



## Do injuries have to happen?

Do you have back pain? Have you ever heard of carpal tunnel syndrome or tendonitis? People from all over the country who work in places like factories, offices, nursing homes, hospitals, and construction sites have suffered from these and other kinds of injuries.

These “ergonomic” injuries do **not** have to happen. They are **not** a part of the job. They **can be prevented**. To avoid these injuries, you need the right equipment and a job that is well-designed.

## What is ergonomics?

Ergonomics is the study of how a job can be designed in a way that will not hurt workers. Ergonomics looks at the design of tools, equipment, workstations and job tasks. It also looks at how work is organized, such as the speed of work and the number of workers carrying out a task. A job that is “ergonomically designed” reduces or gets rid of the problems that can cause job injuries.

## Why does job design matter?

Many jobs are designed in a way that will get the work done quickly and for the least cost. The comfort and safety of the person who has to do the job often is not seen as important.

Because of this, workstations and the way a job gets done actually may hurt workers. They can cause injuries called musculoskeletal disorders (MSDs).



## What are musculoskeletal disorders (MSDs)?

Musculoskeletal disorders are a major health and safety problem in many workplaces. In a poorly designed job, workers often have to reach or twist some part of their body over and over again. After awhile, this can seriously hurt muscles, tendons and ligaments. These types of injuries are called musculoskeletal disorders (MSDs). Sometimes they are called cumulative trauma disorders, repetitive strain injuries, repetitive motion disorders, or overuse syndrome. All of these mean the same thing. They all are caused by poorly designed jobs and equipment.

Musculoskeletal disorders usually develop over time. They can cause constant pain and sometimes permanent damage. Musculoskeletal disorders can prevent workers from being able to do their jobs. They can even keep workers from doing basic activities in their daily lives, like brushing their teeth.

## What are some symptoms of MSDs?

Examples of musculoskeletal disorders include carpal tunnel syndrome, tendonitis, rotator cuff injury, and lower back injury.

Here are some of the symptoms of MSDs:



- Soreness
- Weakness
- Stiffness
- Tenderness
- Swelling
- Burning feeling
- Tingling
- Numbness
- Difficulty with movement
- Clumsiness

## What are the “risk factors” that cause musculoskeletal disorders?

Musculoskeletal disorders are usually caused by one or more “risk factors.” These are divided into physical risk factors and risk factors involving work organization.

**Physical risk factors** include:

- Repeating the same movement over and over again,
- Working in an uncomfortable position or the same position for a long period of time,
- Pushing, pulling or lifting,
- Working with objects or tools that vibrate,
- Pressing parts of the body against hard surfaces or edges for a long period of time, and
- Working in very hot or cold temperatures.

Risk factors involving **work organization** include:

- Too much work that must be done,
- Not enough workers doing the job,
- Fast pace of the work,
- Too few rest breaks, and
- Long hours of work.

## How can you get rid of ergonomic hazards in the workplace?

It is important to find out whether your job has any of these risk factors.

If so, it is important to **reduce** or **get rid** of these hazards as soon as possible.



Employers can reduce or get rid of risk factors that cause musculoskeletal disorders by making changes or improvements in the workplace. These changes are called “controls.” There are three main types of controls: engineering controls, administrative controls, and personal protective equipment.

- Engineering controls make permanent changes that reduce or get rid of ergonomic hazards. This might include changing the design of a workstation.
- Administrative controls reduce ergonomic hazards by changing the way a job is done. This could include making the work day shorter, or reducing the amount of overtime.
- Using personal protective equipment, such as gloves or knee pads, is the least effective way to control an ergonomic hazard because it does not get rid of the hazard.

Sometimes it is easy to make changes to a workplace. For example, an overhead conveyor belt can be lowered so that workers do not have to work with their arms over their heads. In other cases, it is harder to make changes because the employer thinks it costs too much.

## Does every workplace need an ergonomics program?

Every workplace that has risk factors for musculoskeletal disorders should have a complete ergonomics program.

An ergonomics program should include these things:



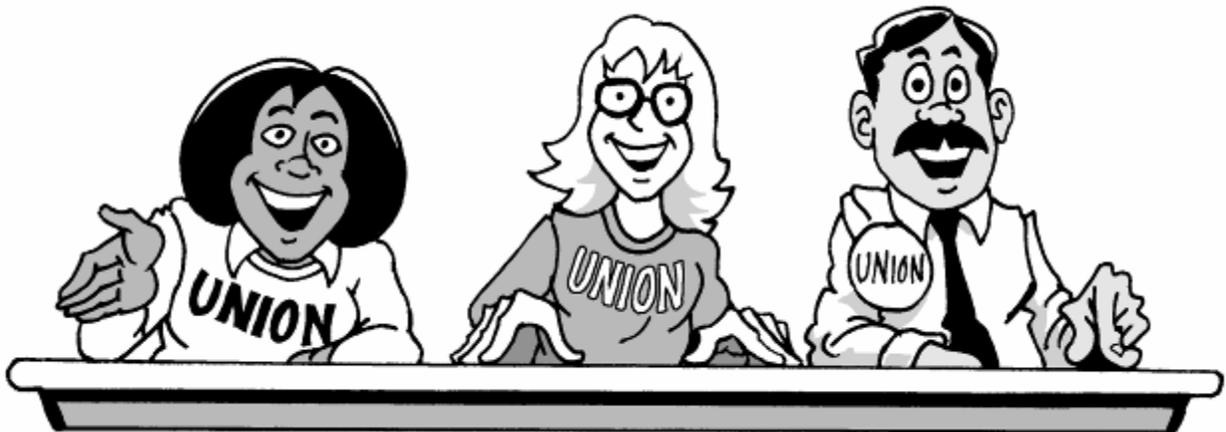
- An overall plan that says who will make what changes by when,
- Participation by workers and the union,
- Training and education for the workers,
- Medical treatment and care for workers with MSDs,
- Continuous evaluation of the worksite to find and correct ergonomic hazards, and
- Ongoing evaluation of the ergonomics program to see if it is working.

**These are the KEY points:**

Musculoskeletal disorders (MSDs) are caused by poorly designed jobs and equipment. It is important to find the specific causes of MSDs in the workplace. These are called "risk factors."

Employers can reduce or get rid of risk factors that cause MSDs by making changes or improvements in the workplace.

An ergonomics program is key to making sure employers are doing their best to protect workers from MSDs.



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