

# INDUSTRIAL ERGONOMICS

## Supplement to Standard Training Module

### TRAINING REQUIREMENTS OVERVIEW

This standard Vivid training module provides a general overview of industrial workplace ergonomics and back safety. Although ergonomic programs and employee training are currently not specifically required by OSHA, it is highly recommended that facilities have a detailed site ergonomics program in place where occupational risk factors are present.

**In addition to the general overview, employees *should* receive facility-specific training on ergonomics. This additional training *should* cover:**

- The company's ergonomic program
- Site experience, including history of musculoskeletal disorders
- Ergonomic hazards associated with their jobs and tasks
- Job-specific training for ergonomic risk prevention

**Additional, in-depth training should be provided for managers, supervisors, engineers, and maintenance personnel involved with program implementation, as well as for employees with significant exposure to occupational risk factors.**

The General Duty Clause requires an employer to “provide employment and a place of employment which are free from recognized hazards”. Employee training, appropriate to recognized workplace hazards, is anticipated to be a part of a facility's overall safety and health program.

Frequency: Training *should* be provided to affected employees:

- Upon initial assignment of work
- When recognized hazards change, or new hazards are introduced into the workplace
- When new or modified processes, procedures, and/or equipment are introduced into the workplace
- When an employee with an ergonomic injury returns to work
- When the employers' frequency of ergonomic injuries increases

## GENERAL OVERVIEW OF INDUSTRIAL ERGONOMICS BEST PRACTICES

Currently there is no OSHA standard covering industrial ergonomic exposures or control methods. A general industry standard can be expected in the future. In the interim, this module is presented as a best practice guideline for ergonomic program implementation.

**WRITTEN PROGRAM:** A written program is beneficial to outline the major components of the workplace ergonomic process, including:

- Facility-specific objectives
- Management Commitment and Employee Involvement
- Training
- Worksite Analysis
- Hazard Prevention and Control
- Medical Management

**PURPOSE:** To provide effective guidelines to identify and control ergonomic exposures in the workplace, through effective administrative and engineering means..

1. **SCOPE:** Applies to all occupational exposures to ergonomic risk factors in general industry operations.
2. **OBJECTIVES:** An ergonomic process should have goals and objectives for achievement based on the type of actual cumulative trauma occurrences in the work place and the existence of occupational risk factors of the manufacturing process.
3. **MANAGEMENT COMMITMENT:** Defined responsibilities and accountabilities for participation in the ergonomics process are crucial to long-term success. A statement of responsibilities is important to communicate how the following will be implemented:
  - Top management commitment to eliminating/minimizing ergonomic risk factors
  - Detailed expectations for participation from management, supervisors, engineering and maintenance
  - Expectations for employee involvement (i.e. ergonomic committees, reporting of signs and symptoms, problem solving task groups etc.)
4. **TRAINING:** Training should be provided, appropriate to an individual's responsibilities and accountabilities:

Production Employees

- The company ergonomic policy
- Hazards of their jobs and equipment
- Types of musculoskeletal disorders (MSDs)
- Risk factors that cause or contribute to MSDs, including:
  - Forceful exertion
  - Awkward postures
  - Local contact / Mechanical stressors
  - Vibration
  - Temperature
  - Repetition
  - Static Loading
- Recognition and reporting of signs and symptoms
- Personal techniques to prevent MSDs
- Job-specific training for ergonomic risk prevention

Management, Supervisors, Engineers and Maintenance

- Everything listed above for “Production Employees”
- Anthropometry
- Job and Workstation design criteria
- Hand tool design criteria

5. WORKSITE ANALYSIS: An ongoing worksite analysis system provides the means to quantify and prioritize workplace ergonomic hazards. Tools to assist include:
  - Initial analysis of injury, illness, and medical cases to identify actual incident trends
  - Baseline surveys of employees to identify work positions that contain actual or perceived ergonomic risk factors, and may lead to ergonomic injuries
  - Job Hazard Analyses to technically identify, quantify, and evaluate specific risk factors and work positions. Initial analyses often provide preliminary recommendations for engineering and administrative controls
  - Periodic ergonomic surveys to identify previously unrecognized risk factors or unintended results from implemented control measures
  - Employee Feedback and follow-up reports on implemented control measures and occupational symptoms experienced
  
6. HAZARD PREVENTION AND CONTROL: Details the methods used by the employer to eliminate or minimize workplace ergonomic hazards through:

Engineering Controls

- Selection and design of production processes
- Workstation design and layout
- Design of tools and equipment
- Design of controls and displays
- Material handling methods and procedures
- Selection of personal protective equipment

Work Practice Controls

- Design of job methods and motions
- Special training considerations for job methods
- Training for new hire, transfer, and return-to-work employees

Administrative Controls

- Rest breaks
- Job rotation
- Job standards
- Production process maintenance procedures

7. MEDICAL MANAGEMENT: The employer should have a defined system for medical management of cumulative trauma injuries, including:
- Identified, knowledgeable healthcare providers, familiar with production operations
  - Implementation of an effective return to work procedure
  - Baseline and periodic health surveillance evaluations
  - Conditioning periods for new and transferred employees

## REFERENCE MATERIALS

Publications

*Ergonomics Program Management Guidelines for Meatpacking Plants*

Publication # 3123

Can be downloaded at: <http://www.osha.gov/Publications/Osha3123.pdf>

*Ergonomics: The Study of Work*

Publication # 3125

Can be downloaded at: <http://www.osha.gov/Publications/Osha3125.pdf>

Website

OSHA website:

<http://www.osha.gov/ergonomicss/index.html>