

3 - Ergonomics & CTDs: Safety Training

EH&S – MGA

Goals: This safety session should teach you to:

- A. Understand the risks and symptoms of ergonomic injuries.
- B. Know basic ways to avoid ergonomic injuries.

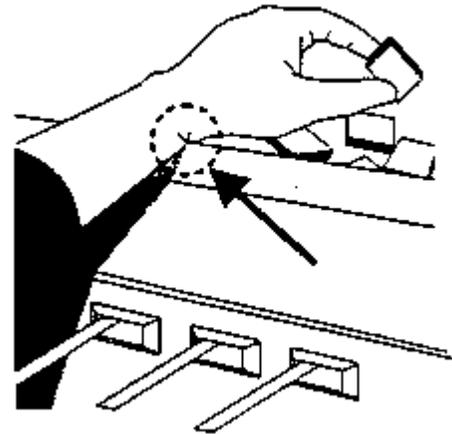
OSHA Regulations: General Duty Clause 5(a)(1)

1. Good Ergonomics Adapts the Job to the Person Instead of Forcing the Person to Fit the Job

- A. It reduces physical strain, pain, and possibly serious injuries.

2. Poor Ergonomics Causes Painful Musculoskeletal Disorders, Also Called Cumulative Trauma Disorders (CTDs)

- A. These are painful, sometimes crippling, injuries that generally affect upper body nerves, tendons, tendon sheaths and muscles. They may develop from frequent:
 - 1. Repetitive motions on a machine or keyboard, packing, cutting, etc.
 - 2. Forceful exertion of your arm or hand
 - 3. Use of vibrating or impact tools
 - 4. Awkward positions or movements
- B. Carpal tunnel syndrome, a common CTD, occurs when the nerve that runs through the wrist's carpal tunnel is pinched.
 - 1. Initial symptoms are numbness, tingling and weakness.
 - 2. It can reduce strength and mobility and may cause permanent damage.
- C. Tendinitis—arm or shoulder tendon inflammation—can result from overuse or strain.



3. Minimize Repetitive Movements to Avoid Ergonomic Injuries

- A. Repetitive movements are the most common cause of carpal tunnel syndrome.
- B. Avoid repetitive movements whenever possible.
- C. Switch tasks and positions to reduce time spent on repetitive motions.

4. Organize Your Work Area to Minimize CTD Risk

- A. Set up your workstation so that:
 - 1. Your work surface is at waist height.
 - 2. The tools and materials you need are within a 20-inch reach.
- B. Use a chair that offers back support and adjustable height.
- C. Position computer keyboards so you work with straight wrists, elbows at right angles, and arms resting at sides.

5. Choose and Use Tools With Ergonomics in Mind

- A. Select tools that are comfortable to use and hold.
 - 1. They should be lightweight, easy to grip, and not require extreme effort.
- B. Choose the right tool for the job to reduce strain and awkward positions.
- C. Grip tools so the thumb and index finger overlap slightly.
- D. Avoid bending your wrists while holding tools.
- E. Use clamps, jigs, etc., to help avoid awkward positions and bent wrists.
- F. Reduce vibration-related injuries by operating tools at the lowest efficient speed possible.
- G. Hold tools as loosely as possible without losing your grip.
 - 1. Use mechanical aids, not your hands, to grasp and hold materials you're working on.
- H. Keep your hands warm. Cold hands:
 - 1. Make you grip tools and materials too tightly.
 - 2. Are more likely to develop problems from vibration.

6. Don't Ignore Symptoms of Ergonomic Injuries

- A. Report it immediately if your arm, neck, shoulder, hand, wrist, or fingers feel:
 - 1. Pain or aching
 - 2. Numbness or tingling or stiffness
 - 3. Burning
 - 4. Swelling
 - 5. Weakness

Summation: Good Ergonomics Means Listening to Your Body

Numbness, pain, and other symptoms mean you're forcing your body to do something it wasn't meant to do. Look for ways to reorganize your work to avoid ergonomic injuries.