

**APHIS ERGONOMICS PROGRAM**

**1. PURPOSE**

This Directive establishes procedures for ergonomic hazard identification, evaluation, and control; training; program management; and program evaluation within the Animal and Plant Health Inspection Service (APHIS).

**2. DEFINITIONS**

- a. Ergonomics. The task of fitting the job to the person, as opposed to fitting the person to the job.
- b. Musculoskeletal Disorders (MSDs). Injuries and disorders of the soft tissues (muscles, tendons, ligaments, joints, and cartilage) and nervous system.
- c. Work Related. The physical work activities or workplace conditions in the job which are reasonably likely to be causing or contributing to a reported MSD.

**3. SCOPE**

- a. APHIS provides a comprehensive Safety and Health Program for APHIS employees with work places and conditions of employment in which the risk of exposures to potential hazards is minimized.
- b. The Safety, Health, and Employee Wellness Branch (SHEWB) administers the APHIS Ergonomic Program (EP) as though every employee at APHIS is at risk for developing a work-related musculoskeletal disorder (WMSD). From administrative personnel to industrial personnel, ergonomics plays an important role in preventing injury and illness. The APHIS-EP uses a comprehensive approach to inform employees of the possible ergonomic hazards to which they may be exposed.
- c. The APHIS-EP will focus on employees whose primary work-related tasks require repetitive motions, awkward postures, high repetition, and forceful exertions. At APHIS, these types of job tasks normally are performed by employees spending a large portion of their day at computer workstations, employees involved with animal care and handling, and employees involved with repetitive or heavy lifting.

#### **4. AUTHORITIES**

- a. The Occupational Safety and Health Act of 1970, Section 5(a)(1), General Duty Clause.
- b. Executive Order 121965 -- Federal Civilian Employees, Section 1-201.
- c. Title 29, Code of Federal Regulations, Part 1960.8(a), Agency Responsibilities.

#### **5. REFERENCES**

- a. APHIS Safety and Health Manual dated 2/27/98.
- b. USDA Technology Accessible Resources Gives Employment Today (TARGET) Center.
- c. Federal Occupational Health, U.S. Public Health Service.
- d. National Institutes of Health Division of Safety Occupational Safety and Health Branch Ergonomics Program, March 2000.
- e. Ergonomics: The Study of Work, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) 3125 2000 (revised).
- f. Musculoskeletal Disorders and the Computer Workstation, Roslyn Edson, M.S., CPE.
- g. Department of Army Pamphlet 40-21: Medical Services Ergonomics Program.
- h. USACHPPM Draft Technical Guide 220: Ergonomics in Action.

#### **6. POLICY**

APHIS will provide, upon request, at no cost to the employee, an ergonomic evaluation of the employee's workstation or work area and training on ergonomic hazards typically found in his/her work area.

#### **7. GOALS**

- a. The goals of the APHIS Ergonomics Program are to:
  - (1) Prevent injuries and illnesses by eliminating or reducing employee exposures to WMSD risk factors;

- (2) Reduce the potential for fatigue, error, and unsafe work practices by adapting the job and workplace to the employee's capabilities and limitations;
  - (3) Increase the overall productivity of the work force;
  - (4) Reduce worker's compensation claims and associated costs; and
  - (5) Improve employee morale and willingness to perform job tasks.
- b. An emphasis on early identification and prevention of WMSDs will preserve and protect the APHIS work force while decreasing related costs. A WMSD is limited to one that meets all three of the following criteria:
- (1) It is recordable by the Federal Employees Compensation Act, Office of Workers' Compensation Program (OWCP), as an injury or illness;
  - (2) It occurred in a job where the WMSD hazards present are reasonably likely to cause or contribute to the type of musculoskeletal disorder (MSD) reported; and
  - (3) A significant part of the injured employee's regular job duties involves exposure to these WMSD hazards (i.e., not incidental exposure).

## **8. RESPONSIBILITIES**

A collaborative partnership among all levels of the working community is essential in achieving the goals of the APHIS-EP. Agency emphasis, commitment by management, and demonstrated visible involvement are imperative to provide the organizational resources and motivation needed to implement a sound ergonomics policy. All levels of APHIS employees (managers, supervisors, and employees) are responsible for injury prevention and the identification and resolution of WMSDs.

- a. The Ergonomics Program Manager (EPM):
- (1) Develops and administers the APHIS-EP; coordinates, schedules, and conducts ergonomic evaluations;
  - (2) Coordinates and conducts ergonomic training sessions;
  - (3) Maintains a database on employees who have been evaluated and have completed ergonomic training;
  - (4) Remains abreast of technical issues related to ergonomics;

- (5) Periodically reviews and evaluates the effectiveness of the APHIS-EP; and
  - (6) Maintains regular contact with the OWCP specialist and Work Life Wellness Program (WLWP) manager to assess and determine how the APHIS-EP may better serve its employees.
- b. The Collateral Duty Safety and Health Officer (CDSHO):
- (1) Conducts ergonomic evaluations and training sessions; and
  - (2) Completes an Office Ergonomic Evaluation Checklist (OEEC) (see Attachment 1) for each evaluation performed for an APHIS employee. A copy of that evaluation will be furnished to the EPM. A list of all employees who participate in an ergonomics training session will be furnished to the EPM.
- c. The OWCP Specialist provides a means for employees to report job-related injuries and illnesses and receive compensation benefits for disability due to personal injury or illness sustained while performing their job-related duties.
- d. The WLWP Manager encourages employees to:
- (1) Generate a healthy attitude and lifestyle.
  - (2) Develop habits that will:
    - (a) Improve their health and morale;
    - (b) Prevent illness; and
    - (c) Decrease absenteeism, workers' compensation expenses, turnover rate, deaths, and premature retirements.
  - (3) Participate in regular exercise on a daily basis to maintain good health and reduce stress. Some locations have fitness centers within their facilities. Time should be allotted to employees wishing to workout during the day, through use of maxiflex schedules or personal leave.

- e. Supervisors will:
  - (1) To the full extent of their authority, furnish employees a place of employment which is free from recognized ergonomic exposures and hazards.
  - (2) Encourage employees to file claims for injuries and illnesses suffered on the job.
  - (3) Provide employees time to participate in APHIS-EP initiatives, including training, without restraint, interference, coercion, discrimination, or reprisal.
  
- f. Employees will:
  - (1) Follow applicable workplace safety and health rules,
  - (2) Follow work practices and procedures related to their jobs,
  - (3) Report early signs and symptoms of ergonomic-related injuries and illnesses, and
  - (4) Participate in APHIS-EP initiatives and training.
  
- g. APHIS Contractors (e.g., Federal Occupational Health), if required, will have a fully implemented Ergonomics Program.
  
- h. The Technology Accessible Resources Gives Employment Today (TARGET) Center ensures that all USDA employees have safe and equal access to electronic and information technology by assessing, educating, and advocating for the integration of assistive technology and worksite accommodations.

## 9. **WORKSITE ANALYSIS**

Worksite analysis identifies existing risk factors associated with WMSDs. Worksite analysis also includes close scrutiny and tracking of injury and illness records to identify patterns of trauma or strains that may indicate the development of WMSDs. Other medical information may be acquired through the medical records and worker's compensation records with employee consent. The analysis will be conducted by the EPM.

- a. Passive Surveillance. This procedure involves the analysis of data provided in existing monthly or quarterly reports. Such surveillance will identify WMSD hazards, set intervention priorities, and organize the ergonomics effort. The APHIS EPM may solicit trend analyses from sources such as:
- (1) Routine injury and illness reports;
  - (2) Log of Federal Occupational Injuries and Illnesses (OSHA 300);
  - (3) OWCP records;
  - (4) Accident reports and insurance claims;
  - (5) Safety, industrial hygiene and occupational health surveys and records;  
and
  - (6) Employee suggestions.
- b. Active Surveillance involves focused and active efforts to gather information about WMSD hazards at worksites and to identify workers at risk of developing a cumulative trauma disorder (CTD). The APHIS EMP and CDSHOs will actively seek information to target and assess problematic work areas, job series, and tasks. Active surveillance will be performed in conjunction with safety and/or industrial hygiene surveys or regular training. This will help in identifying symptoms that indicate early or developing WMSDs.
- (1) Examples of active surveillance include:
    - (a) Questionnaires and surveys. The EPM and CDSHOs may use worker surveys to obtain information on current and past symptoms, including the anatomical location, duration, intensity, and frequency of symptoms. Worker surveys and questionnaires will be administered to employees to provide a quick way to identify workers' perceptions and sources of discomfort. Also, these tools will help in identifying problems that might otherwise go unreported.

The worker surveys will be conducted when passive surveillance indicates an increase in WMSDs, before and after initiation of new jobs, tasks, tools, or processes, and when a worker is hired or transferred in order to establish a baseline.

- (b) Observation. Direct observation by the EMP and CDSHOs conducting regular walk-throughs and safety and/or industrial hygiene surveys can identify WMSD hazards. Worker interviews during these surveys can identify tasks or situations that are uncomfortable and may indicate WMSD risk factors.
  - (c) Activity or position (job) hazard analysis. The EPM and CDSHOs will identify the steps of a particular activity or employee's job, determine the hazards associated with the performance of those steps, and finally, recommend controls or changes to eliminate or reduce the risks during the activity or job task execution.
  - (d) Case referrals. Case referrals will be used to identify a work area with potential WMSD risk factors.
- (2) The presence of one WMSD will trigger an active surveillance survey using appropriate questionnaires or surveys in conjunction with an activity or position (job) hazard analysis. The CDSHOs will perform active surveillance at respective worksites at least once a year. Also, the CDSHOs will perform walk-through surveys for any new or significantly changed job, process, equipment, or method. The EPM may be called in on a walk-through as necessary.
  - (3) In many cases, corrections to the WMSD hazards or risk factors are simple, quick, on-the-spot workplace changes. The EPM and CDSHOs will conduct regular walk-through surveys to identify and implement solutions immediately. More complex problems will require prioritization and detailed analysis.
  - (4) If a worksite or job is identified as high risk, special medical surveillance may be indicated.
- c. Prioritization. The APHIS EPM and CDSHOs will prioritize worksites for detailed analysis based on the passive and active surveillance information. The prioritization may be based on the number of workers affected, direct costs, lost work time, or severity of cases. OWCP data will be used to identify high-cost injuries and high-risk work areas.
  - d. Detailed Analysis. To further evaluate those jobs or worksites having WMSD risk factors as determined by passive and active surveillance, a more detailed analysis will be conducted. A detailed analysis will include the following:
    - (1) Consideration of the concept of multiple causation and the degree of WMSD risk;

- (2) Identification of trends, including age, gender, work task, and time of injury;
- (3) Identification of the work tasks or portions of the process that contain risk factors; and
- (4) Identification of both problems and solutions.

The following data, analysis tools, and methods may be used during a detailed analysis:

- (a) OSHA Log 300;
- (b) Log of Federal Occupational Injuries and Illnesses or equivalent;
- (c) Accident and injury reports;
- (d) Lost work time or absenteeism reports by job, unit, department, or facility;
- (e) Checklists, questionnaires, and interviews; and
- (f) Direct observation, videotape analysis, and job analyses.

## **10. IDENTIFICATION OF ERGONOMIC HAZARDS**

Most work-related tasks have some degree of risk for developing a MSD. The APHIS-EP is designed to help SHEWB staff and other responsible APHIS employees identify work-related tasks that present a moderate to high degree of risk. Ergonomic hazards will be identified by the following methods:

- a. Employee Request for Evaluation. APHIS employees should contact their area CDSHO to request an ergonomic evaluation of their work area. These calls should be forwarded to the EPM if warranted.
- b. Safety and Occupational Health Specialists (SOHSs). Agency SOHSs, including industrial hygienists, will notify the EPM of any workplace conditions or physical work activities that cause or are reasonably likely to cause or contribute to a WMSD during laboratory, safety, and industrial hygiene surveys in their areas of responsibility.



- c. OWCP Records. OWCP records will be evaluated by the EPM to determine whether a WMSD has occurred in work areas that have not been previously identified by the SHEWB.

## 11. HAZARD PREVENTION AND CONTROL

- a. Once risk factors associated with WMSDs have been identified, steps will be taken to eliminate or control the risk factors. The primary method of preventing and controlling exposure to WMSD hazards is through effective design (or redesign) of a job or worksite. There are several types of control measures which are listed below:
  - (1) Engineering controls. Engineering controls are the preferred methods of control. The workstation is adapted to fit the worker through redesign or modification of the workstation, work methods, and tools. Equipment or worksite redesign typically offers a permanent solution.
  - (2) Substitution. Substituting a new work process or tool (without WMSD hazards) for a work process with identified WMSD hazards can effectively eliminate the hazard.
  - (3) Work practice controls. Practices that decrease worker exposure to WMSD risk factors include changing work techniques, providing employees conditioning programs, and regularly monitoring work practices. Also included are maintenance, adjustment, and modification of equipment and tools as needed.
    - (a) Proper work techniques include methods that encourage:
      - 1 Correct posture.
      - 2 Use of proper body mechanics.
      - 3 Appropriate use and maintenance of hand and power tools.
      - 4 Correct use of equipment and workstations.
    - (b) Employee conditioning refers to the use of a conditioning or break-in period. Employees returning to work from injury or illness may need gradual integration into a full workload, depending on the job and the person. The EPM, CDSHOs, and supervisors should identify those jobs that require a break-in period.

- (c) Regular monitoring of operations helps to ensure proper work practices and to confirm that the work practices do not contribute to cumulative trauma injury of hazardous risk factors.
  - (d) Effective schedules for facility, equipment, and tool maintenance, adjustments, and modifications will reduce WMSD hazards. This includes ensuring proper working conditions, having sufficient replacement tools to facilitate maintenance, and ensuring effective housekeeping programs. Tool and equipment maintenance also may include vibration monitoring.
- (4) Administrative controls. Administrative controls will be used to limit the duration, frequency, and severity of exposure to WMSD hazards. Examples of administrative controls include, but are not limited to:
- (a) Decreasing production rate requirements and limiting overtime work to reduce the number of repetitions.
  - (b) Reducing the number and speed of repetitions by reducing line or production speed or by having worker input regarding production speed.
  - (c) Providing rest breaks to relieve fatigued muscles.
  - (d) Increasing the number of employees assigned to the task (e.g., lifting in teams rather than individually).
  - (e) Instituting job rotation as a preventive measure, with the goal of alleviating physical fatigue and stress to specific body parts. Job rotation is not to be used in response to symptoms of cumulative trauma. This can contribute to symptom development in all employees involved in the rotation schedule rather than preventing problems.
  - (f) Providing modified- or restricted-duty assignments to allow injured body parts time to rest, assisting in the healing process. Every effort will be made to provide modified- or restricted-duty assignments when physical limitations (as identified by occupational health employees) allow the worker to return to work performing less than his/her normal work requirements. In regard to modified- or restricted-duty assignments:

- 1 An occupational health medical provider must specifically identify physical limitations and restrictions for the individual worker based on his/her symptoms.
  - 2 Occupational health medical providers with specific knowledge in both occupational demands and cumulative trauma injuries should cooperate with trained ergonomics employees to develop a list of jobs with low WMSD risk.
- (g) Personal Protective Equipment. Personal protective equipment (PPE) is not necessarily recommended for controlling exposure to WMSD hazards, since little research has been conducted to support claims of its usefulness.
- 1 PPE is worn to provide a protective barrier between the employee and an MSD hazard. Anti-vibration gloves are an example of PPE. Medical appliances, such as wrist rests, back belts, back braces, etc., are not considered PPE. The Office of the Surgeon General does not support the use of back belts as a back injury preventive measure.
  - 2 Consider WMSD hazards when selecting PPE. The PPE should:
    - a Be properly worn or used according to manufacturers' specifications.
    - b Be available in a variety of sizes.
    - c Accommodate the physical requirements of employees and the job.
    - d Not contribute to WMSD hazards.
- b. The supervisor, with the technical assistance of the EPM and the CDSHOs, will implement all engineering, administrative, and work practice controls recommended during the ergonomic assessment. The EPM will followup to determine whether the changes were successful, and if the employee is experiencing improvement of MSD symptoms.
- c. Funding for suggested recommendations will be provided by each program area within APHIS. The APHIS-EP will provide limited funds in helping programs to meet suggested recommendations.

## 12. HEALTH CARE MANAGEMENT

- a. Proper medical management is necessary to eliminate or reduce the risk of developing MSD signs and symptoms through an early reporting system which will identify and treat signs and symptoms before they develop into diagnosable disorders. Medical management of disorders should involve conservative treatment. Examples of conservative treatment include adequate rest, alternative work duties, conditioning, break-in periods, and job modification. Medical treatment may be necessary if conservative treatment fails. Surgery should be considered only after thorough medical evaluations and treatments have been conducted.
- b. Employees will be notified by their supervisor that they are to report all signs and symptoms of a WMSD to the APHIS Medical Officer (MO), in addition to completing any OWCP forms (e.g., Form CA-1, Federal Employee's Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation and Form CA-2, Notice of Occupational Disease and Claim for Compensation). The APHIS MO provides employees a mechanism for reporting signs and symptoms of WMSDs.

## 13. TRAINING AND EDUCATION

- a. Training and education are critical components of an ergonomics program for employees potentially exposed to the risk factors associated with WMSDs.
- b. Ergonomic training will be performed primarily by the APHIS EPM. The train-the-trainer concept will be established, in which case managers, supervisors, and designated employees will be trained on ergonomic concepts. These employees will be trained bi-annually by the EPM, CDSHOs, or an authorized contractor to perform basic ergonomic evaluations and training. Training formats consists of the following:
  - (1) Ergonomic Training Classes. Periodically, the SHEWB will provide training classes on office ergonomics, industrial ergonomics, and laboratory ergonomics. All training classes will be conducted onsite and in an instructional classroom environment.
  - (2) Video-based Training. The SHEWB has a video lending program loaning out training videos on office and industrial ergonomics for a period of 2 weeks. Each video is approximately 25 minutes in length. The videos are loaned to departments for employee training, and may be used by the EPM, CDSHO, and other designated trainers during training classes or presentations.

- (3) One-On-One Training. One-on-one ergonomic training is provided to employees during ergonomic evaluations. During an office ergonomic evaluation, the employee is provided a copy of the APHIS Computer Workstation Ergonomic Handout (APHIS-CWEH) and the APHIS-OEEC. The APHIS-CWEH provides employees information on services the SHEWB can provide concerning ergonomics, information on proper workstation adjustments, and suggested office stretching exercises. The APHIS-OEEC is used whenever an office ergonomic evaluation is performed by the EPM or CDSHO. Each question on the OEEC is phrased affirmatively; therefore, if a question is answered with a NO response, the resulting recommendation will be recorded on the APHIS-OEEC.
- c. The EPM maintains a database of each employee who has completed instructional ergonomic training. The employee's name will remain in the database for as long as the employee is employed by APHIS.

All employees are trained on the following general issues:

- (1) WMSDs;
- (2) Risk factors associated with WMSDs;
- (3) How to recognize and report symptoms;
- (4) How to prevent or control these symptoms; and
- (5) On-the-job techniques that are difficult to communicate through classroom training and computer-based training.

#### **14. ERGONOMICS PROGRAM EVALUATION**

- a. The APHIS-EP will be evaluated annually by the EPM to ensure program effectiveness.
- b. The EPM will analyze worker's compensation claims with reported WMSDs to determine:
  - (1) The total number of reported WMSDs for the year;
  - (2) The type of work these employees perform;

- (3) Whether these employees received ergonomic training prior to their WMSD; and
  - (4) Any changes or trends in the reporting of WMSDs.
- c. After these work areas or job tasks are identified, the APHIS-EP will be implemented by SHEWB. During the following fiscal year, the data gathered will be analyzed to:
- (1) Establish a baseline for each APHIS program, its corresponding locations, and for APHIS overall; and
  - (2) Determine whether the APHIS-EP effectively reduced the number and severity of the reported WMSDs.

## 15. INQUIRIES

- a. Inquiries about this Directive should be directed to APHIS, Employee Services Division, SHWEB.
- b. This Directive is available on the MRPBS home page at [www.aphis.usda.gov/library](http://www.aphis.usda.gov/library).

/s/

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Attachment