

Fitting the Task to the Person:

Ergonomics for Very Small Businesses



California Department of
Industrial Relations
Cal/OSHA Consultation Service
Education Unit



Who This Information Is For

This booklet presents basic ergonomic principles for very small businesses. It does not include issues specific to computer use, construction or agriculture. You may need the advice of an ergonomics consultant or other outside experts. The field of ergonomics is dynamic, and new information is constantly being developed. Check periodically for updated information. The references listed on page 11 provide more in-depth information.

No one is required to use the information in this booklet. This booklet is not intended to provide employers with information on how to comply with Cal/OSHA regulations.

Cal/OSHA values and welcomes your comments about our booklet. We want to provide the best possible service to employers and employees.

Publishing Information

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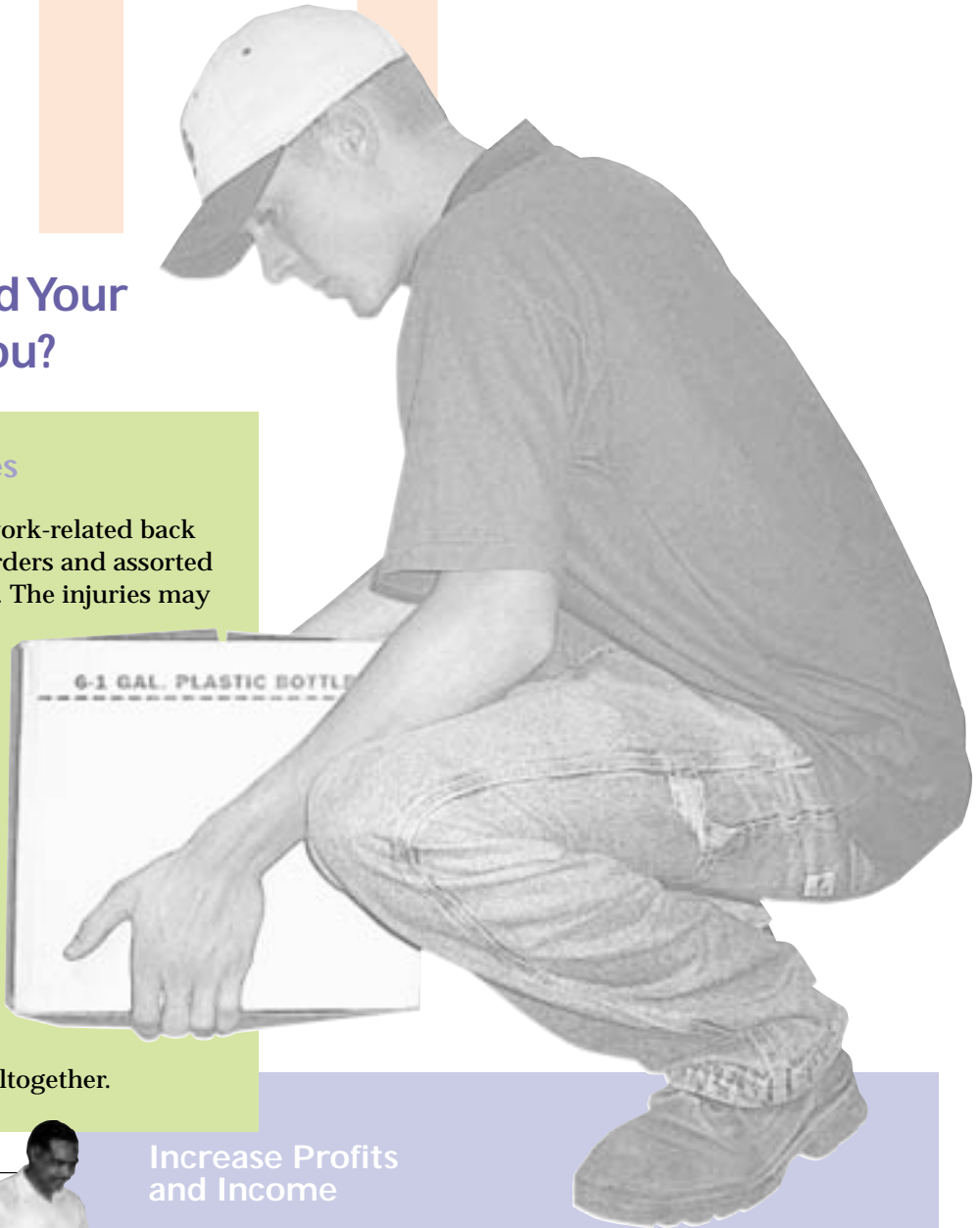
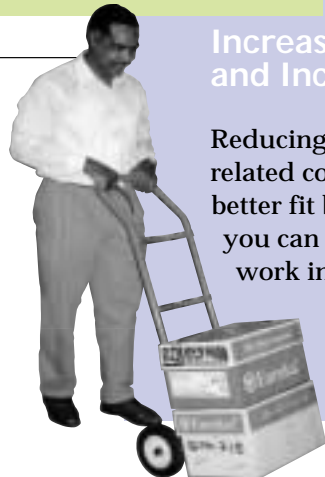
Why Should Your Work Fit You?

Reduce Injuries

Many people get work-related back injuries, wrist disorders and assorted strains and sprains. The injuries may occur suddenly or may develop slowly over time. Improving the fit between you and your work can help prevent these injuries. Chronic injuries may mean that you are no longer able to do certain parts of your job or that you have to leave your line of work altogether.

Increase Profits and Income

Reducing injuries saves medical costs, lost work time and related costs of replacing an injured worker. When there is a better fit between you and your work tasks and environment, you can often work faster and more efficiently. When you work in awkward and uncomfortable positions, you may have difficulty doing your job correctly. Errors are more common, and work sometimes needs to be redone.



Fitting the Task to the Person

Fitting the task to the person means adjusting the way in which work is done, modifying equipment, job design and layout and adjusting for the physical capabilities of workers so that work does not cause musculoskeletal disorders.

1

Lift for a long work life.

Teach everyone you work with the importance of smart lifting:



- Avoid bending and twisting your back when you lift.



- Bend your knees and keep your back straight to lift loads from the floor.



- Train new employees to use a hand truck or to get help with large loads.



Try to design work so that loads are lighter, heavy loads are stored at waist height, and less lifting is required.

2

Work in a comfortable position.

When you can, put the work in front of you at about waist height. You may be able to do this by making simple changes:



- The work is too low.



- The work is too high.



- Move things in closer and within easy reach.
- Raise or lower your chair or work surface.
- Try to build in adjustability and redesign work areas for a comfortable work position.

3

Pick the right tool for the task.



- Use the right tool for the task.
- Use a tool with a handle that fits comfortably in your hand and lets you work in a comfortable position.

- You may be able to reduce force and repetition by using a power tool.
- Try to redesign tasks that require repeated, forceful hand and tool use.

4

Make modifications to account for differences in size and strength.



- Be flexible and modify your expectations according to employees' size and strength.
- Provide adjustable equipment and work stations to accommodate differences in employee size.
- Change the size or weight of the load to accommodate differences in strength.

Vertical handles to accommodate different heights

**A poster for retail/wholesale business is attached.
Other posters available include health care, den-
tistry, restaurant/bar, cosmetology, and auto repair.**

Insert fold-out poster
(11x17)-

- perforated in center
- Back of poster blank

Back of
poster-blank
(do not print
instruction)



MSDs Contributing Factors

- *Repeated or prolonged* reaching, twisting, bending, working overhead, kneeling, squatting, holding fixed positions or pinch grips
- *Repetitive work* with the same types of motions over and over again using the same muscles, tendons, and joints
- *Forceful exertions* when the amount of muscular effort is expended to hard or sharp surfaces
- The body or body parts press against hard or sharp surfaces
- Continuous or high intensity *vibration* with tools, vehicles, equipment or platforms



Warning signs of musculoskeletal disorders:

- *Pain*
- *Muscle tightness*
- *Numbness or tingling* in the arm, leg, finger, or hand, especially in the fingertips at night
- *Decreased range of motion* in the joints
- *Decreased grip strength*
- *Swelling* of a joint or part of the arm, hand, finger(s), or leg
- *Fatigue, achiness, discomfort*

What to Do If You Hurt

Musculoskeletal Disorders (MSDs) (also known as cumulative or repeated trauma, repetitive strain injuries or repetitive motion injuries) may occur when the task does not fit the worker. You may have heard of MSDs in terms of muscle strains, ligament sprains, or back, wrist, neck or shoulder pain. It is not true that MSDs hurt only while you are working. MSDs can hurt at any time—while you are working, sleeping, or watching television. Sometimes MSDs can hurt very little, and other times MSDs can flare up and cause extreme pain.



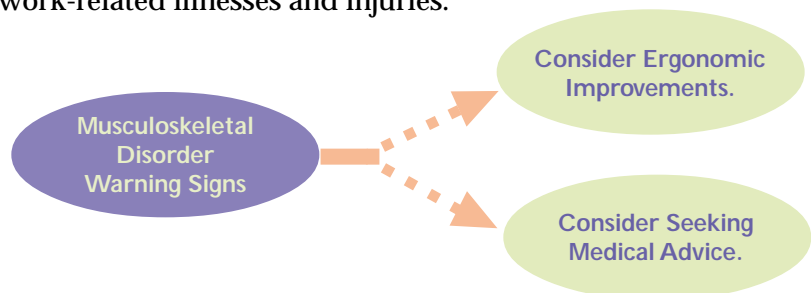
Understand what can happen if you do not pay attention to warning signs.

If nothing is done to improve the fit between the person and the work, permanent damage can occur. MSDs are difficult to diagnose and difficult to treat in later phases. You need to pay attention to warning signs to avoid permanent injury.



Take Action!

Take action as soon as you become aware of warning signs. Early action can prevent the loss of function and serious injury. If an injury does occur, seek medical attention promptly and follow Cal/OSHA and workers' compensation guidelines for reporting work-related illnesses and injuries.



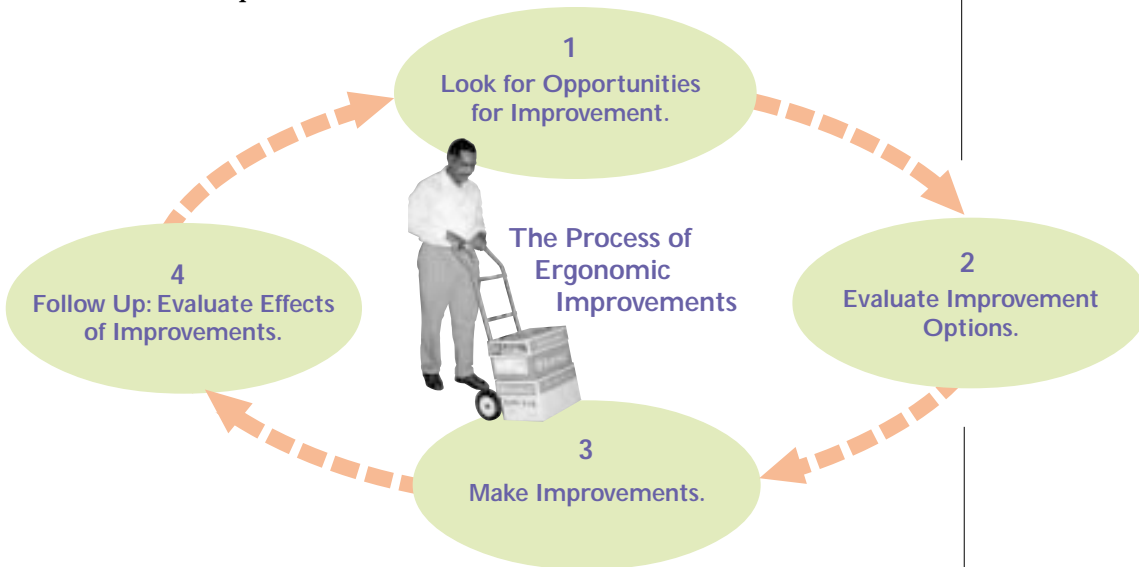
Improvements That Will Pay Off

Improvements in lifting, work position and tool use and reductions in awkward posture and forceful exertions will pay off. Task redesign is often important for long-term solutions.

Making an improvement should make the work physically easier and relieve discomfort. However, if modifications require you to use new muscle groups or different parts of your body, the work may feel awkward, or you could feel fatigued in ways that you did not before. This discomfort should fade in a few days as you become conditioned to the new procedures. Persistent fatigue or discomfort is a sign that a change is not working.

The Process of Ergonomic Improvements

The process of making improvements is not exact. Expect to try out improvements, determine their effectiveness, and either modify them or discard them in favor of alternatives. Keep up with changes in your trade and be aware of new opportunities for improvements. If you plan to purchase new equipment or remodel the workplace, use that opportunity to make changes that will make it easier to fit the work to the person.



Getting Help With Improvements

You and your co-workers will often have the ideas you need for improvements. If you need assistance, contact the workers' compensation insurer for your business or the Cal/OSHA Consultation Service.

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More Information on Ergonomics

Easy Ergonomics: A Practical Approach for Improving the Workplace. California Department of Industrial Relations, Division of Occupational Safety and Health, Education Unit, 1999.

Four-Step Ergonomics Program for Employers with Video Display Terminal (VDT) Operators. California Department of Industrial Relations, Division of Occupational Safety and Health, Education Unit, 1997.

A Back Injury Prevention Guide for Health Care Providers. California Department of Industrial Relations, Division of Occupational Safety and Health, Education Unit, 1997.

The Rules of Work: A Practical Engineering Guide to Ergonomics. Dan MacLeod. New York: Taylor and Francis, 2000.

The Ergonomics Edge: Improving Safety, Quality, and Productivity. Dan MacLeod. New York: Van Nostrand Reinhold, 1994.

Ergonomics Is Good Economics: An Integrated Approach to Injury Prevention, Return-to-Work, and Legal Compliance. C. C. Schulenberger. Walnut Creek, Calif.: Council on Education in Management, 1994.



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