

Talks **ZONE**

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Ergonomics affect many tasks

The human body can tolerate awkward or unnatural positions and movement only for so long without paying a painful price.

The pain results from what are called musculoskeletal disorders (MSDs), which affect muscles, tendons, ligaments, nerves, discs and blood vessels. Other common names for MSDs are repetitive stress injuries, cumulative trauma disorders, tennis elbow, white finger, and the most common of all, carpal tunnel syndrome.

MSDs are a major cause of workplace injury and illness. Helping to reduce or eliminate them is the purpose of ergonomics — creating a better match between workers, the tasks they perform and the equipment they use.

Factors that contribute to the development of MSDs include:

- Excessive force
- Repetition
- Fixed or awkward body position
- Vibration
- Extreme temperatures
- Repeated impacts
- Work organization and methods

MSDs can cost employers hundreds of thousands of dollars because most of the disorders are not reported in the early stages, when prevention is still possible. The keys to prevention are recognition, assessment and control of potential ergonomic hazards.

Risk factor identification is just one step in eliminating or minimizing MSDs. Once factors have been identified, an assessment is needed to find out how great the risk is.

Everyone should be involved in this process. It is important that workers raise any concerns about ergonomic issues or signs of a potential injury.

Among the early signs and symptoms of



are discomfort, pain, numbness, tingling, weakness and/or restrictions in movements.

More than one risk factor can occur at the same time. The more risk factors in the task, the greater the risk of injury — but the presence of risk factors doesn't necessarily mean MSDs will occur. They also can depend on how great the force is and how long the worker is exposed to the risk. Also, individual characteristics vary from worker to worker (such as height, gender and the body's ability to deal with the risk factors).

Checking your posture is a good way to start being ergonomically correct. All workers — those who sit and those who stand — should be able to maintain the natural "S" curve of the spine.

Take special note of the lower back. For those who sit, it may help to have extra lumbar support, perhaps in the form of a pillow or rolled up towel. For standing workers, it may help if they rest one foot on a small box or stool, alternating their feet regularly.

Employees hunched over their work surfaces with their necks bent downward should have the work surface raised.

Here are some more ways to reduce or

eliminate ergonomically-related disorders:

- Use two hands instead of one for a task, in order to reduce excess demand on a single muscle group.
 - Use tools that are correct for the job and proportioned for your body.
 - Use power tools instead of manual tools when possible.
 - Take frequent breaks from repetitive motion tasks.
 - Avoid repeating awkward movements or holding yourself in uncomfortable positions.
 - Wear protective gloves that reduce pressure or tool vibration on your fingers.
 - Computer users should keep the screen 30 to 45 centimeters (12 to 18 inches) from the face and just below eye level.
 - Position the keyboard so wrists are straight and elbows are close to the body.
 - Use proper technique for moving or lifting heavy objects (back straight, legs doing the work, avoid twisting). For objects that are too heavy for one person to handle, get help or use a mechanical aid. Boxes and crates should be equipped with large, comfortable handles.
- Workers have a right to receive training on new work procedures, mechanical aids and protective equipment designed to prevent MSDs. They have a responsibility to follow those procedures and to use properly the equipment they have been trained to use.

The Quiz

These questions are meant to help you remember what was discussed today — not to test your patience or challenge your intelligence. The answers are at the bottom of the page. Cover them up, and complete the quiz as quickly as you can.

1. Muscles and tendons are the only parts of the human body that can develop musculoskeletal disorders.
TRUE ____ FALSE ____
2. Is the purpose of ergonomics to create a better match between workers, the tasks they perform and the equipment they use?
YES ____ NO ____
3. Which of these factors can contribute to the development of MSDs?
 - A. Excessive force
 - B. Repetition
 - C. Germs
 - D. Fixed or awkward positions
 - E. Repeated impacts
4. Workers should be directly involved in identifying and assessing MSD risk factors.
TRUE ____ FALSE ____
5. Employees who are hunched over their work surfaces with their necks bent downward should have the work surface:
 - A. Raised
 - B. Stabilized
 - C. Lowered
 - D. None of the above
6. Using two hands instead of one for a task can help reduce stress on a single muscle group.
TRUE ____ FALSE ____
7. Which of these are among ways to avoid musculoskeletal disorders:
 - A. Use power tools instead of manual tools when possible.
 - B. Wear protective gloves to reduce pressure or vibration on the fingers.
 - C. Avoid repeating awkward movements or holding yourself in uncomfortable positions.
 - D. All of the above.
8. Does your workplace have a program to identify and control MSDs?
YES ____ NO ____ DON'T KNOW ____

ANSWERS

1. False, 2. Yes, 3. A., B., D., E., 4. True, 5. C., 6. True, 7. D., 8. Your

Hold These Thoughts

Signs and symptoms of musculoskeletal disorders can appear suddenly—for example, from a single incident—or gradually over a longer period. An MSD is likely to be treated more effectively if it is discovered and reported early.

Treatment will vary according to the type of MSD. It can include the application of cold or heat, medication, physical therapy and even surgery.

Those who ignore symptoms for too long might eventually be unable to perform their current jobs. In the very worst cases, they could develop such a major and painful disability that they are unable to work at all.

Organizations developing an ergonomics program to prevent work-related MSDs should ask workers questions about their health. A symptoms survey can help determine when workers are experiencing any discomfort, pain or disability that may be related to workplace activities.

The Canadian Centre for Occupational Health and Safety has developed a sample checklist to survey employees. It asks 46 specific questions about the nature and location of pain or discomfort they may be experiencing, and the effect that the pain has had on the individual and their work.

The checklist can be customized to meet the needs of a particular workplace and support MSD prevention initiatives.

The sample survey can be reviewed at www.ccohs.ca/oshanswers/diseases/work_related_WMSD.html

For the Record

Date of Meeting: _____

Topic: _____

Location: _____

Department: _____

Start Time: _____ Finish Time: _____

Meeting Leader: _____

In Attendance:

Tips for Safety Meeting Leaders

Plan an upbeat ending to the meeting. Review all your main points and leave your audience with a joke or story they will remember. Then give them a quiz and see how much information they retained. This feedback will help you plan your next meeting. You can also use the tests as documentation that training has occurred.

Take a few minutes to focus on any recent changes to the organization's safety policies. This can help inform new employees about current safety policies as well as keep older employees aware of changes. Another approach is to discuss a different policy aspect (whether it is new or not) on a regular basis. This ensures that the employees are continually

presented with current information.

Vary the format. Have outside experts in when possible. Vendors are often happy to come in and talk about safe use of their equipment. Some safety cultures rotate leadership responsibility for the meeting. A roundtable discussion of safety case studies (again relevant to the kind of work they do) can be energizing. Breaking a large class down into sub-groups of three or four to work on case studies or to brainstorm safety recommendations can generate a higher level of energy and involvement. In a group of 20, usually only a few actively participate; in a group of four, all usually participate.

Note: *TalksZone* safety meetings are not intended to take the place of your own safety procedures. Always consult and/or review your procedures before attempting any work.