

The University of Southern Indiana

Policy Title:	Ergonomics Program
Policy Owner:	Office of Risk Management and Safety
Departments Affected:	University-Wide
Last Review Date:	09-30-2002
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Policy Purpose:

The purpose of The University of Southern Indiana's Ergonomic Program is to inform employees that USI is committed to improving our employee's comfort and wellbeing by identifying and correcting ergonomic risk factors on the job.

Under this program, workstations will be evaluated to identify and correct ergonomic deficiencies through engineering, work practices and/or administrative controls.

Policy Statement:

It is the policy of USI to maintain an ergonomic program that achieves the following goals:

- Prevent or minimize the occurrence of work-related musculoskeletal disorders such as tendonitis, low back pain and carpal tunnel syndrome, by controlling employee exposure to the ergonomic risk factors that can cause or aggravate them;
- Ensure that affected employees are informed about work-related musculoskeletal disorders and associated ergonomic risk factors (e.g. repetitive motion, sustained postures, exertions);
- Reduce the severity of work-related musculoskeletal disorders through early medical management.
- Encourage employee involvement in controlling exposure to ergonomic risk factors.

Introduction

Work-related musculoskeletal disorders (MSDs) result when there is a mismatch between the physical capacity of workers and the physical demands of their jobs. Each year 1.8 million workers in the United States report work-related MSDs such as carpal tunnel syndrome, tendinitis and back injuries. About 600,000 MSDs are serious enough to result in workers having to take time off work to recover. The solution to these injuries lies with ergonomics, the science of fitting the job to the worker.

Ergonomic Program

This program will cover the following areas:

1. *Ergonomic Program Coordinator*
2. *Identifying Workstation Risk Factors*
3. *Hazard Prevention and Control*
4. *Medical Management*
5. *Employee Involvement and Training*

1. *Ergonomic Program Coordinator*

The Office of Risk Management and Safety coordinates the University's ergonomic program. RM will lead an effort to identify and resolve ergonomic related problems.

2. *Identifying Workstation Risk Factors*

During the workstation evaluation ([see Appendix A: Office Ergonomics Evaluation Form](#)), the risk factors for developing musculoskeletal disorders are evaluated. Risk factors are job attributes or exposures that increase the probability of developing MSDs. These risk factors are not necessarily causation factors for MSDs, nor, does the presence of a risk factor mean that an employee performing a job is at excessive risk of injury. Rather, a combination of risk factors, coupled with individual pre-dispositions may contribute to the risk of MSD occurrence. The following are risk factors for developing MSDs:

- Repetition Rate -The current literature suggests a strong link between repetitious motion and the

development of these disorders. This risk factor appears to be even more significant when sufficient recovery periods are not applied

- Duration - When duration of a task is increased, the risk for MSDs is also increased.
- Force - Forceful exertions place loads on joint structures and tissues of the musculoskeletal system.
- Contact Stress -Contact stresses are produced when parts of the body come in contact with hard, sharp objects, resulting in forces transmitted through the skin to tendons and nerves. An example includes resting your wrists on a hard surface while using a keyboard.
- Posture -Stress to the body occurs when a body position places undue load on the musculoskeletal system or the nerves and blood vessels.
- Environment - Environmental factors such as vibration, lighting and cold temperatures can increase the risk of developing MSDs.
- Other Stressors:
 - Time pressures, deadlines and work overload
 - Absence of employee involvement in decision making
 - Unaccustomed work, especially during training periods or after returning from a long-term leave.
 - Non-Occupational Risks -Many employees have hobbies or other past times not related to work which might present any of the above-mentioned risk factors. If the muscle-tendon groups used during these activities are the same as those used during work activities, then the individual may not be allowing for adequate recovery periods in between exposures.

3. *Hazard Prevention and Control*

Engineering controls are preferred over all other control methods because they involve designing the workstation to fit the individual and not the reverse. Examples of engineering controls most commonly used include the following:

- Work Station Design -Workstations should be easily adjustable and designed for each specific task so that they are comfortable for the employee and are appropriate for the job being performed. Specific attention shall be paid to static loading of muscles, work activity height, reach requirements, force requirements, sharp or hard edges, proper seating, support for the limbs, equipment orientation and layout of the workstation.
- Design of Work Methods -Work methods should be designed to reduce exposure to static, extreme and awkward postures, repetitive motions, excessive forces, inefficient grasps and vibrations.

Administrative controls reduce the duration, frequency and severity of exposures to ergonomic hazards. An example would be to take rest pauses or breaks to relieve fatigued muscle-tendon groups. Administrative controls can be used in combination with other controls, but should not be used as the only control method for an ergonomic hazard.

4. *Medical Management*

The major components of a medical management program for the prevention and treatment of MSDs are trained first-level health care providers, health surveillance, employee training and education, early reporting of symptoms, appropriate medical care and accurate recordkeeping.

Early Reporting & Symptoms -All employees should report signs and symptoms (see [Appendix B: Symptoms Survey](#)) of MSDs as soon as they occur. Pain, numbness and tingling in wrists, arms, elbows, neck, shoulders and back are early symptoms of MSDs.

5. *Training*

Ergonomic training is available for all employees. This training will consist of the following:

- Overview of the Ergonomic Management Program.
- Recognition of Ergonomic Hazards.
- Hazard Prevention and Control.
- Recognition of Symptoms and Reporting Requirements.

Glossary Administrative Controls are changes in the way that work in a job is assigned or scheduled that reduce the magnitude, frequency or duration of exposure to ergonomic risk factors. Examples of administrative controls for MSD hazards include:

- 1) Employee rotation;
- 2) Job task enlargement;

- 3) Alternative tasks;
- 4) Employer-authorized changes in work pace.

Carpal Tunnel Syndrome: The compression and entrapment of the median nerve where it passes through the wrist into the hand--in the carpal tunnel. The median nerve is the main nerve that extends down the arm to the hand and provides the sense of touch in the thumb, index finger, middle finger and half of the fourth or ring finger.

Engineering controls are physical changes to a job that reduce MSD hazards. Examples of engineering controls include changing or redesigning workstations, tools, facilities, equipment, materials or processes.

Musculoskeletal disorder (MSD) is a disorder of the muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs. For purposes of this program, this definition only includes MSDs in the following areas of the body that have been associated with exposure to risk factors: neck, shoulder, elbow, forearm, wrist, hand, abdomen (hernia only), back knee, ankle and foot. MSDs include muscle strains and tears, ligaments sprains, joint and tendon inflammation, pinched nerves and spinal disc degeneration.

MSD signs are objective physical findings that an employee may be developing an MSD. Examples of MSD signs are:

- 1) Decreased range of motion;
- 2) Deformity;
- 3) Decreased grip strength;
- 4) Loss of function.

MSD symptoms are physical indications that an employee may be developing an MSD. For purposes of this standard, MSD symptoms do not include discomfort. Examples of MSD symptoms include:

- 1) Pain;
- 2) Numbness;
- 3) Tingling;
- 4) Burning;
- 5) Cramping;
- 6) Stiffness.

Risk Factor means, for the purposes of this program: force, awkward posture, repetition, vibration and contact stress.

Work practice controls are changes in the way an employee performs the physical work activities of a job that reduce or control exposure to MSD hazards. Work practice controls involve procedures and methods for safe work. Examples of work practice controls for MSD hazards include:

- 1) Use of neutral postures to perform tasks (straight wrists, lifting close to the body);
- 2) Use of two-person lift teams;
- 3) Observance of micro breaks.

Work Related: means that an exposure in the workplace caused or contributed to an MSD or significantly aggravated a pre-existing MSD.