CSUDH

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS

Ergonomics Program

INTRODUCTION

Ergonomics is the science of fitting workplace conditions to a user's needs to reduce discomfort and avoid the risk of injury. The right 'fit' can also increase job satisfaction and productivity. The California Code of Regulations (CCR), Title 8 §5110 requires all employers to have an ergonomic program designed to reduce the risk of workplace repetitive motion injuries.

The methods and procedures used to identify, evaluate, and correct these types of injuries include, but are not limited to, engineering and/or administrative controls, workstation and equipment evaluations, and employee training.

The CSUDH Ergonomics Program is a cooperative effort between individual departments and Environmental Health and Safety (EHS). Its purpose is to improve employee well-being through the reduction of workplace discomfort and the identification and control of ergonomic hazards that may result in musculoskeletal disorders.

INCLUSIONS

This program includes all employees working on campus under direct management of California State University, Dominguez Hills. Components of the program include:

- Worksite and equipment assessment
- Hazard prevention and control
- Training and education
- Provision of personal protective equipment (PPE)
- Industrial ergonomics cost-sharing program

This policy shall not negate state requirements for ADA accommodations or for employees who have legally mandated equipment at their workstation.

EXCLUSIONS

This program does not include foundation employees, tenants (such as Loker Student Union), or vendors. It also does not include employees working from home or during business travel, contractors, students, or campus visitors.

DEFINITIONS

Musculoskeletal Disorders (MSDs) are injuries and disorders that affect the human body's movement or musculoskeletal system including muscles, bones, joints, and connective tissue.

These disorders may result in pain and loss of function; they are among the most disabling and costly conditions in the United States.

Repetitive Motion Injuries (RMIs) are specific musculoskeletal disorders that are caused by performing a task repeatedly. Repetitive work means performing similar tasks or a series of exertions again and again. This may include activities as lifting, twisting, gripping, pushing, pulling, typing, or mousing.

Engineering Controls protect workers by removing hazardous conditions or by placing a barrier between the worker and the hazard. Engineering controls involve modifying equipment, processes, or systems rather than requiring behavioral changes or personal protective equipment.

Administrative Controls rely upon changes to worker behaviors rather than removing the hazard. These may include rules, procedures, warning signage, and training.

RESPONSIBILITIES

PROGRAM ADMINISTRATOR

The program administrator is the Environmental Health and Safety Director. The administrator shall maintain injury metrics and develop prevention goals designed to reduce MSDs. The administrator shall also oversee the *Ergonomic and Injury Prevention* (EIP) cost-sharing program for industrial ergonomic equipment (see Appendix A).

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT

- Facilitate ergonomic assessment requests
- Provide general ergonomics training to employees
- Evaluate injury trends and develop action plans aimed at injury reduction
- Develop training materials, fact sheets, and stretching programs for employee use

MANAGERS

- Follow injury trends for the department and develop strategies to reduce MSDs
- Provide employee training for equipment and PPE use
- Work with EHS and Workers Compensation as required to implement corrective actions
- Respond to employee requests for ergonomic evaluation

EMPLOYEES

- Report discomfort on the job before it becomes an injury
- Contact EHS to request an ergonomic assessment
- Follow ergonomic recommendations
- Employ proper working techniques
- Participate in provided ergonomic training
- Report all injuries

WORKERS COMPENSATION DEPARTMENT

- Provide guidance to supervisors when American Disabilities Act (ADA) regulations apply to an employee's needs
- Assist with reasonable accommodations when applicable
- Inform EHS when a reasonable accommodation request is made
- Provide required documentation to insurance provider

REPETITIVE MOTION INJURY REPORTING

Employees must report all workplace injuries to their supervisors as soon as possible. The injury reporting process is outlined in the university's *Injury and Illness Prevention Program.* Additionally, the state of California has specific reporting and hazard correction requirements for RMIs. To qualify, these injuries must be:

- Diagnosed by a medical doctor
- Caused predominantly (at least 50%) by workplace exposures to repetitive motions
- Incurred by performing identical work activities (such as but not limited to word processing, assembly, or loading)
- Reported by the employee within the last 12 months

HAZARD CORRECTION FOR RMIs

When a workplace RMI is identified and reported, CSUDH shall take steps to identify and correct the hazard in a timely manner and eliminate or minimize future exposures. A hazard assessment shall be conducted for the repetitive task and similar repetitive tasks being performed.

Once the hazard is identified, control measures must be developed to eliminate or minimize the risk of RMIs. Engineering controls shall be considered first. This may include a workspace redesign, adjustable fixtures, equipment replacement, or tool redesign. Administrative controls such as job rotation, work pacing, or work breaks may also be incorporated into the program.

PREVENTION

Prevention is the key to reducing workplace MSD's. This includes the use of good body mechanics, good ergonomic design (engineering controls), and the use of administrative controls. Early intervention makes a difference when symptoms such as pain, numbness, tingling, or tenderness occur in the fingers, hands, muscles, back, shoulders, or other parts of the body. It is important for employees to report early signs and symptoms of discomfort to their supervisor.

WORKSTATION ASSESSMENT – OFFICE EMPLOYEES

The vast majority of employees at CSUDH are instructors or office workers. Maintaining a static position for prolonged periods can increase the likelihood of MSDs. A workstation assessment is conducted to evaluate an employee's computer workspace and make recommendations regarding equipment and posture to reduce or eliminate biomechanical stress. Workstation assessments can be requested at any time provided that employee completes the following prerequisites:

- Take the ergonomics course through CSU Learn
- Fill out the *Ergonomics Inquiry* Form (include requested measurements and photos)
- Obtain responsible administrator's signature

Components of the assessment include:

- Chair height, support, and rating
- Desk height and configuration
- Keyboard and mouse use
- Monitor height and distance
- Footrests
- Reach zone

Under the terms of the California Labor Code, an employer may not deny ergonomic equipment for known risks. EHS has developed a catalog with ergonomic office product recommendations. The *Ergonomics Lab* displays many of these products for employees to consider before requesting purchase from their departments.

EQUIPMENT AND WORKSTATION ASSESSMENT - INDUSTRIAL ERGONOMICS

Industrial ergonomics applies to an industrial work area (e.g., workshops, labs, equipment repair areas). Good body posture should always be employed to minimize muscle tension and body strain. Exercise and pre-shift stretching can benefit those who work on their feet, carry heavy loads, and use industrial equipment. Ergonomically designed equipment must

be considered whenever equipment is replaced or new equipment is purchased.

MANUAL MATERIAL HANDLING

Manual material handling involves sitting, lifting, lowering, twisting, and/or carrying objects; it may also involve getting up and down from a standing position. All of these movements include using the back. To avoid the risk of developing back problems, ergonomic principles should be applied while lifting and moving. If ergonomic principles are ignored, daily stress on muscles, joints, and disks in the back can eventually cause an MSD.

For objects that are too heavy or bulky for safe manual handling by employees, manual or mechanical lifting devices must be used to aid lifting and moving. Options for heavy lifting include:

- Proper lifting techniques
- Using lifting aid such as forklifts (if certified), dollies, handcarts, or golf carts
- Seeking assistance of another employee
- Breaking the load down into smaller components, when possible

INDUSTRIAL HAND TOOLS

Good working postures can be maintained when properly designed tools are used. Improper hand tool selection or improper use of tools can cause MSDs. Hand tools should fit the employee's hand; employees with small hands or who are left-handed may need tools that are better designed for them.

Hand and wrist posture affect how much force the muscles must produce to hold objects. When selecting and purchasing hand tools, managers should:

- Select tools that allow the wrist to be held straight and that minimize twisting of the arm and wrist.
- Select tools that allow the operator to use a power grip, rather than a pinch grip. Minimal muscle force is required to hold objects in a power grip posture. The pinch grip requires excessive fingertip pressure, and can lead to an MSD.
- Avoid tools that put excessive pressure on any one spot of the hand (e.g. sides of fingers, palm of the hand).

INDUSTRIAL EQUIPMENT

New or replacement industrial equipment shall be assessed and approved by the EHS department before purchase. Equipment used for certain processes (such as cutting, welding, plumbing, glazing, chemical ventilation, and auto repair) is hazardous by nature. A safety evaluation can demonstrate engineering controls that greatly reduce the chance of

injury and improve body mechanics. Once approved, equipment shall not be released to the end user without a written job hazard analysis and appropriate training.

NOISE AND VIBRATION EXPOSURES

Excessive noise and vibration hazards are classified as ergonomic risks. In the state of California, noise exposures are limited based on a time weighted average (TWA) (8 CCR §5096. *Exposure Limits for Noise*).

Power or pneumatic tools are often available with vibration dampening or noise control that is built in. These factors shall be considered when purchasing new or replacement equipment. For existing equipment, the effects of noise and vibration can be reduced by:

- Providing required hearing protection to employees exposed to noise above permissible exposure levels.
- Providing vibration reducing gloves to employees exposed to vibrating equipment such as sanders or saws.
- Conducting hazard analysis for equipment suspected of excessive noise or vibration

TRAINING

Ergonomic training begins with new employee orientation. The EHS department representative will include information about proper lifting, office ergonomics, and the general ergonomics program. Ergonomic postures shall be demonstrated when new employees are taught to use industrial equipment. The EHS department has created several *Fact Sheets* for proper lifting and stretching. These are available on the university website.

Training modules for ergonomics are also available through *CSU Learn*. Department managers may assign specific topics to their employees. Department managers may request additional training assistance from the EHS department when ergonomic hazards or RMI trends are identified.

Ergonomic training programs at CSUDH shall minimally:

- Review the components of the university's ergonomics program
- Identify exposures that have been associated with RMIs
- Educate employees about the symptoms and consequences of RMIs
- Explain the importance of reporting RMIs early
- Demonstrate the methods used by the university to minimize RMIs

COST SHARING PROGRAM

The cost sharing program is a collaborative effort between Environmental Health and Safety, Risk Management, and Worker's Compensation. Costs are shared for equipment and/or PPE that promote neutral postures and reduce repetitive motion injuries that can lead to an MSD (see Appendix A).

PROGRAM EVALUATION

The ergonomics program shall be evaluated annually. The EHS department produces an annual report outlining injury trends for the past fiscal year. Included in the report is a strategic plan for the reduction of future injuries, including those that could be prevented through ergonomic solutions.

APPENDIX A – Sample EIP Form

CSUDH Ergonomics and injury prevention (EIP) cost share program

(In Collaboration with Environmental Health and Safety, Risk Management, and Worker's Compensation)

HOW THE PROGRAM WORKS:

The cost sharing program is designed to be a collaboration with campus departments to proactively work with EHS, RM and W/C to utilize equipment and/or PPE to make work practices safer for the department and campus community. Applications should be for purchases of $500 to $5000, with this program covering 50% of the cost.

Applications are reviewed on a quarterly basis by EHS, RM, W/C & the department asking for the funding. Completed applications are reviewed and meetings scheduled at the beginning of each quarter to review the proposal. At the conclusion of the quarterly review EHS, RM and W/C review all proposal and determine which proposals will be funded.

NOTE: Funds are requested for each Fiscal Year, should funds be depleted before the end of the Fiscal year, all remaining applicants will be reviewed in Q1 of the following FY.

APPLICATION PROCESS:

1. Contact EHS to go over the intended purchase and briefly explain why the purchase will improve workplace safety for the department. Should the initial discussion warrant a further review, then complete this application

2. Items listed below are needed to support the request, all forms should be emailed to Environmental Health and Safety at ehs@csudh.edu

   a. EIP Application
   b. The cost, via a quote, for the item requested
   c. Any additional supporting documentation to support the need for the item

3. EHS will respond to the email noting the application was received and the date and time of the proposal meeting to review the application with the department

4. All approved cost share items will be purchased by the department and the chartfield will be issued to reimburse 50% of the cost of the item. Chargeback must occur before year end accounting requirements.

APPLICATION		
Department:	**Building:**	
Proposal Submitted By:	**E-mail:**	**Telephone:**
Admin contact for charge backs	**Email:**	**Telephone:**
Additional contacts:	**Email:**	**Telephone:**
Total cost of proposed project: **$ _____**	**Funding Requested (50% of Total Cost):** **$ _____**	

PROJECT DESCRIPTION
Provide the basic details of the project (vendor, brand/model, location/building, persons affected). Remember to attach quotes or a purchase order.

PROJECT GOALS
Review attached Appendix A and describe the goals of your project using the S.M.A.R.T. format. Include all identified hazards and provide information on the how the proposed project will address safety concerns/issues:
1. Specific
2. Measurable
3. Achievable
4. Relevant
5. Timebound

Submitter Signature **Date**

Departmental Manager Signature **Date**

EXAMPLE OF A SMART GOAL:

Proposed Purchase of Westco Power L Stair climber Machine for University Housing

EIP Applications must include specific goals designed to promote safety and reduce potential risk of injury.

These goals must be SMART:

1. Specific - Consider who, what, when, where, why and how in developing the goal.
2. Measurable - Include a numeric or descriptive measurement.
3. Achievable - Consider the resources needed and set a realistic goal.
4. Relevant - Make sure the goal is consistent with the mission.
5. Time-bound - Set a realistic deadline.

Is It Specific?

Sample Goal: Housing moves furniture and other large items up and down stairs in Phase I & II, having a mechanical stair climber to assist in transporting heavy or awkward items will reduce load on necks, backs and shoulders

Is It Measurable?

SMART Goal: In 2017 Housing experienced 3 workplace injuries from manually carrying heavy items up and down stairs.

Is It Achievable?

SMART Goal: By using a mechanical device to move items, weight load is taken off the employee and moved to the equipment, this has been shown to achieve reduced injuries. This may also require less staffing to perform similar tasks, freeing up resources for other projects.

Is It Relevant?

SMART Goal: Due to the need, especially at move in and move out, custodial and trades staff have to enter, rearrange and move items. Since there are no elevators, this becomes even more relevant as heavy items can be moved via an elevator. Can also use a mechanical stair climber to move custodial cleaning equipment up and down stairs.

Is It Time-Bound?

SMART Goal: Due to the frequency of this job task, opportunities over the next fiscal year will happen frequently and thus the return on this investment could be shown with as little as one workplace injury.