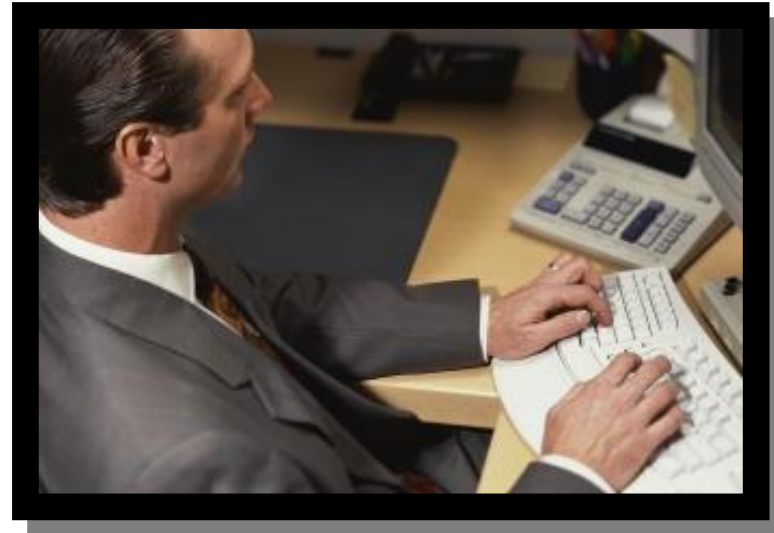


Ergonomics

An overview of hazard identification
and practical solutions.

Has Ergonomics Affected Losses?

- Have you had employees with:
 - sprains
 - strains
 - back pain
 - soft tissue injuries
 - carpal tunnel
- Trouble with these type of incidents
 - hard to diagnose and harder to treat
 - potential for high loss



What is Ergonomics?

- Ergonomics is a science that focuses on **human capabilities and limitations** in the design of jobs, workstations, tools, and equipment.
- Ergonomics can be used to **prevent musculoskeletal disorders** and other health conditions related to the job.
- Ergonomics also helps in improving people's comfort, morale, productivity, and quality.

Ergonomics Program

- An ergonomics program should include:
 - Hazard Identification/Job Analysis
 - Training
 - Equipment
 - Medical Management
 - Program Evaluation



Musculoskeletal Issues

- Musculoskeletal injuries are often associated with industrial workers. However, serious illnesses called **cumulative trauma disorders** (CTD's) occur frequently to office workers as well.
- The most common symptoms are:
 - Back pain
 - Neck and shoulder pain
 - Hand and wrist pain



Causes of Musculoskeletal Disorders



- Musculoskeletal disorders can be caused by one or more of the following factors:
 - Constrained or fixed postures
 - Awkward postures/excessive reaches
 - Repetitive motions
 - Force
 - Duration

Awkward Postures

- Prolonged work with hands above the head
- Elbows above the shoulders
- Prolonged work with the neck bent
- Squatting, kneeling, or lifting
- Handling objects with back bent or twisted
- Repeated or sustained bending or twisting of wrists, knees, hips, or shoulders
- Forceful and repeated gripping or pinching

Force

- Forceful lifting
- Pushing or pulling
- Which may include:
 - handling heavy objects
 - moving bulky or slippery objects
 - assuming awkward postures while moving objects



Guidelines for Safe Material Handling

- When possible, modify object to make movement easier
- Power grip as opposed to a pinch grip
- Avoid manual lifting of heavy objects
- Use material handling aids when available
- Seek assistance
- Carry load close to the body

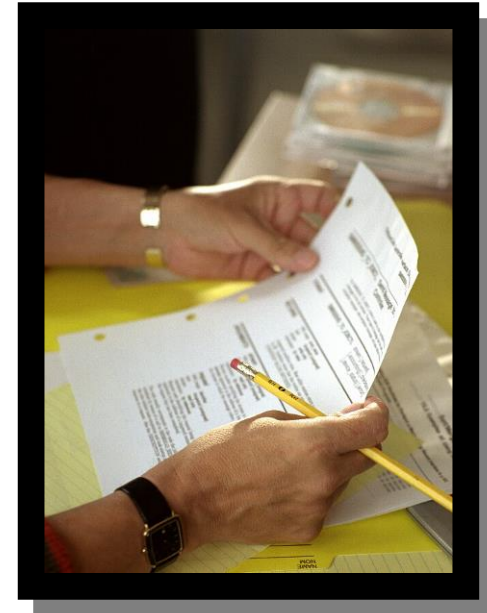
Repetitive Motions

- Poor position, combined with highly repetitious actions may cause sprains and strains.
- To be considered...
 - Duration
 - Vibration (which might include power hand tools)



Tools to Evaluate

- Worksite evaluation
- JHA (Job Hazard Analysis)
 - sequence of basic job steps
 - potential hazards
 - recommended action or procedure
- Where do we start? How about our **accident log**?
 - frequency of accidents
 - rate of disabling injuries
 - severity potential
 - new jobs



Identify and Correct Problems

- If problems are found, work with your clients and employees to develop solutions.
- Understand that minimal changes to workstations yield tremendous results in alleviating problem areas.

Simple Solutions

- Anti-fatigue mats
- Adjustable chairs
- Armrests
- Encourage appropriate postures
- Encourage frequent changes in posture
- Changing work surface layout
- Job rotation
- Rest pauses/ Exercises
- Training



Other Solutions...

- More sophisticated clients may have
 - Zero gravity tools
 - Pallet wrap machines
 - Adjustable workstations
 - Hoyer lifts
 - Climate control
 - Lighting options



Training



- Training should include:
 - Back care
 - Weight management
 - Strengthening
 - Posture
 - Pre-work and break time exercise
 - Stretching

Equipment

- Material Handling
 - Hand trucks
 - Adjustable worktables and chairs
 - Assist lifts (vacu hoist)
 - Conveyors set at or slightly below chest level
- Office/Computer
 - Adjustable chairs
 - Wrist rests
 - Footrests
 - Video glare reduction
 - Chairs with lower back support



Medical Management

- Encourage **early reporting of problems**
 - If employees report early, you have an opportunity to take care of the problem before it results in a workers compensation claim.
- Encourage employee “wellness”
 - Exercise programs
 - Nutrition
 - Frequent check-ups
- Establish lifting limits and encourage team lifting as well as consequences for non-compliance



Regulations

- OSHA is developing industry- or task-specific guidelines for a select number of industries, taking into account injury and illness incidence rates, as well as available information on what is known to correct problems.
- Even if there are no guidelines specific to your industry, as an employer, you still have an obligation under the General Duty Clause, Section 5(a)(1) to keep your workplace free from recognized serious hazards, including ergonomic hazards.
- California has adopted CCR 8:5110 as their ergonomics standard.
- Check state plans for variations.

Summary Points

- The **most common injuries** in the workplace are **sprains and strains** (musculoskeletal disorders).
- Effective ergonomic programs can **minimize the number of injuries**.
- In most cases, the solutions to ergonomic problems are **not cost prohibitive** and do not require major design changes.
- Employee participation and management commitment are critical to the success of the program.