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IN REPLY  
REFER TO DLA-Strategic Materials

SEP 16 2010

MEMORANDUM FOR ALL EMPLOYEES

SUBJECT: Ergonomics Plan

Attached for your information and implementation is our updated Ergonomics Plan, dated September 2010.

This revision replaces previous procedures dated FY 2000 and other memoranda. Should you have any questions please contact Jason Boynton at (703) 767-7592.

A handwritten signature in blue ink that reads "Ron Favors".

RON FAVORS  
Administrator

Attachment



*Final*

# Defense Logistics Agency Strategic Materials

## Ergonomics Plan

September 2010

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# Acronyms and Abbreviations

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DLA	Defense Logistics Agency
IEO	Installation Ergonomics Officer
PPE	personal protective equipment
WMSD	work-related musculoskeletal disorders

# Purpose and Policy Statement

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The Defense Logistics Agency (DLA) Strategic Materials is issuing a revised Ergonomics Plan. This plan will be adopted by all DLA Strategic Materials components.

## Ergonomics Program Policy Statement

We are committed to the health and safety of our staff. This ergonomics program has been developed and will be implemented to aid in minimizing ergonomic risk factors to which our staff may be exposed and eliminating work-related musculoskeletal disorders (WMSDs). This program will focus on continual improvement and emphasize proactive measures such as educating employees, identifying and prioritizing high-risk situations, and reducing ergonomic risk factors.

For this program to be successful, it must have support at all levels of the organization and include the participation of everyone. All are required to participate, and no one will be excluded. The intent of this program is to make DLA Strategic Materials a role model agency within the Department of Defense. There will be a structured approach for identifying jobs and tasks with ergonomics risk factors and potential for WMSD injury, assessing those jobs and tasks, and eliminating or controlling those risk factors. Ergonomics training will be provided to employees, and, if a WMSD does occur, employees will receive prompt medical management. The program will be evaluated periodically. This program will establish measureable goals and methods to identify and manage the reduction of WMSD risk factors and provide the resources needed to achieve those goals.

This plan will be monitored as well as administered by DLA Strategic Materials. All questions regarding this plan will be directed through Jason Boynton, the DLA Strategic Materials Safety Manager.

# 1. Ergonomics Program Goals and Components

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The overall objective of this ergonomics program is to prevent WMSDs through integrating ergonomics into job design; educating and training employees; performing assessments and evaluations as a standard practice rather than after a report of discomfort; providing the proper tools and equipment based on the assigned tasks and employees' capabilities and needs; providing additional resources to employees as needed to minimize ergonomic risk factors; and encouraging employee participation.

## Program Goals

The goals of the DLA Strategic Materials ergonomics program are as follows:

- Reduce or eliminate worker exposure to WMSD risk factors, thereby preventing injuries and illness
- Reduce the potential for fatigue, error, and unsafe acts by adapting the job and workplace to each worker's capabilities and limitations
- Integrate ergonomics into job design, job performance, and workstation setup
- Increase the overall productivity of the workforce
- Reduce workers' compensation claims and associated costs
- Improve overall working environment
- Identify problems early, and provide prompt medical intervention as needed

## Program Components

The DLA Strategic Materials ergonomics program will consist of six major components:

1. Management leadership and employee participation
2. Hazard information and reporting
3. Job hazard analysis and hazard control
4. Training
5. Medical management
6. Program evaluation

These components are described in detail in Sections 2 through 7 of this Ergonomics Plan.

## 2. Management Leadership and Employee Participation

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The management recognizes that implementing a proactive ergonomics program is an important component of the overall DLA Strategic Materials health and safety program. A collaborative partnership among all levels of the DLA Strategic Materials working community is essential in achieving the goals of the ergonomics program. Command 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 DLA Strategic Materials personnel (manager, supervisor, and employee) are responsible for injury prevention.

The program will be evaluated periodically.

Management will develop a schedule for program implementation and training. A program assessment will be conducted biennially.

The DLA Strategic Materials Safety Manager will be responsible for enforcing the plan and for providing to management necessary information regarding the progress and problems.

Employees may receive periodic communications to ensure management commitment to the ergonomics program and that concerns about WMSDs are understood. It is expected that each employee will promptly report discomfort or concerns regarding assigned tasks or workstation issues.

As determined by the Safety Manager, DLA Strategic Materials employees will receive ergonomics training to allow for self-identification of problems, and employees will be encouraged to promptly report any WMSD injury and hazard areas that may cause WMSD injuries. Each employee is responsible for recommending ways to address problem areas. Employee awareness and prompt reporting are the main tools in making the program successful. Tools will be developed and distributed to allow employees to take ownership. These tools may include a self-evaluation worksheet, information on proper workstation setup, and access to equipment as appropriate.

## 3. Hazard Information and Reporting

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A WMSD is an injury of the muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs and may include such injuries as muscle strains and tears, ligament sprains, joint and tendon inflammation, pinched nerves, spinal neck syndrome, carpal tunnel syndrome, and rotator cuff syndrome, among others. Common signs and symptoms of WMSDs are decreased range of motion, decreased grip strength, numbness, burning, pain, cramping, tingling, and stiffness. The importance of early reporting will be stressed with employees, and a process for employees to report symptoms and injuries will be established.

Each task that DLA Strategic Materials personnel carry out each day will be evaluated to identify and eliminate ergonomic risk factors to the greatest degree feasible to preempt WMSD injuries. Each task will be evaluated to determine whether any workplace conditions may contribute to a WMSD injury. Employees will be provided with information about WMSDs, including their signs and symptoms and how to recognize them. Some signs and symptoms are clear while others, especially during the early stages, may not be easily identifiable to an employee. Since early reporting is critical to preventing a situation from becoming worse, providing this information to employees is important.

All employees will be trained to recognize potential hazards and to report such hazards to their community. Major occupational tasks to be monitored will be as follows:

- Repetitive motions (especially during prolonged activities)
- Layout of work area/workstation
- Sustained or awkward postures or reaching
- Excessive bending or twisting of the wrist
- Continued elbow or shoulder elevation (for example, overhead work)
- Forceful exertions (especially in an awkward posture)
- Excessive use of small muscle groups (for example, pinch grip)
- Acceleration and velocity of dynamic motions
- Vibration
- Mechanical compression
- Restrictive workstations (for example, inadequate clearances or lack of adjustability)
- Improper seating or support
- Inappropriate hand tools
- Machine-pacing and production-based incentives
- Extreme temperatures
- Extended exposure to hazardous or annoying noise

## 4. Job Hazard Analysis and Hazard Control

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Job hazard analysis and hazard control are integral parts of the ergonomics program. Therefore, all DLA Strategic Materials employees will be required to complete a worksite analysis form each year or as needed, such as when discomfort develops, new tasks are assigned, computer usage is increased significantly, or an employee changes workstations. The worksite analysis will identify hazards and potential controls. The ergonomic self-evaluation worksheet and workstation setup checklist are provided in Appendix A to support the worksite analysis. This annual assessment will provide necessary information to identify and document areas of ergonomic concern. Once the areas of concern are identified, precautions can be taken to prevent hazardous work areas. The following components that will aid in hazard prevention are part of an “intervention hierarchy” of steps to prevent or resolve ergonomic concerns:

- Engineering controls
- Substitution
- Work practices
- Administrative controls
- Personal protective equipment (PPE)

The following subsections discuss these components in detail.

### Engineering Controls

The primary method of preventing and controlling exposure to WMSD hazards is through effective design (or redesign) of a job- or worksite. Ergonomic engineering controls redesign the equipment or worksite to fit the limitations and capabilities of workers. Equipment or worksite redesign typically offers a permanent solution. For example, a video display terminal workstation that can be adjusted to a wide range of anthropometrical dimensions can be provided.

### Substitution

Substituting a new work process or tool (without WMSD hazards) for a work process with identified WMSD hazards can effectively eliminate the hazard. For example, replacing hand tools that require awkward wrist positions (for example, extreme wrist flexion, extension, or deviation) with tools that allow a neutral wrist posture can be beneficial. An example relating to office ergonomics would be using a keyboard or mouse that allows the wrists and arms to be in a neutral position rather than angled or twisted.

### Work Practices

Practices that decrease worker exposure to WMSD risk factors include changing work techniques, providing personnel conditioning programs, and regularly monitoring work practices. Also included are maintenance, adjustment, and modification of equipment and tools as needed.

- Proper work techniques include methods that encourage the following:
  - Correct posture
  - Use of proper body mechanics
  - Appropriate use and maintenance of hand and power tools
  - Correct use of equipment and workstations
- Personnel conditioning refers to the use of a conditioning or break-in period. New and returning personnel (after a protracted absence) may need gradual integration into a full workload, depending on the job and the person. Supervisors and health-care personnel should identify those jobs that require a break-in period. Health-care personnel should evaluate those personnel returning from health-related absences and define the break-in period for each individual person (Title 5, *Code of Federal Regulations*, Part 339.301).
- Regular monitoring of operations helps to ensure proper work practices and to confirm that the work practices do not contribute to WMSDs or hazardous risk factors.
- 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. Introducing an adjustable workstation or adding computer break stretching software allows for changes in position and breaks that are automatically built into the employee's work shift.

## Administrative Controls

Use administrative controls to limit the duration, frequency, and severity of exposure to WMSD hazards. Examples of administrative controls include, but are not limited to, the following:

- Providing rest breaks to relieve fatigued muscle-tendon groups. Determine the length of the rest break by the effort required, total cycle time, and the muscle-tendon group involved.
- Increasing the number of personnel assigned to the task (for example, lifting in teams rather than individually).
- Instituting job rotation as a preventive measure, with the goal of alleviating physical fatigue and stress to a particular set of muscles and tendons. Do not use job rotation in response to symptoms of cumulative trauma. This can contribute to symptom development in all personnel involved in the rotation schedule rather than preventing problems. Trained ergonomics and health-care personnel should conduct an analysis of the jobs used in the rotation schedule.

- Providing modified- or restricted-duty assignments to allow injured muscle-tendon groups time to rest, assisting in the healing process. Make every effort to provide modified- or restricted-duty assignments when physical limitations (as identified by a health-care provider) allow the worker to return to work performing less than his or her normal work requirements. In regard to modified- or restricted-duty assignments:
  - A health-care provider should specifically identify assignments or job tasks for the individual worker based on his or her symptoms, capabilities, and limitations.
  - Supervisors, in conjunction with health-care personnel, should identify modified-duty assignments and tasks; a combination of tasks from one or more jobs can be used as a modified-duty.

## Personal Protective Equipment

Personal protective equipment is not necessarily recommended for controlling exposure to WMSD hazards, since little research has been conducted to support claims of its usefulness. *Appliances such as wrist rests, back belts, back braces, and the like are not considered PPE.* No purchases of ergonomics-related PPE are authorized unless approved by the Safety Manager. The Office of the Surgeon General does not support the blanket use of back belts as a back injury preventive measure. Antivibration gloves are an example of PPE that addresses WMSD hazards.

## 5. Training

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Training at all levels is a critical component of an ergonomics program. Training managers is important in building their understanding of the need for an ergonomics program and the role ergonomics plays in workplace injuries, productivity, and quality. Managers will also need to understand how to establish and evaluate an ergonomics program. Training of employees and supervisors is necessary so that they understand ergonomics principles and also to aid them in the identification of proper work practices for their assigned tasks, how to recognize WMSD signs and symptoms, the importance of early reporting, how to report a WMSD, and the job-specific controls of their jobs. A primary goal of employee training is to enable employees to perform self-evaluations and adjustments and to know when they need to seek additional assistance.

### Training Requirements

The Safety Manager is required to have a minimum of 40 hours of formal ergonomics training. Formal training includes classroom instruction, exercises, supervised worksite assessment, and individual learning assignments.

#### “Train the Trainer” Concept

- The Safety Manager will be responsible for training personnel at the installation level, including supervisors and workers. This training may also be conducted by ergonomics personnel.
- Personnel who are potentially exposed to WMSDs should receive instruction on hazards associated with their jobs and equipment.
- Specific training: New and reassigned civilian personnel who are potentially exposed to WMSDs should receive an initial orientation and hands-on training from the immediate supervisor prior to being placed in a full-production position.
- The initial orientation should include the following:
  - General ergonomics principles and how to identify appropriate and inappropriate work practices and equipment
  - Recognition of the signs and symptoms of WMSDs
  - Importance of early reporting and how to report
  - A demonstration of the proper use and care and the proper operating procedures for all tools and equipment
  - Use of safety equipment

- Use of safe and proper work procedures, such as proper lifting techniques
- Use and importance of task variation as possible, taking breaks from repetitive work, and stretching to prevent injury

Periodic communications should also be used as training in the form of posters, memorandums, articles, presentations, and discussions in staff meetings to maintain employee ergonomics awareness.

## 6. Medical Management

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The DLA Strategic Materials ergonomics program will focus on reducing ergonomic risk factors and preventing WMSDs. However, if an employee does develop symptoms of a WMSD, the employee is expected and encouraged to promptly report it; early medical intervention of these cases helps to reduce the severity of WMSDs. When WMSDs are identified early, patients respond more quickly to treatment, in many cases need less medical intervention, and are less likely to sustain any long-term or permanent impairment.

Ergonomics will be part of the existing Health-care Management Program. Each DLA Strategic Materials facility has a contracted health-care unit where annual physicals are conducted. Each facility will be given an ergonomics assessment evaluation form to be filled out by the physician during the annual physicals. This will enable the physician to recognize WMSDs. The evaluation will consist of the following:

- Completing a medical and occupational history that includes the following:
  - Job title or series and number of years and months at that job
  - Prior work history
  - A detailed description of current job tasks and the amount of time normally spent on each task
  - A detailed description of any symptoms to include location, character (such as burning, sharp, dull, or pins and needles), severity, onset, duration, and exacerbating and relieving factors
  - Lost time or limited duty as a result of symptoms
  - Prior evaluation, diagnosis, and treatment of symptoms
  - Other existing medical conditions and history of trauma and surgery
  - Activities and hobbies outside of work
  - Current medications
- Health-care personnel coordinating with trained ergonomics personnel to recommend duty assignments and controls that will not aggravate a patient's condition.

The medical management program will identify appropriate work interventions when they are necessary and ensure the employee receives evaluation and follow-up in the workplace. Health-care personnel should discuss and coordinate with the supervisor on workplace interventions and perform regular follow-up for patients being treated for WMSDs to monitor the efficacy of therapy and worksite intervention.

## 7. Program Evaluation

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The ergonomics program will be evaluated biennially. The purposes of the evaluation are to measure and identify successes and effectiveness of the program, identify areas of improvement, ensure that the program is effective in meeting the stated goals, and ensure that resources dedicated to the program are being used efficiently.

During this evaluation, the plan, implementation process, and results should be evaluated. The program participation and effectiveness of the ergonomics effort will be evaluated using the methods of measurement for both of these elements, including the following:

- Program participation
  - Number of requests for ergonomics assistance by management occurring during a specified period
  - Number of ergonomic evaluations performed during a specified period
  - Number of personnel suggestions related to ergonomics during a specified period
  - Number of educational programs in ergonomics offered or number of personnel attending educational programs
- Program effectiveness
  - Number of ergonomics risk factors eliminated
  - Number of ergonomics communications prepared and distributed
  - Interview with select employees
  - Number of general or systematic identifications of potential WMSDs
  - Number of detailed analyses conducted
  - Number of high-priority listings relating to ergonomics
  - Change in the number or percentage of ergonomic discomforts reported
  - Number of ergonomic discomforts that are improving due to changes in workstation layout, change in equipment, or proactive measures such as breaking and stretching
  - Changes in the incidence and severity rates
  - Changes in the incidence and severity rates of ergonomically related illness or injury reports filed
  - Changes in the incidence and severity rates of ergonomically related illness or injury by department or unit

- Changes in the incidence and severity rates of lost or restricted-duty time due to ergonomically related illness or injury
- Changes in the number of new job reassignments due to ergonomically related illness or injury
- Changes in productivity or production costs that can be attributed to ergonomic interventions.

In some situations, illness or injury reporting may increase at the start of an ergonomics program because of increased personnel and supervisor awareness. This reporting rate will decrease as a well-managed, effective ergonomics program is integrated into the workplace. It may also be necessary on occasion to engage the services of an outside ergonomics consultant to assist with evaluating and eliminating ergonomics hazards.

Evaluation and review will include the following steps:

- The Installation Ergonomics Officer and the ergonomics subcommittee will be responsible for the following:
  - Conduct at least a biennial program evaluation and review
  - Communicate the results of the program evaluation and review to top management and all workplace personnel
- The program evaluation assesses the implementation, progress, and effectiveness of the installation ergonomics plan. It should include the following:
  - A progress summary or program update
  - A summary of results of external evaluations
  - Identification of trends, deficiencies, and corrective actions needed
  - Before and after surveys or evaluations of worksite improvements
  - Observation of work practices to determine the effect of training and education
  - Personnel surveys or interviews conducted by department, job title, or work area to monitor ergonomics

APPENDIX A

# Ergonomic Self-evaluation Worksheet and Workstation Setup Checklist

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[Submit by E-mail](#)

## ERGONOMIC SELF-EVALUATION WORKSHEET



**Employee Name:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Are you currently experiencing any discomfort associated with using your computer? \_\_\_\_\_

If yes, please describe and include how long you have been experiencing this discomfort: \_\_\_\_\_

### WORK HABITS

How much time do you spend at your workstation per day (on average)? \_\_\_\_\_

How much time do you spending keying? \_\_\_\_\_

How much time mousing or using the trackball? \_\_\_\_\_

Are you taking breaks throughout the day (i.e. 5 minutes for every hour of keying/mousing)? \_\_\_\_\_

### CHAIR

Do you have a problem with your chair? \_\_\_\_\_ If yes, please describe:

Does your chair support your back and is it comfortable to sit in? \_\_\_\_\_

Is the chair height adjusted so wrists are straight when using keyboard and mouse? \_\_\_\_\_

Are your feet able to reach the floor when the chair is properly adjusted to the workstation? \_\_\_\_\_

If no, do you need a footrest? \_\_\_\_\_

### WRISTS AND ARMS

Is your mouse and keyboard on the same height surface?

If no, please place keyboard and mouse next to one another and make sure they are at the same height. Operating the mouse and keyboard on difference height surfaces can cause shoulder, elbow and wrist pain.

When using your keyboard, are your elbows at a 90° angle or slightly greater? \_\_\_\_\_

Are your wrists straight while using the computer? \_\_\_\_\_

Is the mouse comfortable to use and appropriate for tasks? \_\_\_\_\_

### SHOULDERS, NECK AND EYES

Is your computer equipment placed directly in front of you? \_\_\_\_\_

If no, please move computer in front of you. This will help prevent neck and shoulder strain.

Are your head and neck in a neutral position (straight) when viewing monitor? \_\_\_\_\_

Is your monitor at a level that allows you to keep your head and neck straight when viewing the monitor? \_\_\_\_\_ (If bifocals are worn, then the computer screen should be lower than eye level)

Is the monitor 18-22 (within arm's reach) inches away from your body or at a comfortable viewing distance? \_\_\_\_\_

If you transfer or compare information between paper documents and the computer screen, do you need a document holder? \_\_\_\_\_

Do you use the telephone for extended periods of time (>10 hours per week?) \_\_\_\_\_

If yes, are you able to use the speaker phone? \_\_\_\_\_

### GLARE

Do you have a glare problem? (Light reflecting on monitor?) \_\_\_\_\_

### COMPUTER

Do you use a laptop computer at work?

If yes, do you have any of the following?

Laptop Riser \_\_\_\_\_

External Keyboard \_\_\_\_\_

External Mouse \_\_\_\_\_

Do you have any comments/concerns/questions about your workstation?

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## Computer Workstation Setup Check Sheet

### Chair:

- Sit upright and back into your chair
- Chair height - feet are flat on floor or footrest
- Seat pan depth - 1 to 3 inches from the back of your knees
- Chair lumbar support - fits into the small of your back
- Armrests - support arms and allow you to get close into your workstation
- Shift positions in your chair often



### Keyboard/Pointing Device:

- Keyboard - within easy reach and positioned at seated elbow height
- Keyboard - positioned so hands & wrists are straight while keying
- Wrists - straight during keying and use of pointing device
- Mouse - close to and on the same plane as the keyboard
- Keyboard - directly in front of you to minimize reaching

### Computer Screen/Documents:

- Monitor and keyboard directly in front of the you
- Screen height - adjusted for straight head viewing
- Screen distance - about arm's reach
- If a document holder is used - close to your screen

### Equipment

Frequently used equipment - located within easy reach

### Breaks, Stretching, & Posture

- Take frequent breaks from computing
- Take stretch breaks
- Use good posture
- Move while at your workstation

If you have any questions, need an ergonomic evaluation or more workstation setup information e-mail [Jason.boynton@dla.mil](mailto:Jason.boynton@dla.mil) or call 703-767-7592.