as recommended by the manufacturer and recorded through Ebase
- Where required, repairs and or improvements will be carried out in a timely fashion and recorded through Ebase.
- Managers coordinating renovations or re-design of the workplace will ensure ergonomic considerations are proactively integrated into the design to prevent MSD injuries.
- Employees and end-users should be consulted in the design phase.

Ergonomic assessments

- Ergonomic assessments can be requested through the Human Resources Department. Assessments will be coordinated by the Health and Safety Coordinator and consist of evaluating equipment and workstation setup towards the standard. Staff level of comfort will be given reasonable consideration during evaluations
- Where required, the Health and Safety Officer, in consultation with the Return to Work Coordinator / Manager of Human Resources may recommend an in-depth ergonomic assessment by a consultant

Engineering Controls

- Consideration shall be given to the hierarchy of controls. Where possible, engineering controls will be implemented first

General Ergonomic Tips

Repetitive or awkward movements are a common cause of MSDs. Below are some basic tips for identifying ergonomic risks. Employees are encouraged to look for these characteristics of work that may be causing concerns in the workplace:

- Frequent bending or twisting of the back or neck.
- Heavy, awkward or repetitive lifting, pushing or pulling.
- Tasks requiring lifting either below the knees or above the shoulder.
- Static postures - spending long periods without movement of a particular body part. This could include, but is not limited to, sitting, standing, bending, and crouching.
- Working with arms above shoulder height, elbows away from the body, or reaching behind the body.
- Repetitive or prolonged grasping and holding of objects, gripping with the wrist or elbow in an awkward position, or repetitive bending or twisting of the wrists or elbows.
- Frequent exposure to whole-body or hand-arm vibration that has not been controlled.
- Work surfaces that require elevation of the shoulders or stooping of the back for long periods.
- Contact stress, where force is concentrated on a small area of the body.
- Using any part of the body, especially your hand, as a hammer or mallet.
- Inadequate or excessive light or glare.

Often simple solutions can be used to correct these risk factors, like re-arranging storage shelves, changing the height of work surfaces, re-organizing tasks to reduce unnecessary manual material handling, opening or closing blinds, and taking appropriate ergonomic breaks

to work different muscle groups. The most effective ergonomic solutions involve both the workers and supervisors.

Sources

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