# Ergonomics

HS99-149B (2-02) A 5-Minute Safety Training Aid

An increasing number of companies are developing workplace ergonomic programs to help reduce injuries, illnesses, and workers' compensation costs. Development of a successful program requires an understanding of ergonomics and how it can help.

## What is ergonomics?

Ergonomics is the science of work. The term "ergonomic" is derived from the Greek words Ergos, meaning work, and Nomos, meaning laws of or study of. Literally, ergonomics means the "laws of work." The science of ergonomics pulls from several different disciplines to collect information on human abilities, limitations, and characteristics as relevant to designing a better workplace. Ergonomists look at anatomy and body mechanics for an understanding of how the human machine operates. Also engineering, another principle of science ergonomists utilize, aids in the development of new processes, tools, and workstations. Workplaces designed using ergonomic principles enhance the abilities of employees to work more productively. Unfortunately, injuries occur when the demands of the job exceed the abilities of the worker. The object of ergonomics is to prevent these injuries.

The general goals of an ergonomic program are quite simple:

- To reduce occupational injuries and illnesses;
- To reduce workers' compensation costs;
- To increase production;
- To improve the quality of work; and
- To decrease absenteeism.

The application of ergonomics in workplace design will assist in meeting these goals and improve the quality of life for employees.

## How can ergonomics help?

Applying ergonomic principles in the workplace can reduce the risk factors for musculoskeletal disorders. Some common risk factors are:

- Awkward postures;
- Using excessive force to move objects;
- Repetitive or prolonged actions; and
- Localized pressure.

Ergonomic programs include methods to:

- Identify risk factors;
- Implement controls to reduce or eliminate identified risk factors; and
- Educate supervisors and workers on recognizing and eliminating risk factors.

Everyone can do something to improve his or her worksites ergonomically. Here are some examples of how to address ergonomic risk factors.

### Repetitive or Prolonged Actions

- Use electric tools instead of mechanical tools.
- Reduce the quantity of work performed in a given period.
- Rotate workers among different tasks.
- Vary the work throughout the work shift.

### Using Excessive Force to Move Objects

- Carry fewer objects at a time.

Select tools that can help the weight to be lifted.

- Use dollies and conveyers to move heavy materials.
- Supply training on proper lifting techniques.
- Do not bend or twist at the waist when lifting any object.

### Localized Pressure

- Use elongated handles on tools such as pliers and scissors.
- Choose handles and work surfaces with rounded edges.

### Awkward Postures

- Change your work methods to maintain a neutral posture.
- Change body position periodically throughout the day.
- Adjust workstation height to assist in maintaining a neutral posture.

Successful application of some ergonomic principles in the workplace requires the collaboration of employees and their employer. The result will be a safer, more productive workplace.

***Remember to practice safety. Don't learn it by accident.***