



**Duke University - Facilities Management Department  
Environmental Safety and Health Program**

**Ergonomics Program**

<b>Area: All FMD Organizations</b>	<b>Date Effective: 11/27/2015</b>
<b>Issue No.: 1</b>	<b>Revision: 0</b>
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**A. Purpose**

1. To identify proper ergonomic procedures in order to prevent common workplace musculoskeletal (MSD) injuries.

**B. Scope**

1. This program applies to all FMD employees.

**C. Policy**

1. FMD will take all reasonable measures to provide a safe workplace. All FMD operations must be performed in a manner which will prevent any undesirable effects to FMD and/or Duke employees, assets, the local community, and the environment.
2. The provisions of this program and all applicable standards will be followed to ensure the safety of personnel performing services or maintenance activities to equipment, machines, or systems.

**D. Definitions**

1. **Ergonomics** - the practice of designing products, systems or processes to take proper account of the interaction between them and the people who use them.
2. **Ergonomic stressors** - Poor workplace design(s) can present ergonomic risk factors called stressors. These stressors can lead to musculoskeletal disorders (MSDs) and may include:
  - a. **Repetitive Motion**: Performing the same or similar motions repeatedly or using the same muscle-tendon groups throughout the day with no time for muscles and tendons to recover.
  - b. **Excessive Force**: Occurs when activities are performed that require exertion of a great deal of force against an object to move it or prevent it from moving.
  - c. **Awkward/Static Postures**: Awkward Postures are not normal, or stress the joints beyond their normal range. Static postures are those that require a person to hold one position for a prolonged period of time.
  - d. **Contact Stress**: Occurs when an activity or posture causes tissues to be compressed between a bone and another hard surface for a prolonged period of time.
  - e. **Vibration**: Occurs when a specific part of the body comes in contact with a vibrating object, such as a power hand tool. Exposure to whole-body vibration can occur while standing or sitting in vibrating environments or objects, such as when operating heavy-duty vehicles or large machinery.
  - f. **Cold Environment**: Occurs when work must be performed in a cold environment. Cold temperatures reduce the sensation of touch. This can cause employees to exert more force than is necessary. Working at temperatures below 68°F without adequate protection can be considered cold in some cases.
3. **Micro-break**- A 30-90 second stretch/rest break. Stop periodically and stretch the opposite way of what you are currently doing. In other words, if your job requires leaning forward a lot, periodically, stop briefly and lean back.
4. **Musculoskeletal Disorder (MSD)**- an injury or illness of the soft tissues of the upper extremity, shoulders and neck, lower back, and lower extremity that is primarily caused or exacerbated by

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workplace risk factors, such as sustained and repeated exertions or awkward postures and manipulations. (Examples include: tendonitis, epicondylitis, rotator cuff syndrome, low-back pain).

**E. Responsibilities**

1. FMD employees are responsible for the following:
  - a. Reporting hazardous or unsafe work conditions/practices, to either the supervisor/manager or via the Safety Hazard Reporting form available online:  
[http://fmd.duke.edu/safety/incident\\_injury\\_accident\\_reporting.php](http://fmd.duke.edu/safety/incident_injury_accident_reporting.php)
  - b. Reporting all work-related MSD injuries or illnesses to their supervisor verbally as soon as possible, and via the Work-Related Accident, Injury or Illness Report (A016) no later than the end of the same work shift in which the condition occurred or was noticed:  
<http://www.hr.duke.edu/benefits/medical/workcomp/index.php>
  - c. Assist in maintaining an ergonomic work environment in order to minimize injury.
  - d. Using proper body mechanics.
  - e. Being aware of potential ergonomic risk factors associated with their jobs.
  - f. Being familiar with the signs and symptoms of MSD injuries and report it as soon as possible.
2. FMD managers are responsible for the following:
  - a. Notifying all employees of the purpose and intent of the Ergonomics Program.
  - b. Being familiar with the concept of ergonomics and identifying workplace conditions that could cause or contribute to injury.
  - c. Assist in maintaining an ergonomic work environment in order to minimize injury.
  - d. Ensuring that employees receive appropriate training. See Section H below.
  - e. Assisting with the prevention of workplace injury or illness through the implementation of recommendations (processes, equipment, and/or PPE) from FMD Safety and/or OESO, designed to abate hazardous workplace conditions.
    - i. This typically is meant for users who are at a computer workstation or stationary work bench, for >4 hours.
  - f. Ensuring that employees who report MSDs or signs/symptoms of MSDs fill out the Work-Related Accident, Injury or Illness Report (A016) no later than the end of the same work shift in which the injury occurred or was noticed.  
<http://www.hr.duke.edu/benefits/medical/workcomp/index.php>
  - g. Ensuring that employees who report MSDs or signs/symptoms of MSDs seek appropriate medical attention according to the guidelines found on the Human Resources website:  
<http://www.hr.duke.edu/benefits/medical/workcomp/medical.php>
  - h. Ensure that employees are aware of OESO's on-line computer workstation self-help tool. These self-help tools empower and allow users to properly adjust and set up their computer workstation. [http://www.safety.duke.edu/Ergonomics/Self\\_Assessment.asp](http://www.safety.duke.edu/Ergonomics/Self_Assessment.asp)
  - i. Ensure employees are allowed to take micro-breaks when necessary.
3. FMD Safety is responsible for the following:

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- a. Assess the nature and extent of ergonomic hazards or issues which affect the health, efficiency, and morale of employees and recommend ways of minimizing or controlling these hazards (i.e. processes, procedures, equipment recommendations).
- b. Conduct an informal evaluation (when requested from an FMD employee, supervisor/manger) and a formal evaluation (when requested from Employee Occupational Health and Wellness (EOHW) or Workers' Compensation).
- c. Provide accurate and timely information on evaluations to EOHW and Workers' Compensation.
- 4. OESO is responsible for the following:
  - a. Work with FMD Safety to support managers with education, consultation, and direction regarding equipment design, workstation design, ergonomic implications of work processes, product recommendations and other aspects of ergonomics related to safety, health and productivity.
  - b. Maintaining on-line computer workstation self-help tool(s).
- 5. Employee Occupational Health and Wellness (EOHW) is responsible for the following:
  - a. Medical management of work-related injuries to ensure early identification, evaluation and treatment of symptoms. This may include systematic evaluation and referral of employees for an ergonomic assessment, consistent treatment, conservative return to work practices, and systematic monitoring of medical cases.

**F. Ergonomic Related Injuries**

- 1. Injuries that can be attributed to poor workplace ergonomics can range from simple discomfort to disabling ailments. Some symptoms of discomfort caused by poor ergonomics include:
  - a. Headache
  - b. Eye Strain
  - c. Neck pain
  - d. Shoulder pain
  - e. Back pain
  - f. Arm pain
  - g. Wrist pain
  - h. Numbness
  - i. Tingling
  - j. Leg Discomfort

**G. Control of Risk**

- 1. When circumstances dictate, corrective measures will be adopted that inherently reduce the identified risk; these may include (but are not limited to):
  - a. Physical changes to work environments, workstations and tools
  - b. Reducing the size and weights of loads handled
  - c. Process redesign
  - d. Job rotation

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2. When corrective measures may not be entirely adequate, FMD supervisors must ensure proper workplace procedures are in place for employee to follow. Additional ergonomics training will be provided, at the supervisor/manager's request, by FMD Safety to meet this need.

**H. Training**

1. Employees shall be made aware of this Program's contents and specific requirements by either an FMD safety representative or their manager.
2. Ergonomics training will be conducted upon hire, every three years, or as-needed. This might include when new equipment is introduced into the workplace, procedures change, and/or the work area changes.
3. Ergonomics training for all new employees will be completed within 10 days of employment.
4. Ergonomics training is provided via:
  - a) FMD New Employee Orientation for initial training.
  - b) On-line at [www.safety.duke.edu](http://www.safety.duke.edu) once every three years.
  - c) In-Person (by request and appointment).
5. Additional Training:
  - a) EOHW may recommend additional training for certain individuals
  - b) Managers may contact FMD Safety to request additional job specific training for groups or individual employees
  - c) If metrics indicate increased injury or incidents in certain functional areas, FMD Safety may choose to do in-person hands on training.

**I. References**

1. American National Standards Institute (ANSI) Z-365 *Control of Work-Related Cumulative Trauma Disorders (Working Draft)*
2. American National Standards Institute /Human Factors Society (ANSI/HFES) 100-2007, Human Factors Engineering of Computer Workstations
3. National Institute for Occupational Safety and Health (NIOSH), Technical Report 81-122, *Work Practices Guide for Manual Lifting*
4. Occupational Safety and Health Administration (OSHA) Guideline No. 3123, *Ergonomics Program Management Guidelines for Meatpacking Plants*

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