



Loss Control Department
Technical Information Paper Series

Understanding OSHA's
Ergonomics Program
Standard
*A Guide for Employers and
Their Employees*

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This document is provided for information purposes only. It is not intended to be a substitute for individual legal counsel or advice on issues discussed within. Readers seeking resolution of specific legal issues or business concerns related to the captioned topic should consult their attorney and/or insurance representative.

Understanding OSHA's Ergonomics Program Standard

A Guide for Employers and Their Employees

After years of discussion, and delay, the U.S. Occupational Safety and Health Administration (OSHA) published the Ergonomics Program Standard (29 CFR 1910.900) on November 14, 2000. OSHA issued the ergonomics standard to reduce musculoskeletal disorders developed by workers whose jobs involve repetitive motions, force, awkward postures, contact stress and vibration.

Safety professionals, astute business people, and insurers agree that an effective ergonomics program can prevent injuries, boost productivity, and increase the overall value of a company's products or services. The Hartford encourages all employers to comply with OSHA's ergonomics standard, but to do so with careful planning and consideration. The Hartford has specific concerns about the limited scope of the standard and the possibility that these limitations could negatively affect worker safety.

First, strict compliance with the standard will leave many at-risk employees without the benefit of an ergonomics program until they actually suffer discomfort or musculoskeletal disorders severe enough to require medical attention. *The Hartford urges all employers to implement comprehensive ergonomics programs for all employees.* Second, the information OSHA offers to employers to satisfy the mandatory employee training component provides a limited discussion of a complex issue. The Hartford has developed a handout for employees which supplements OSHA's Appendix A. Our document uses plain language to explain *how* and *why* ergonomic risk factors such as repetition and excessive force contribute to worker discomfort, and provides a more balanced perspective on musculoskeletal disorders. A copy is included in this package.

To help you get started with understanding and implementing the standard, The Hartford's Loss Control Department has provided this information for you and for your employees. If you are using this document online, these links will take you directly to the highlighted documents.

- [*Employer Overview: OSHA's Ergonomics Program Standard.*](#) This 9-page overview of the standard is based on Appendix B of the OSHA standard, with additional information from The Hartford's Loss Control Department.
- [*Summary of OSHA's Ergonomics Program Standard.*](#) This single-page summary is based on Appendix B of the OSHA standard, with additional information from The Hartford's Loss Control Department. You may give this to employees to satisfy the requirement that the employer provide a summary of the standard to employees. Managers and supervisors should also find it helpful.
- [*Employee Overview: Workplace Musculoskeletal Disorders and OSHA's Ergonomic Program Standard.*](#) This 5-page handout for employees is based on Appendix A of the OSHA standard. Additional information from The Hartford's Loss Control Department offers plain-language guidance and practical advice to help employees work more comfortably.
- [*What Employees Need to Know About Workplace Musculoskeletal Disorders and OSHA's Ergonomics Program Standard.*](#) This single-page summary for employees is based on Appendix A of the OSHA standard. You may give this to your employees to satisfy the requirement that the employer must provide employees with basic information about musculoskeletal disorders.

Employer Overview: OSHA's Ergonomics Program Standard

Introduction

After years of discussion, and delay, the U.S. Occupational Safety and Health Administration (OSHA) published its Final Ergonomics Program Standard (29 CFR 1910.900) on November 14, 2000. OSHA issued the ergonomics standard to reduce musculoskeletal disorders (MSDs) developed by workers whose jobs involve repetitive motions, force, awkward postures, contact stress and vibration. The standard has sparked intense debate among safety and ergonomics professionals, business owners, insurers, and the working public. Several court challenges to the standard are still pending, including at least one class action suit, and the ultimate fate of the standard may not be decided for several months.

Although they may disagree with particular provisions of the standard, however, safety professionals, astute business people, and insurers agree that an effective ergonomics program can prevent injuries to workers, boost morale and productivity, decrease costs, and increase the overall value of the products or services you provide.

Thus, there's no need for you to wait for the outcome of the OSHA regulation to begin an ergonomics program. Although any steps you take now to protect the health of your workers, including an ergonomics program, will help you to comply with OSHA now and in the future, improved employee health and well-being translate into increased productivity and profits.

Many employers have already begun to implement ergonomic activities which will put them well on their way to compliance. You can get help from your local OSHA office and from The Hartford's Loss Control Consultants.

This document presents a *summary* of the requirements of the OSHA ergonomic standard. It is not a substitute for the standard or for related documents that OSHA has published. Complete copies of OSHA's ergonomics standard and supporting documents are available from a special section of the OSHA web site (www.osha-slc.gov/ergonomics-standard/index.html) or from your local OSHA office.

In this document (as in OSHA's ergonomic standard), the terms *rule*, *standard*, and *regulation* are used interchangeably to mean OSHA's ergonomic standard, 29 CFR 1910.900.

Quick Overview of the Standard

Who is Covered? All general industry employers are required to abide by the rule; this covers more than 102 million American workers at more than 6 million worksites. The standard does not apply to employers whose primary operations are covered by OSHA's construction, maritime or agricultural standards, or employers who operate a railroad.

What Compliance Dates Apply? The standard became effective on January 16, 2001. By October 14, 2001, employers must give their employees information about 1) the standard and 2) about common musculoskeletal disorders, signs and symptoms, and the importance of early

reporting. Also by October 14, 2001, employers must be prepared to receive and respond to employees' reports of injuries or discomfort. Other timetables take effect whenever you determine that an employee has experienced a musculoskeletal disorder (more detail below).

What Are the Essentials of the New Rule? At a minimum, OSHA's ergonomics standard requires employers to inform workers about common musculoskeletal disorders and their symptoms; the importance of early reporting; how to report MSDs and their signs and symptoms; risk factors, jobs, and activities associated with MSD hazards; and the OSHA standard (provide a summary of requirements). OSHA does not require any further action from employers unless an employee reports an MSD or reports continuing signs or symptoms of an MSD. However, as of October 14, 2001, employers will be *required* to respond to employees' reports of MSDs, and the procedures and standards employers must follow when they do respond are complex, and make up the bulk of the standard.

The Hartford's Concerns and Cautions

The Hartford encourages all employers to comply with OSHA's ergonomics standard, but to do so with careful planning and consideration. We have specific concerns about the limited scope of the standard and the possibility that these limitations could negatively affect worker safety.

Limited Scope Leaves Many Employees Unprotected. OSHA's ergonomics standard mandates a full program only for those jobs which are above an "action trigger" point, and which have caused musculoskeletal disorders or symptoms caused by those action triggers. Thus, some employers may never be required to implement a full ergonomics program. But even the "full" programs mandated by the standard will apply, in many cases, only to a few employees, leaving the employer with a choice of administering many individual programs or a single comprehensive one. Thus, strict compliance with the standard will leave many at-risk employees without the benefit of an ergonomics program until they actually suffer discomfort or a musculoskeletal disorder severe enough to require medical attention, or are experiencing persistent signs or symptoms. *Minimum compliance with the standard will be vastly less effective than the adoption of a comprehensive ergonomics process for all employees.*

To remedy this limited approach, and to provide protection and support to all employees, *The Hartford urges all employers to implement comprehensive ergonomics programs for all employees.* Properly designed and implemented, such program will provide benefits far exceeding any investments made to facilitate the programs.

OSHA's Employee Education Information is Limited. OSHA requires employers to educate employees about musculoskeletal disorders and their signs and symptoms. However, the information OSHA provides for employers to share with their employees (non-mandatory Appendix A to the standard) provides only a limited discussion of a complex issue. The symptoms of musculoskeletal disorders can have many causes, some work related and some not. Among the latter, Appendix A does not address diabetes, pregnancy, and psychological issues, or suggest that off-the-job activities might be a contributing factor to worker discomfort.

The Hartford has developed an alternative handout for employees which supplements OSHA's Appendix A. Our document, *What Employees Need to Know About Workplace Musculoskeletal Disorders and OSHA's Ergonomics Program Standard*, uses plain language to explain *how* and *why* ergonomic risk factors such as repetition and excessive force contribute to worker

discomfort, and provides a more balanced perspective on musculoskeletal disorders. A copy of the document is included in this package.

A Return to Work Program Can Help. The Hartford also strongly encourages every employer to implement a Return to Work (RTW) program. A good RTW program can minimize some of the difficult aspects of compliance with the ergonomics standard, help injured employees, and help you meet your obligations to your customers.

What Employers Must Do

Provide Information to Employees. At a minimum, OSHA's ergonomics standards requires employers to inform workers about

- common MSDs and their signs and symptoms
- the importance of early reporting
- how to report MSDs and their signs and symptoms
- risk factors, jobs, and activities associated with MSD hazards and
- the OSHA standard (provide a summary of requirements)

The employer may provide this information in printed form or, if all employees have access, it may be provided in electronic form. The information must be posted conspicuously (in print or electronic formats, as above), and all new workers must receive the information within 14 days of hire.

We recommend that you provide this information to your employees through their supervisors in both written and verbal form, and in language(s) your employees can understand. Be sure to provide an opportunity for questions and discussion. If the material on this complex issue is simply handed out to employees, without an opportunity for discussion, it may not be read, or worse, it may be misunderstood.

Meet with your supervisors ahead of time to share information and answer any questions. Be sure they understand:

1. The requirements of OSHA's ergonomics standard
2. How an ergonomics program will work (or is working) in your company
3. What employees are required to know (see above)
4. What are musculoskeletal disorders (MSDs) and how to recognize them
5. What procedures to follow to help employees report discomfort or MSDs
6. How soon supervisors and employees can expect responses to their reports of discomfort or MSDs, and what kinds of responses they can expect
7. What each supervisor's role is in this process.

Items 1, 3, and 4 are covered in the training document for employees which is included in this package. You will need to develop company-specific information for items 2, 5, 6, and 7.

OSHA does not require any further action from employers unless an employee reports an MSD or reports continuing signs or symptoms of an MSD.

Determine Status of Reported MSDs. When a worker reports signs or symptoms of an MSD, the employer must determine whether the injury meets the definition of an *MSD Incident*, that is, a work-related MSD that requires time away from work, restricted work, or medical treatment beyond first aid, or work-related MSD signs or MSD symptoms that last for seven or more consecutive days after the first report.

If it is an MSD Incident, the employer must use the *Basic Screening Tool* to determine whether the job meets the standard's *Action Trigger*; that is, that it exposes the worker to risk factors that could trigger MSD problems. The Basic Screening Tool (published in the standard as Table W-1 and printed below) lists risk factors (repetition, force, etc.), gives examples of the types and numbers of movements that invoke these risks (e.g., using a computer mouse more than four hours per day), and names body parts associated with an MSD incident (e.g., neck/shoulder).

If the job does not meet the action trigger, no further action is required.


Table W-1 - Basic Screening Tool

You need only review risk factors for those areas of the body affected by the MSD incident.

Risk Factors This Standard Covers	Performing job or tasks that involve:	Body Part Associated With MSD Incident			
		Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ Knee/ Ankle
Repetition	(1) Repeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.	√	√	√	√
	(2) Using an input device, such as a keyboard and/or mouse, in a steady manner for more than 4 hours total in a workday.	√	√		
Force	(3) Lifting more than 75 pounds at any one time; more than 55 pounds more than 10 times per day; or more than 25 pounds below the knees, above the shoulders, or at arms' length more than 25 times per day;	√	√	√	√
	(4) Pushing/pulling with more than 20 pounds of initial force (e.g., equivalent to pushing a 65 pound box across a tile floor or pushing a shopping cart with five 40 pound bags of dog food) for more than 2 hours total per day;	√	√	√	√
	(5) Pinching an unsupported object weighing 2 or more pounds per hand, or use of an equivalent pinching force (e.g., holding a small binder clip open) for more than 2 hours total per day;		√		
	(6) Gripping an unsupported object weighing 10 pounds or more per hand, or use of an equivalent gripping force (e.g., crushing the sides of an aluminum soda can with one hand), for more than 2 hours total per day.		√		

Table W-1 - Basic Screening Tool - continued

You need only review risk factors for those areas of the body affected by the MSD incident.

Risk Factors This Standard Covers	Performing job or tasks that involve:	Body Part Associated With MSD Incident			
		Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ knee/ Ankle
Awkward Postures	(7) Repeatedly raising or working with the hand(s) above the head or the elbow(s) above the shoulder(s) for more than 2 hours total per day;	✓	✓	✓	
	(8) Kneeling or squatting for more than 2 hours total per day;			✓	✓
	(9) Working with the back, neck or wrists bent or twisted for more than 2 hours total per day (see figures:) 	✓	✓	✓	
Contact Stress	(10) Using the hand or knee as a hammer more than 10 times per hour for more than 2 hours total per day;		✓		✓
Vibration	(11) Using vibrating tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools, riveting or chipping hammers) for more than 30 minutes total per day;	✓	✓	✓	
	(12) Using tools or equipment that typically have moderate vibration levels (such as jig saws, grinders, or sanders) for more than 2 hours total per day.	✓	✓		

Implement Program for Jobs Which Cause MSDs and Meet the Action Trigger. If the risk factors on the job meet the levels of exposure indicated in the Basic Screening Tool, then the job will have met the standard's Action Trigger. If the job meets the Action Trigger, the employer must either use a *Quick Fix* option (see details below under Flexibility in the Standard) or must implement the following program elements, in compliance with the time frames outlined in Table W-2:

A. Management Leadership and Employee Participation. The employer must set up an MSD reporting and response system and an ergonomics program. The employer must also ensure that policies encourage and do not discourage employee participation in the program, or the reporting of MSDs, MSD signs and symptoms, and MSD hazards. Employees and their representatives must have ways to report MSDs, MSD signs and symptoms and MSD hazards in the workplace, and employers must provide prompt responses. Employees must also be given the opportunity to participate in the development, implementation, and evaluation of the ergonomics program.

B. Job Hazard Analysis and Control. If a job involves a reported MSD and meets the Action Trigger, the employer must conduct a job hazard analysis to determine whether MSD hazards exist in the job. The job hazard analysis must be conducted using

- one or more of the hazard identification tools listed in Appendix D-1
- a VDT-specific hazard identification tool offered in Appendix D-2
- a job hazard analysis conducted by a professional trained in ergonomics, or
- “any other reasonable method that is appropriate to the job and relevant to the risk factors being addressed”

Note: The eight Job Hazard Analysis Tools described in Appendix D-1 are published variously in professional journals or by private organizations (e.g., AIHA) or government agencies (e.g., NIOSH); OSHA incorporates them by reference into the standard but does not include them in the regulatory text. Employers will have to obtain copies from the sources listed in Appendix D-1. Two of the tools, one developed by the Washington State OSHA (WAC 296-62-05174), and the NIOSH Lifting Equations, are in the public domain, and are available from those agencies. Local corporate or university libraries may be able to provide copies of other documents.

If hazards which meet the “Action Trigger” are found, the job is identified as a *problem job*, and the employer must implement controls to reduce the hazards in accordance with or to levels below those found in the tools listed in Appendix D. Employees must be involved in identifying and controlling hazards.

For each problem job, you must use feasible engineering, work practice, or administrative controls, or any combination of these, to reduce MSD hazards. Engineering controls are preferred. You may use personal protective equipment (PPE) to supplement these controls, but you may use PPE alone *only* if other controls are not feasible.

C. Training. The employer must provide additional training to employees in MSD producing jobs that meet the Action Trigger, to their supervisors or team leaders, and to other employees who are involved in setting up and managing the ergonomics program.

D. MSD Management. Employees must be provided, at no cost, prompt access to a Health Care Professional (HCP), evaluation and follow-up of an MSD incident, and any temporary work restrictions that the employer or the HCP determine to be necessary. Temporary work restrictions include limitations on the work activities of the employee in his or her current job, transfer of the employee to a temporary alternative duty job, or temporary removal from work.

E. Work Restriction Protection. Employers must provide Work Restriction Protection (WRP) to employees who receive temporary work restrictions. This means maintaining 100% of earnings and full benefits for employees who receive limitations on the work activities in their current job or transfer to a temporary alternative duty job, and 90% of earnings and full benefits to employees who are removed from work. WRP is good for 90 days, or until the employee is able

to safely return to the job, or until an HCP determines that the employee is too disabled to ever return to the job, whichever comes first. The standard also permits the employee to use his or her own HCP as well as the employer's HCP to determine whether work restrictions are required. A third HCP may be chosen by the employee and the employer if the first two disagree.

F. Program Evaluation. The employer must evaluate the ergonomics program to make sure that it is effective. The employer must ask employees what they think of it, check to see if hazards are being addressed, and make any necessary changes.

G. Recordkeeping. Employers who have 11 or more employees at any time during the year, including part-time employees, must keep written or electronic records of employee reports of MSDs, MSD signs and symptoms and MSD hazards, responses to such reports, job hazard analyses, hazard control measures, ergonomics program evaluations, and records of work restrictions and HCPs' written opinions. Employees and their representatives must be provided access to these records.

H. Dates. Employers must begin to distribute information, and receive and respond to employee reports by October 14, 2001. Employers must implement permanent controls by January 18, 2005, or two years following determination that a job meets the Action Trigger, whichever comes later. Interim controls must be implemented within 90 days after the employer determines that the job meets the Action Trigger. Other obligations are triggered by the employer's determination that the job has met the Action Trigger, as detailed in Table W-2, Compliance Time Frames, published in the standard after paragraph (x) (2) (see below).

29 CFR 1910.900 TABLE W-2 COMPLIANCE TIME FRAMES

REQUIREMENTS AND RELATED RECORDKEEPING	TIME FRAMES
Determination of Action Trigger	Within 7 calendar days after you determine that the employee has experienced an MSD incident.
MSD Management	Initiate within 7 calendar days after you determine that a job meets the Action Trigger.
Management Leadership and Employee Participation	Initiate within 30 calendar days after you determine that a job meets the Action Trigger.
Train employees involved in setting up and managing your ergonomics program	Within 45 calendar days after you determine that a job meets the Action Trigger.
Job Hazard Analysis	Initiate within 60 calendar days after you determine that a job meets the Action Trigger.
Implement Initial Controls	Within 90 calendar days after you determine that a job meets the Action Trigger
Train current employees, supervisors or team leaders	Within 90 calendar days after you determine that the employee's job meets the Action Trigger.
Implement Permanent Controls	Within 2 years after you determine that a job meets the Action Trigger, except that initial compliance can take up to [insert date 4 years and 60 days after the date of publication] whichever is later.
Program Evaluation	Within 3 years after you determine that a job meets the Action Trigger

Flexibility in the Standard

Quick Fix. Employers whose workers have experienced only isolated MSDs may be able to use the "Quick Fix" option to reduce hazards and to avoid implementing many parts of the program. You may use a Quick Fix *for a job* if your employees have experienced no more than one MSD incident in that job, and if there have been no more than two MSD incidents in your establishment, in the preceding 18 months. Refer to the standard (paragraph o) for detail.

“Grandfathering” Existing Ergonomics Programs. Employers who already had written ergonomics programs in place when the standard was published on November 14, 2000, may be able to "grandfather" existing programs (that is, continue to implement them), providing that they contain the following program elements (refer to the regulatory text for details):

- Management leadership
- Employee participation
- Job hazard analysis and control
- Training of managers, supervisors, and employees (at no cost to these employees)
- Program evaluation

By January 16, 2002, you must have implemented a policy that provides MSD management (including HCP consultation and temporary work restrictions).

Note that the existing program must have been evaluated by January 16th, 2001, to be eligible for grandfathering. However, due to the continued debate and uncertainty over the final disposition of the standard, it's possible that the grandfathering deadline might be extended. It would be prudent, then, if you feel your program qualifies, to meet the requirements of the grandfathering section as soon as possible.

Discontinuing Your Ergonomics Program for Specific Jobs. You may discontinue your ergonomics program for a specific job (except for maintaining controls and training related to those controls) if you have reduced exposure to the risk factors in that job to levels below those described in the Basic Screening Tool in Table W-1.

Resources from OSHA

OSHA has supplemented the regulatory text with several Appendices, both mandatory and non-mandatory. These are available at the special section of the OSHA web site (www.osha-slc.gov/ergonomics-standard/index.html) or from your local OSHA office.

Appendix A: What You Need to Know About Musculoskeletal Disorders (MSDs) (Non-Mandatory)

Employers may provide Appendix A to employees to satisfy the requirement to provide employees with basic information about MSDs, their signs and symptoms, the importance of early reporting, how to report MSDs or signs and symptoms, risk factors and work activities, and a short description of the standard.

In the opinion of The Hartford's ergonomists, the information in Appendix A presents a limited view of musculoskeletal disorders, and does not provide enough practical information to help workers understand how MSDs occur and how they can help make themselves more comfortable. The Hartford has developed an alternative handout for employees which supplements OSHA's

Appendix A. A copy of this handout, *What Employees Need to Know About Workplace Musculoskeletal Disorders and OSHA's Ergonomics Program Standard*, is included in this package.

Appendix B: Summary of the OSHA Ergonomics Program Standard (Non-Mandatory)

This summary provides a good overview of the entire standard, although it necessarily omits much essential detail. However, it may be given to employees to satisfy the requirement that employers provide a summary of the standard to their employees.

Appendix C: [Reserved]

Appendix D: Hazard Identification Tools

Appendices D-1 and D-2 present several tools for identification and analysis of musculoskeletal risks. Employers can use any of the tools that are appropriate to the job and risk factors present. The use of these tools will also demonstrate when hazards have been controlled to levels required by the standard.

Appendix D-1: Ergonomics Job Hazard Analysis Tools (Mandatory)

The eight Job Hazard Analysis Tools described in Appendix D-1 are published variously in professional journals or by private organizations (e.g., AIHA) or government agencies (e.g., NIOSH); OSHA incorporates them by reference into the standard but does not include them in the regulatory text. Employers will have to obtain copies from the sources listed in Appendix D-1. Two of the tools, one developed by the Washington State OSHA (WAC 296-62-05174), and the NIOSH Lifting Equations, are in the public domain, and are available from those agencies. Local corporate or university libraries may be able to provide copies of other documents.

Appendix D-2: VDT Workstation Checklist

Appendix D-2 is a simple checklist for analyzing MSD hazards in jobs involving computer use. The checklist was developed by OSHA to provide employers with a simple and quick way to analyze the growing number of computer jobs.

Appendix E: Ergonomics Rule Flow Chart

OSHA has devised a flow chart to help employers implement the various parts of the standard in the proper sequence. It is three printed pages.

OSHA's web site also contains many other useful documents, including Frequently Asked Questions, with questions and answers on about 40 specific items (www.osha-slc.gov/ergonomics-standard/faq/index.html).

If you do not have Internet access at your business or home, or if your business does not have a librarian on staff, try your local public library, where Internet access is usually available. A librarian can help you find this information.

The Hartford's Loss Control Department cannot guarantee that this training material will comply with the ergonomics standard. Every effort has been made to meet the requirements of the standard, but assuring compliance remains the responsibility of the employer.

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Summary of OSHA's Ergonomics Program Standard



About OSHA's Ergonomics Standard

Why Did OSHA Issue an Ergonomics Program Standard?

OSHA published its Ergonomics Program Standard (29 CFR 1910.900) to reduce musculoskeletal disorders (MSDs) developed by workers whose jobs involve repetitive motions, force, awkward postures, contact stress and vibration. The principle behind ergonomics is that by fitting the job to the worker through adjusting a workstation, rotating between jobs, or using mechanical assists, MSDs can be reduced and ultimately eliminated.

Who is Covered? All general industry employers are required to abide by the rule. The standard does not apply to employers whose primary operations are covered by OSHA's construction, maritime or agricultural standards, or employers who operate a railroad.

What Employers Must Do

Provide Information to Employees. OSHA's ergonomics standards requires employers to inform workers about common MSDs and their signs and symptoms, the importance of early reporting, how to report MSDs and their signs and symptoms, risk factors, jobs, and activities associated with MSD hazards and, the OSHA standard. The employer may provide this information in printed form or, if all employees have access, it may be provided in electronic form. The information must be posted conspicuously (in print or electronic formats, as above), and all new workers must receive the information within 14 days of hire.

Determine Status of Reported MSDs. When a worker reports signs or symptoms of an MSD, the employer must determine whether the injury meets the definition of an *MSD Incident*; that is, a work-related MSD that requires time away from work, restricted work, or medical treatment beyond first aid, or work-related MSD signs or MSD symptoms that last for seven or more consecutive days after the first report. If it is an MSD Incident, the employer must use a *Basic Screening Tool* to determine whether the job meets the standard's *Action Trigger*; that is, that it exposes the worker to risk factors that could trigger MSD problems.

Implement Program Elements for Jobs Which Meet the Action Trigger. If the risk factors on the job meet the levels of exposure indicated in the Basic Screening Tool, then the job will have met the standard's Action Trigger. If the job meets the Action Trigger, the employer must either use a *Quick Fix* option (see below) or must implement the following program elements, and comply with a specific compliance date for each element:

A. Management Leadership and Employee Participation. The employer must set up an MSD reporting and response system and an ergonomics program. The employer must also ensure that policies encourage and do not discourage employee participation in the program, or the reporting of MSDs, MSD signs and symptoms, and MSD hazards. Employees and their representatives must have ways to report MSDs, MSD signs and symptoms and MSD hazards in the workplace, and employers must provide prompt responses. Employees must also have an opportunity to participate in the development, implementation, and evaluation of the program.

B. Job Hazard Analysis and Control. If a job meets the Action Trigger, the employer must conduct a job hazard analysis to determine whether MSD hazards exist in the job. If hazards are found, the job is identified as a *problem job*, and the employer must implement controls to reduce the hazards. Employers must use feasible engineering, work practice, or administrative controls, or any combination of these, to reduce MSD hazards.

C. Training. The employer must provide training to employees in jobs that meet the Action Trigger, to their supervisors or team leaders, and to other employees who are involved in setting up and managing the ergonomics program.

D. MSD Management. Employees must be provided, at no cost, prompt access to a Health Care Professional (HCP), evaluation and follow-up of an MSD incident, and any temporary work restrictions that the employer or the HCP determine to be necessary. Temporary work restrictions include limitations on work activities of the employee in his or her current job, transfer of the employee to a temporary alternative duty job, or temporary removal from work.

E. Work Restriction Protection. Employers must provide Work Restriction Protection (WRP) to employees who receive temporary work restrictions. This means maintaining 100% of earnings and full benefits for employees who receive limitations on the work activities in their current job or transfer to a temporary alternative duty job, and 90% of earnings and full benefits to employees who are removed from work. WRP is good for 90 days, or until the employee is able to safely return to the job, or until an HCP determines that the employee is too disabled to ever return to the job, whichever comes first. The standard also permits the employee to use his or her own HCP as well as the employer's HCP to determine whether work restrictions are required. A third HCP may be chosen by the employee and the employer if the first two disagree.

F. Program Evaluation. The employer must evaluate the ergonomics program to make sure that it is effective. The employer must ask employees what they think of it, determine if hazards are being addressed, and make any necessary changes.

G. Recordkeeping. Employers who have 11 or more employees, including part-time employees, must keep written or electronic records of employee reports of MSDs, MSD signs and symptoms and MSD hazards, responses to such reports, job hazard analyses, hazard control measures, ergonomics program evaluations, and records of work restrictions and HCPs' written opinions. Employees and their representatives must be provided access to these records.

H. Dates. Employers must begin to distribute information, and receive and respond to employee reports, by October 14, 2001. Employers must implement permanent controls by January 18, 2005, or two years following determination that a job meets the Action Trigger, whichever comes later. Interim controls must be implemented within 90 days after the employer determines that the job meets the Action Trigger. Other obligations are triggered by the determination that the job has met the Action Trigger.

Flexibility in the Standard

Quick Fix. Employers whose workers have experienced only a few isolated MSDs may be able to use the "Quick Fix" option to reduce hazards and to avoid implementing many parts of the program.

"Grandfathering" Existing Ergonomics Programs.

Employers who already had written ergonomics programs in place when the standard was published on November 14, 2000, may be able to "grandfather" existing programs, providing that they meet specific criteria.

Discontinuing The Ergonomics Program for Specific Jobs.

An employer may discontinue parts of the ergonomics program for a job (except for maintaining controls and training related to those controls) if exposure to the risk factors in that job have been reduced to levels below those described in the Basic Screening Tool in Table W-1.

OSHA's ergonomics standard is available at the OSHA web site (www.osha-slc.gov/ergonomics-standard/index.html) or from your local OSHA office.

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Employee Overview: Workplace Musculoskeletal Disorders and OSHA's Ergonomic Program Standard

About OSHA's Ergonomics Program Standard

The U.S. Occupational Safety and Health Administration (OSHA) published its Final Ergonomics Program Standard (29 CFR 1910.900) on November 14, 2000. OSHA issued the ergonomics standard to reduce musculoskeletal disorders (MSDs) developed by workers whose jobs involve awkward postures, forces, repetitive motions, contact stress and vibration.

Your employer is required to make available a summary of the OSHA ergonomics standard. Complete copies of OSHA's ergonomics standard and supporting documents are available from a special section of the OSHA web site (www.osha-slc.gov/ergonomics-standard/index.html) or from your local OSHA office.

As part of the standard, OSHA also requires employers to inform workers about

- common musculoskeletal disorders (MSDs) and their signs and symptoms
- the importance of early reporting of MSDs
- how to report MSDs and their signs and symptoms in your workplace.
- risk factors, jobs, and activities associated with MSD hazards and
- the OSHA standard (provide a summary of requirements)

An employer may provide this information in printed form, and if all employees have access, in electronic form. The information must be posted conspicuously (in print or electronic formats, as above), and all new workers must receive the information within 14 days of hire.

Discomfort and Work

Ergonomics is the science of fitting jobs to the people who work in them. The goal of an ergonomics program is to reduce or eliminate elements of tasks which may cause work-related discomfort or musculoskeletal disorders (MSDs). Tasks which may cause discomfort or MSDs include reaching, bending over, lifting heavy objects, using continuous force, working with vibrating equipment, and doing some repetitive motions.

We all experience discomfort. If we run when we're not used to it, we may be sore the next day. If we nurture a sick child by holding him for a long time, our arms and shoulders can ache for a while. Sitting for long periods of time causes us to fidget because we are uncomfortable. Even gripping the steering wheel during long drives will cause our hands to become numb.

Work-related discomfort can be caused by overworking muscles or by holding one position for a long time. Discomfort can be dull or sharp pain, numbness or tingling, twitching, or stiffness. Discomfort is a signal from our bodies telling us that we are doing something it doesn't like. If we're smart, we will listen to messages from our bodies.

We respond to discomfort at work and home very differently. At home, we can easily stop what we're doing if we are uncomfortable or tired. At work, it's not always easy to stop, and we often must continue to work in spite of any discomfort. Because we must keep working, we need to change the work so we can keep going without discomfort.

Why You Need To Pay Attention to Discomfort

Working with discomfort day after day may ultimately cause a *musculoskeletal disorder* (MSD). The longer we work with discomfort, the longer it takes for the discomfort to go away when we're not working. If we work with discomfort long enough, a time will come when the discomfort won't go away. Then we're in MSD territory. We need to avoid developing MSDs if at all possible. They can be difficult to treat successfully, and radical treatments such as surgery may be necessary.

Recognizing Signs and Symptoms of MSDs

Workers who suffer from MSDs may experience less strength for gripping, less range of motion, loss of muscle function and difficulty doing everyday tasks. Common symptoms include:

- Painful joints
- Pain, tingling, or numbness in hands or feet
- Shooting or stabbing pains in arms or legs
- Swelling or inflammation
- Burning sensation
- Pain in wrists, shoulders, forearms, knees
- Fingers or toes turning white
- Back or neck pain
- Stiffness

Work-related tasks are not the only cause of these problems. One of the challenges in resolving discomfort symptoms such as pain, numbness, or swelling is that they can be caused or aggravated by various activities such as too little or too much exercising, certain diseases, or even sitting watching television without moving for awhile. Those of us who are carrying around too much weight, or who smoke, or who don't exercise, tend have more discomfort than those who maintain a good physical fitness level and a healthy lifestyle.

Your employer is striving to make the work you do as comfortable as possible by making adjustments to your workstation, by implementing administrative changes and work practice improvements, and sometimes by having you use personal protective equipment. You can help to keep yourself comfortable by keeping yourself fit for work. You are strongly urged to take good care of yourself: stop smoking, keep fit by controlling your weight, and exercise regularly. Discomfort and MSDs are aggravated by smoking, obesity, and lack of fitness. Most importantly, you are strongly encouraged to have regular medical checkups. Some serious diseases, such as diabetes, have symptoms that mimic MSD symptoms. These diseases are dangerous if they are not detected.

What Are Work-Related Musculoskeletal Disorders?

MSDs are injuries and illnesses that affect muscles, nerves, tendons, ligaments, joints, or spinal discs. Your doctor might tell you that you have one of the following common MSDs.

- Carpal tunnel syndrome
- Trigger finger
- Tendinitis
- Herniated spinal disc
- Tension neck syndrome
- Rotator cuff syndrome
- Sciatica
- Raynaud's phenomenon
- Low back pain
- De Quervain's disease
- Epicondylitis
- Carpet layer's knee
- Hand-arm vibration syndrome

If You Have Signs or Symptoms of MSDs

If you do not report signs or symptoms of MSDs right away, you may suffer a permanent disability. It is important that you report MSD signs and symptoms right away to prevent long-lasting problems. Your employer is required to respond promptly to employee reports.

Contact the following person(s) to report MSDs, MSD signs or symptoms, or MSD hazards:

NAME:	
DEPARTMENT:	
PHONE:	
EMAIL:	

What Can Cause Work-Related MSDs?

Work-related MSDs can be caused by following risk factors:

Forceful Exertions. Force is the amount of physical effort required to perform a task (such as heavy lifting) or to maintain control of equipment or tools. The amount of force acting upon the body depends on the type of grip, the weight of an object, body posture, the type of activity, and the duration of the task.



Awkward Postures. Posture is the position your body is in; it affects muscle groups that are involved in physical activity. Awkward postures include repeated or prolonged reaching, twisting, bending, kneeling, squatting, working overhead with your hands or arms, or holding fixed positions.

Repetition. Doing the same motions over and over again – particularly when they are done forcefully, or in awkward postures – places stress on the muscles and tendons. The likelihood that repetition will cause any discomfort depends upon how often the action is repeated, the speed of the movement, the posture during the repetitive movement, the number of muscles involved, and the required force. Even cake decorating can be fatiguing. This worker is using awkward postures, static high forces when squeezing the pastry bag, and constant repetition.



Contact Stress. Pressing the body against a hard or sharp edge (such as resting your wrist on the edge of a desk) can place too much pressure on nerves, tendons, and blood vessels, restricting blood flow to the muscles, nerves, and other tissues. For example, when we sit for long periods of time, we involuntarily start to fidget, as tissues are pressed against the chair and blood flow is restricted. Eventually, the tissues will send a message saying, “Move me. I need some blood flow!” So, we move. If we take the pressure off the affected tissues soon enough, blood rushes in, and everything goes back to normal. The other type of contact stress, impact pressure, is a serious problem. Avoid activities such as using the palm of your hand as a hammer; this can increase your risk of suffering an MSD.

Vibration. Operating tools which vibrate, such as some sanders, grinders, routers, drills, and saws can affect the nerves and other tissues in the hand and arms, particularly if they are used continuously over a long period of time. Tools which vibrate heavily, such as chippers, can cause serious nerve damage. *(Note in the picture the lack of safeguarding on this grinding wheel, and the improper use of gloves while using a rotating piece of equipment. Avoiding ergonomic risk factors is important. However, while assessing ergonomics, it is also important to make sure that power tools are properly safeguarded, and that other important safety precautions are not overlooked.*



All of the risk factors can cause discomfort, and if they are ignored long enough, they can cause musculoskeletal disorders.

How Can OSHA’s Ergonomics Standard Help?

The goal of the ergonomics program is to encourage you to report any work-related discomfort early so that you can avoid MSDs entirely.

OSHA's standard requires employers to respond to employee reports of work-related MSDs or signs and symptoms of MSDs that last seven days after you report them. If your employer determines that your MSD, or MSD signs or symptoms, can be connected to your job, your employer must provide you with an opportunity to contact a health care professional and receive work restrictions, if necessary. Your wages and benefits must be protected for a period of time while on light duty or temporarily off work to recover. Your employer must analyze the job and if MSD hazards are found, must take steps to reduce those hazards. Your employer may not discriminate against you for reporting MSDs, MSD signs or symptoms or MSD hazards. Your employer may not have policies that discourage such reporting.

If, at any time during the process, you feel that you should see a health care professional, you may do so. This is particularly true if it is determined that your discomfort, MSD, or MSD signs or symptoms, can be connected to your job, and they have lasted for seven days or more. If you must be off work, or if you can continue to work, but in another task, your wages and benefits will be protected for at least 90 days.

Your Role Is Important

You are an essential part of this process. First, you must report discomfort early. Don't let it go until it becomes a more serious problem. Second, you probably know what is causing your discomfort, and you probably have a pretty good idea of what changes will help. That information is essential to correcting the problem so that you can work more comfortably. With your input, and with the input of other people doing similar work, plus the supervisor, we will attempt to discover what is causing your discomfort, and fix it. Remember:

- Report any discomfort right away.
- Talk to your supervisor or other responsible persons about your ideas to fix the problem.
- Take care of yourself. Your best ticket to a full and satisfying life is to maintain good health and physical fitness.
- Always be thinking of ways to improve your workstation and your productivity, and share your ideas with your supervisor.

Additional Resources from OSHA

This document presents a *summary* of the requirements of the OSHA ergonomic standard. It is not a substitute for the standard or for related documents that OSHA has published. Complete copies of OSHA's ergonomics standard and supporting documents are available from a special section of the OSHA web site (www.osha-slc.gov/ergonomics-standard/index.html) or from your local OSHA office.

OSHA's web site also contains many other useful documents, including Frequently Asked Questions, with questions and answers on about 40 specific items (www.osha-slc.gov/ergonomics-standard/faq/index.html).

If you do not have Internet access at your business or home, or if your business does not have a librarian on staff, try your local public library, where Internet access is usually available. A librarian can help you find this information.

In this document (as in OSHA's ergonomic standard), the terms *rule*, *standard*, and *regulation* are used interchangeably to mean OSHA's ergonomic standard, 29 CFR 1910.900.

The Hartford's Loss Control Department cannot guarantee that this training material will comply with the ergonomics standard. Every effort has been made to meet the requirements of the standard, but assuring compliance remains the responsibility of the employer.

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What Employees Need to Know About Musculoskeletal Disorders and OSHA's Ergonomics Program Standard



In November 2000, OSHA issued a new ergonomics regulation to help employers reduce musculoskeletal disorders (MSDs) developed by workers whose jobs involve repetitive motions, force, awkward postures, contact stress, or vibration. Ergonomics is the science of fitting jobs to the people who work in them. The goal of an ergonomics program is to reduce or eliminate tasks which may cause work-related discomfort or *musculoskeletal disorders* (MSDs). Tasks which may cause discomfort or MSDs include reaching, bending over, lifting heavy objects, using continuous force, working with vibrating equipment, and doing some repetitive motions. Working with discomfort day after day may ultimately cause a musculoskeletal disorder.

What Can Cause Work-Related MSDs?

Work-related MSDs can be caused by:

Forceful Exertions. Force is the amount of physical effort required to perform a task (such as heavy lifting) or to maintain control of equipment or tools. The amount of force acting upon the body depends on the type of grip, the weight of an object, body posture, the type of activity, and duration of the task.

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Contact Stress. Pressing the body against a hard or sharp edge can place too much pressure on nerves, tendons, and blood vessels, restricting blood flow to the muscles, nerves, and other tissues. The other type of contact stress, impact pressure, is a serious problem. Avoid activities such as using the palm of your hand as a hammer; this can increase your risk of suffering an MSD.

Vibration. Using tools which vibrate, such as some sanders, grinders, routers, drills, and saws can affect the nerves and other tissues in the hand and arms, particularly if they are used continuously over a long period of time. Tools which vibrate heavily, such as chippers, can cause serious nerve damage.

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PHONE:	
E-MAIL:	

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- Report any discomfort right away. Don't let it go until it becomes a more serious problem. Remember, your employer may not discriminate against you for reporting MSDs, MSD signs or symptoms or MSD hazards.
- Talk to your supervisor or other responsible persons about your ideas to fix the problem.
- Take care of yourself. Maintain good health and physical fitness.
- Always be thinking of ways to improve your workstation, and our product, and share ideas with your supervisor.

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