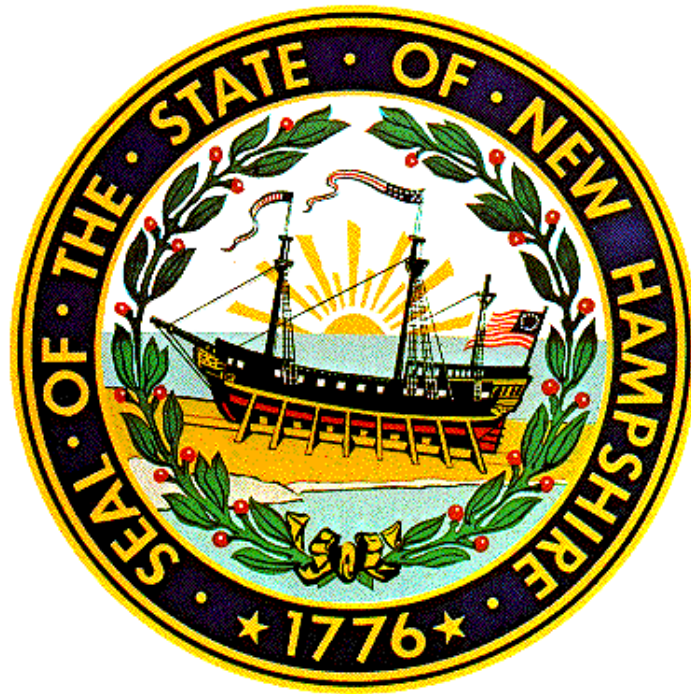


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# ERGONOMICS PROGRAM



August 25, 2008  
Version 1

**FINAL**

## **REVISION LOG**

<b>Date</b>	<b>Revision/Created By</b>	<b>Description</b>
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## 1 INTRODUCTION

The State of New Hampshire believes that our employees' safety and health is important. No job or task is so important or urgent that we cannot take the time to perform it safely. Workplace musculoskeletal disorders have increased in recent years. The State of New Hampshire is committed to providing a workplace free of injuries and strives to achieve an accident record well below the national average for our industry.

The Department of Information Technology (DoIT) and the Bureau of Finance and Administration (BFA), Human Resources provides additional guidelines to implement, foster, and enhance a comprehensive ergonomics program as well as supports existing guidelines defined by of the State of New Hampshire's Risk Management Ergonomics Program.

### 1.1 Definitions

**Ergonomics:** Is the science of designing and matching physical and psychological demands of workplace to the capabilities and limitations of the worker.

**Musculoskeletal Disorders (MSDs):** Injuries resulting from repeated exertions or small traumas that eventually cause chronic discomfort, pain, and disability. MSDs are also known as cumulative trauma disorders and repetitive strain injuries. MSDs develop over time versus an acute injury such as a fall. These injuries affect the muscles, tendons, ligaments, joints, bones, cartilage, discs, and nerves. Some common injuries are lower back pain, carpal tunnel syndrome, and tendonitis.

## 2 PURPOSE

The purpose of this program is to effectively eliminate or control Work-related Musculoskeletal Disorders (WMSD) and hazards by providing management leadership and employee involvement in the identification and resolution of hazards and then by providing training, medical management and evaluation as an on-going process.

### 2.1 The Goal of the Ergonomics Program

Ergonomics is the science of designing and matching physical and psychological demands of workplace to the capabilities and limitation of the worker. The goal of ergonomics is to allow work to be done without undue stress to our labor force. Making ergonomic improvements to the workplace does not have to be expensive or complicated. Significant changes can be made if problems are approached with common sense, good analysis of work methods and knowledge of basic ergonomic principles. When evaluating workplace exposures to WMSD's, we must look at the whole body and how the work demands create or exacerbate potential ergonomic risk.

Also reference:

**Appendix A, *Musculoskeletal Disorders (MSDs) Risk Factors***

**Appendix B, *Aches and Pains at Work***

**Appendix C, *Computer Workstation Ergonomics***

## 3 RESPONSIBILITIES

### 3.1 DoIT Management Commitment

Management commitment is key to a successful Comprehensive Ergonomics Program. Management commitment can be expressed in a variety of ways:

- ▶ Treatment of ergonomic efforts as furthering DoIT's goals of maintaining a safe and healthful work environment for all employees

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- ▶ Cooperation of the total workforce (managers, supervisors, support staff) in working together toward realizing ergonomic improvements
- ▶ Support of the unions and other worker representatives

OT's Management Responsibility to the Ergonomic Program is as follows:

- Assign and communicate responsibilities within the program
- Provide authority, resources, and information regarding the program
- Support existing State of New Hampshire Risk Management guidelines and practices
- Identify individuals to be the **Ergonomic Coordinators/Team**
- Coordinate training with the Department of Administrative Services (DAS), Risk Management or through the Bureau of Training and Education (BET)

### 3.2 Employee Involvement

Worker involvement in efforts to improve workplace conditions has several benefits, which include:

- ▶ Enhanced worker motivation and job satisfaction
- ▶ Added problem solving capabilities
- ▶ Greater acceptance of change
- ▶ Greater knowledge of the work and the workplace

Employee involvement is a critical component of an effective Ergonomics programs. No one understands the equipment or work processes better than the people actually involved with performing the tasks. We recognize this attribute and encourage and expect employees to take part in the Ergonomics Program. Developing and documenting the following suggestions can accomplish this:

- An employee complaint or suggestion, procedure should be established to allow employees to bring their concerns to the Ergonomic Coordinators/ management and provide feedback.
- All Musculoskeletal Disorders (MSDs) symptoms should be reported to the appropriate Ergonomics Coordinator [no matter how minor] to allow prompt evaluation and medical treatment if needed.
- The Ergonomic Coordinators should be organized which should have representatives from each DoIT facilities to allow for further analysis and to make recommendations for corrective action.
- Employees are encouraged to contact their designated Ergonomic Coordinator and/or Human Resources to discuss any problems or suggestions related to ergonomic concerns.

Before making any changes in processes, procedures or equipment, the affected employee(s) should be considered so that they may have the opportunity to provide input for any final decisions. They know how work is performed and why things are done the way they are. Ask them for ideas and be prepared to prioritize potential solutions or controls.

Employees are highly encouraged to bring their individual concerns to their respective supervisors and managers. Feedback from employees is an important means of identifying ergonomic hazards. **All requests for an Ergonomic Assessment/Audit must be sent through email to [HumanResources@DoIT.nh.gov](mailto:HumanResources@DoIT.nh.gov)**

## 4 ERGONOMIC COORDINATORS – FUNCTIONS AND ORGANIZATION

### 4.1 Organization of DoIT's Ergonomic Coordinators

We will promote continuous improvement for efficiency, comfort, and health of all employees through a team effort of management and employee involvement. We will establish an ergonomic team with the ultimate responsibility to address ergonomic problems and recommend solutions that cause or increase the risk of MSD's. The Ergonomic Coordinators are:

Kevin Coates  
Sean D'Entremont  
Lynn Dubey  
Mary Hillier  
Virginia Kendall  
Linda Nalette  
Dawn Schriever

### 4.2 Ergonomic Coordinator Duties

The Ergonomic Coordinators will coordinate the ergonomics program including receiving and responding to reports about signs and symptoms, potential MSD's, hazards, and possible recommendations, and to take appropriate action, where required. Responsibilities of the Ergonomic Coordinators/Team include:

- Will receive reports about signs, symptoms, and hazards
- Will take action to correct problems
- Will communicate regularly with employees about the program
- Setting up and managing the ergonomics program
- Develop and define roles and responsibilities for managers and supervisors
- Help establish accountability measures for meeting those responsibilities
- Help to provide appropriate resources, information and training

Once the employee submits the Ergonomic request through email to [HumanResources@DoIT.nh.gov](mailto:HumanResources@DoIT.nh.gov) mail box, the Human Resources (HR) Administrator will have five (5) days to assign the request to an Ergonomic Coordinator with a scheduled appointment date. The Ergonomic Coordinator has five (5) days to report back to the HR Administrator and if appropriate, a member of the HR staff will order the equipment.

The Ergonomic Assessment/Audit will be maintained within the HR area and will be kept confidential and separate from the employee's personnel file.

### 4.3 Ergonomic Team Mission

It is the mission of the Department of Information Technology (DoIT) to appoint an ergonomics team to control back and upper extremity injuries for both employee safety and production improvement. The ergonomics team will function in partnership with all other programs of equal priority with production and safety. *Ergonomic Team Roster* (Appendix D)

### 4.4 Ergonomic Team Meetings

Ergonomic Team Meetings should be held quarterly to discuss outstanding issues that need to be addressed. The team will also review ergonomic related injuries and illnesses to include incidences, medical only cases, and lost time cases. Once each case is reviewed, recommendations will be made to management to resolve the issues. *Report of the Ergonomic Team Meeting* should be kept on file with the DoIT Human Resources area within the Bureau of Finance and Administration. (Appendix E)

## 4.5 Hazard Identification and Information

Written or verbal signs, symptoms, hazards, or control recommendations from employees, supervisors, and managers will accomplish ergonomic hazard identification. Reviews of existing safety and health reviews will also be completed.

Ways to become involved in developing, implementing, and evaluating job hazard analysis and controls, training, and program effectiveness – Priority Ergonomic Problems and hazards will be identified through the Ergonomic Coordinators/Team using the following methods:

- ▶ Identify at risk jobs and work practices that are most likely to result in MSD's. Use the: *Ergonomic Workstation Analysis Checklist*, **Appendix F** and the *VDT Ergonomics Self-Assessment Checklist*, **Appendix G** to identify actual or potential **Risk Factors**.

Other resources that are beneficial include:

- **Appendix A, Musculoskeletal Disorders (MSDs) Risk Factors**
  - **Appendix B, Aches and Pains at Work**
  - **Appendix C, Computer Workstation Ergonomics**
- ▶ Analyze job tasks when **Risk Factors** cannot be accurately determined using simple observations. Complete a workstation evaluation using the Workstation Ergonomic Evaluation Procedures below:

### Workstation Ergonomic Evaluation Procedures

**Worksheets:** *VDT Observation Worksheet*, **Appendix I**  
*Workstation Ergonomic Assessment Guideline*, **Appendix J**  
*Questions for Ergonomic Evaluation*, **Appendix K**

**Tools:** Measuring Tape

### Procedure

**Step 1:** Using the *VDT Observation Worksheet*, look at the desktop arrangement. This is the section located at the bottom of the worksheet. Look at the overall arrangement of the computer, keyboard, document holder, telephone, calculator, notebooks, and file cabinets, bookshelves. Ask questions from the *Questions for Ergonomic Evaluation*. Take notes for the file. Is everything easily accessible for the employee to limit twisting, bending, and reaching during their normal routine?

**Step 2:** Using the *VDT Observation Worksheet*, look at the seat height. When the employee sits in the chair with their feet flat on the floor. Are their thighs at a 90-degree angle? Using the *Workstation Ergonomic Assessment Guideline*, take measurements "A" (Distance from the floor to the middle of the employee's knee.) This is the measurement that should be used to adjust the seat height.

**Step 3:** Using the *VDT Observation Worksheet*, look at the wrist postures and keyboard placement. The keyboard should be adjusted to a height where the elbows are in a neutral position at 90-degrees and wrists placed in a neutral position to avoid either extension or flexion. The keyboard should be at a distance close enough to the body to avoid stretching. Using the *Workstation Ergonomic Assessment Guidelines*, take measurements "B". This is the elbow height. The keyboard home row height is equal to Dimension A + Dimension B.

**Step 4:** Using the *VDT Observation Worksheet*, check the monitor height position by observing where the employee's eyes view the monitor. The employee's eyes should be at the top of the monitor. Using the *Workstation Ergonomic Assessment Guidelines*, measure eye height, which would be the bottom of the table to the eye level of the

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employee. The monitor should be located about arms distance from the employee or about 20”.

**Step 5:** Using the VDT Observation Worksheet, make sure that there is enough leg clearance between the chair seat pan and back of the knees of the employee.

**Step 6:** Ask employee for feedback regarding the new workstation setup.

- ▶ **Analyze *Injury and Illness Data Log***, Appendix H, Worker Compensation Summary Reports; Accident Investigation reports and worker complaints, to determine which employees are experiencing problems.

### **Recordkeeping**

The following worksheets should be kept by DoIT, Human Resources for each employee that has a workstation evaluation. These worksheets will not be kept in an individual’s personnel file.

- ▶ *VDT Observation Worksheet*
- ▶ *Workstation Ergonomic Assessment Guidelines*
- ▶ *Questions for Ergonomic Evaluations*
- ▶ *Ergonomic Workstation Analysis Checklist*
- ▶ *VDT Ergonomics Self-Assessment Checklist*

The Ergonomics Coordinators/Team will ensure that DoIT, Human Resources receives the *Team Roster*, *Report of Team Meeting*, and the *Injury and Illness Log*.

The team on a quarterly basis with recommendation follow-up should review each employee evaluation with recommendations.

## **4.6 Hazard Prevention and Control**

### Identification and Implementation of Solutions

The Ergonomic Coordinators/Team will be responsible for employee input and developing alternative solutions to exposures to low back and upper extremity cumulative trauma including both long and short-term periods.

## **4.7 Work Organization and Task Controls**

Essential elements for controlling employee risk include proper work methods, employee conditioning, regular monitoring, feedback, maintenance, adjustments and modifications, and enforcement.

### **4.7.1 Team Duties for Hazard Controls**

The Ergonomic Coordinators/Team will identify and help to correct ergonomic Risk Factors by:

- Revealing feasible engineering controls for workstation design, work practices, and tools.
- Potential solutions for administrative controls to reduce exposures to MSD’s. Choices may include job rotation/cross training, job enlargement, work organization, job placement criteria and measurement, and exercise and wellness programs.

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### APPENDIX A MUSCULOSKELETAL DISORDERS (MSDs) RISK FACTORS

Musculoskeletal disorders also referred to as Cumulative Trauma Disorders (CTDs) or Repetitive Strain Injuries (RSIs) are a family of muscle, tendon, and nerve disorders caused by one or more of the following **RISK FACTORS**:

<b>Awkward and Static Postures:</b>	<b>Examples</b> – Keyboarding in a twisted position; holding the phone handset with your head and neck bent; filing above or below your waist; typing on a keyboard with wrists bent up or down, left or right
<b>Contact Stress:</b>	<b>Examples</b> – Resting wrists and forearms on sharp desktop while keyboarding; stomach resting on edge of filing cabinet while reaching; stapling by using the underside of wrist.
<b>Extreme Temperatures:</b>	Temperatures too hot and too cold, which cause the body to react abnormally.
<b>Fatigue:</b>	<b>Examples</b> – Insufficient or infrequent rest breaks performing the same task; any exertion done without adequate rest breaks between tasks.
<b>Force:</b>	<b>Examples</b> – Hole punching or stapling large stacks of paper; typing too hard on a keyboard; pushing or pulling mail carts.
<b>Heavy Lifting:</b>	<b>Examples</b> – Carrying large boxes to the mailroom; lifting boxes full of office supplies; loading large boxes of mail onto the mail truck.
<b>Repetition:</b>	<b>Examples</b> – Keyboarding, calculating, thumbing through files, and sorting mail.
<b>Vibrations:</b>	<b>Examples</b> – Mailroom equipment and print shop equipment causing excessive vibration to hands and arms.
<b>Work Stress:</b>	<b>Examples</b> – Job satisfaction; control over work organization; rapport with supervisor and co-workers; family support structures; self-esteem; ability to cope with pain.

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### APPENDIX B ACHES AND PAINS AT WORK

Changing your working posture or work patterns can relieve many aches and pains. Follow these tips to make your work more comfortable:

<b>Body Part Fatigued</b>	<b>Common Contributing Factors</b>	<b>What Can You Try</b>
<b>Back of neck</b>	Looking down at documents or keyboard	Use a document holder. Improve keyboard skills. Check monitor height.
<b>Side of neck</b>	Looking to one side	Locate documents and screen directly in front of you
<b>Top of shoulders outside or front of shoulders</b>	Keyboard too high, arms unsupported	Raise chair, use footrest, rest palms on front of desk, reduce desk height (if adjustable)
<b>Lower Back</b>	Inadequate lumbar support	Adjust back rest height and angle to give firm support, remove arms from chair, remove obstructions under desk (e.g., drawers)
<b>Upper back</b>	Twisted posture	Sit straight on, locate documents, screen and keyboard in front of you
<b>Right arm or shoulder</b>	Arm outstretched unsupported	Move mouse closer, use single surface desk
<b>Left arm, shoulder or neck</b>	Reaching for telephone or cradling telephone on shoulder	Bring phone closer. Use headset.
<b>Leg discomfort, swollen feet</b>	Underside of thighs compressed against chair seat	Use footrest or reduce desk and chair height
<b>Headaches</b>	Posture, visual problems, noise, stress, glare, high work load	Rearrange work area; re-direct traffic; screen filter; close blinds; shut door; vary tasks; take micro pauses; smooth out work flow; reduce time on computer; eye test.
<b>Eye fatigue temporary short sightedness</b>	Visual problems, screen too close, poor image quality, glare, screen reflections	Rearrange work area; screen filter; close blinds; vary tasks; take micro pauses; eye test.

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### **APPENDIX C COMPUTER WORKSTATION ERGONOMICS**

As we spend increasing amounts of time at our computer workstation, we need to be aware of how the design and arrangement of our equipment can impact our comfort, health, and productivity.

#### **Work Area**

The work area should be large enough to accommodate you, allow the full range of motions involved in performing required tasks, and provide room for the equipment and materials that make up the workstation.

- Use a headset for lengthy or frequent telephone work.
- Place the items you most frequently directly in front of you.
- Avoid overcrowding computer work areas

#### **Desk/Workstation**

Standard furniture cannot accommodate everyone's needs. A taller person may need a one-time adjustment to have his or her work surface raised somewhat; a shorter person may need a footrest or other accessories. Adjustable furniture may be needed in situations where people share or use the same workstations.

- The desktop should be organized so that frequently used objects are close to the user to avoid excessive extending reaching.
- The work surface should have a matte finish to minimize glare or reflections.
- The area underneath the desk should always be clean/uncluttered to accommodate the user's legs and allow for stretching.
- If a fixed-height desk is used, add a keyboard tray that adjusts vertically to provide added adjustability.
- A footrest should be used if, after adjusting the height of the chair, feet do not rest flat on the floor.
- Use a headset or speakerphone to avoid neck and shoulder discomfort if you use a phone frequently throughout the day.
- Place the phone on the side of your non-dominant hand (i.e., left side if right-handed, right side if left-handed)
- Position your desk lamp (if you use one) so that it illuminates source documents without causing either glare on the computer screen or direct illumination to your eyes.
- A document holder should be used if documents are referred to during keying. The document holder should:
  - Be stable and adjustable (height, position, distance, and angle of view).
  - Support your document on either side of the monitor.
  - Be at the same distance from your eyes as the display screen to avoid frequent changes of focus and you should be able to look from one to the other without moving your neck.

#### **Chair Adjustments**

Contrary to popular belief, sitting, which most people believe is relaxing, is hard on the back. Sitting for long periods of time can cause increased pressure on the intervertebral discs – the spongy discs between the vertebra. Sitting is also hard on the feet and legs. Gravity tends to pool blood in the legs and feet and create a sluggish return to the heart.

The following recommendations can help increase comfort for computer users:

- “Dynamic sitting”, don't stay in one static position for extended periods of time.
- When performing daily tasks, alternate between sitting and standing or take small walking break throughout the day.
- The chair back should have a lumbar support.
- Adjust height of backrest to support the natural inward curve of the lower back.
  - It may be useful to use a rolled towel, lumbar roll, or cushion to support the low back.

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- The angle of the backrest is subjective but the trunk and the upper legs should form an angle between 90 to 115 degrees.
- Adjust height of chair so feet rest flat on the floor.
  - Sit upright in the chair with the low back against the backrest and the shoulders touching the backrest.
  - Thighs should be parallel to the floor and knees at about the same level as the hips.
  - Back of knees should not come in direct contact with the edge of the seat pan. There should be 2-4 inches between the edge of the seat and back of the knee.
- Armrests should be removable and the distance between the armrests should be adjustable.
  - Adjust height and/or width of armrests so they allow the user to rest arms at their sides and relax/drop their shoulders while keyboarding.
  - Don't use armrests to slouch. Also, chair arms should not noticeably elevate your shoulders or force you to move your arms away from your body to use them.
  - Elbows and lower arms should rest lightly on armrests so as not to cause circulatory or nerve problems.
- Use a footrest when attempts to adjust your chair and the rest of your workstation fail to keep your feet on the ground.
- Ensure that you have some space (2-3") between the top of your thighs and the underside of your workstation.
- Have enough space under your work surface so that you can pull your self all the way up to the edge of the desk with room for your legs and knees to fit comfortably.

## **Monitor**

Once the chair and work surface height are properly adjusted, the computer monitor should be placed so the top of the screen is at or just below eyelevel when seated in an upright position. The following suggestions can help prevent the development of eyestrain, neck pain, and shoulder fatigue while using your computer workstation:

- Make sure the surface of the viewing screen is clean.
- Adjust brightness and contrast to optimum comfort.
- Position the monitor directly in front of the user to avoid excessive twisting of the neck.
- User must position the monitor at a comfortable viewing distance, approximately 18-30 inches from the user.
- Position monitors at right angles from windows to reduce glare. Close window blinds as needed to reduce glare from sunlight.
- Position monitors away from direct lighting, which creates excessive glare or use a glare filter over the monitor to reduce glare.
- Adjust monitor tilt so that ceiling lights do not reflect on your screen.
- If a document holder is used, it should be placed at approximately the same height as the monitor and at the same distance from the eyes to prevent frequent eye shifts between the monitor screen and reference materials.
- Get regular eye check-ups.
- Adjust as needed for larger screens. You may need to sit farther away and increase the font size to take full advantage of the larger screen.

Bifocal and trifocal wearers have to pay particular attention to the placement of their monitor. Wearers of bifocals and trifocals often unknowingly tilt their heads backwards so they can read the screen through the lower portion of their glasses. This can sometimes lead to neck, shoulder, and back discomfort. Potential solutions include either lowering the computer monitor or purchasing glasses designed specifically for working at the computer.

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### **Keyboard**

Many ergonomic problems associated with computer workstations occur in the shoulder, elbow, forearm, wrist, and hand. Continuous work on the computer may expose soft tissues in these areas to repetition, awkward posture, and forceful exertions, especially if the workstation is not set-up properly.

The following adjustments should be made to your workstation to help prevent the development of an ergonomic problem in the upper extremities.

- The mouse is present in virtually every office environment. Handed versions of mouse are designed specifically to the contours of either the right or left hand.
- Placing the mouse, trackball, or other input device too far away, too low, or too much on one side can cause shoulder, wrist, elbow, and forearm discomfort. Placing the input device directly in your immediate reach zone offers natural comfort and maximum hand-to-eye coordination.
- Do not bend your wrist upward. Make sure you are sitting high enough for the workstation to be slightly below elbow height so that your hand rests naturally on the mouse.
- Mousing demands a certain level of surface stability; if used on a keyboard tray, the tray should not wobble or tip.
- A trackball has an exposed ball that you manipulate with your fingers. It requires the use of different muscle and tendon groups than does a mouse, and can add variety to you manipulation of computer information. Some trackball designs, however, may cause discomfort and possible injury to the area around your thumb, which stretches and reaches to maneuver the trackball.
- Test different models of mousing devices, trackball or other input devices. Consider the shape and size of the devices, how comfortable it fits into your hand, ease of operation, and any special features that might make your job easier.

In addition to the mouse and trackball, a variety of other input devices are available. Consider your task requirements and physical limitations.

- Touch pads allow you to move the cursor on the computer screen by simply gliding your finger across a small pad. Unlike mouse, trackballs, and other pointing devices, touch pads have no moving parts to clog or break, so they never require disassembly for cleaning.
- Touch screens allow you to point directly at an object. They require little or no training, are faster than other pointing devices, and require no extra work surface. However, the disadvantages of touch screens include arm fatigue, smudges, optical interference, and increased glare.
- Voice input allows you to “talk” to your computer. Currently, such programs can understand and respond to natural speech delivered at rates of up to 160 words per minute.
- Pen-like devices use pressure, light, electromagnetic disruption, or radio frequencies to enter and manipulate information through contact with the computer screen or a horizontal pad. A pen pad required about as much room on the work surface as doe a mouse. If pen technology is used on a horizontal pad, a workstation must provide adequate non-glare lighting for both it and the computer screen.

### **Lighting**

Lighting not suited to working with a computer is a major contributing factor in visual discomforts including eyestrain, burning or itching eyes, and blurred or double vision.

The lighting in most office environment is too bright for optimal VDT screen viewing. The illumination may be reduced by removing 2 bulbs in a 4-bulb fluorescent fixture, removing the bulbs in every other fixture, or turning off overhead lights altogether. Supplemental desk lighting is better than overhead lighting for reading a printed copy.

Use the following recommendations to reduce eyestrain and eye fatigue:

- Close drapes/blinds to reduce glare.

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- Adjust lighting to avoid glare on screen (light source should come at a 90 degree angle, with low watt lights rather than high).
- Avoid intense or uneven lighting in your field of vision.
- Place monitor at 90-degree angle to windows (where possible).
- Reduce overhead lighting (where possible).
- Use indirect or shielded lighting (where possible).
- Walls should not be painted with a reflective finish.
- Use a glare screen or monitor shield to reduce glare from overhead lighting.

### **Work Habits**

Repetitious static work (working at the computer) is very fatiguing on your upper extremities as well as your eyes. It is important that breaks from working at the computer be taken every 20 to 40 minutes in order for your body to rest and recover. Taking a short break (3 to 5 minutes) does not mean you have to stop working, other activities such as talking to a co-worker, making copies, filing, etc., could be done during breaks from typing.

It is also important to change positions periodically. Sitting in one position or leaning on your arms for an extended period of time can interfere with circulation.

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## APPENDIX D ERGONOMIC TEAM ROSTER

ERGONOMIC TEAM ROSTER				
The following are the designated OIT Ergonomic Coordinators as of 02/06/2008				
Name	OIT Area	Location	Phone No	Email Address
Kevin Coates	IT Security Group (ITSG)	Nash	(603) 271-7292	<a href="mailto:kevin.coates@oit.nh.gov">kevin.coates@oit.nh.gov</a>
Sean D'Entremont	Technical Services & Support Division (TSS)	Department of Resource and Economic Development	(603) 334-6074	<a href="mailto:sean.dentremont@oit.nh.gov">sean.dentremont@oit.nh.gov</a>
Lynn Dubey	Bureau of Finance and Administration (BFA)	Nash	(603) 271-5081	<a href="mailto:lynn.dubey@oit.nh.gov">lynn.dubey@oit.nh.gov</a>
Mary Hillier	Agency Software Division (ASD)	NH Employment Security	(603) 228-4170	<a href="mailto:mary.hillier@oit.nh.gov">mary.hillier@oit.nh.gov</a>
Virginia Kendall	Agency Software Division (ASD)	45 Chenell Drive	(603) 271-1396	<a href="mailto:virginia.kendall@oit.nh.gov">virginia.kendall@oit.nh.gov</a>
Linda Nalette	Agency Software Division (ASD)	NH Employment Security	(603) 228-4087	<a href="mailto:linda.nalette@oit.nh.gov">linda.nalette@oit.nh.gov</a>
Dawn Schriever	Bureau of Finance and Administration (BFA)	Nash	(603) 271-1515	<a href="mailto:dawn.schriever@oit.nh.gov">dawn.schriever@oit.nh.gov</a>

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**APPENDIX E ERGONOMIC TEAM MEETING REPORT**

<b>BASIC INFORMATION</b>							
<b>DATE:</b>		<b>START TIME:</b>		<b>END TIME:</b>		<b>LOCATION:</b>	
<b>SUBJECT/PROJECT:</b>	<b>Ergonomic Team Meeting Report</b>						
<b>PURPOSE:</b>	Team progress report and identification of ergonomic related illnesses (past quarter) including number of lost time injuries and number of medical cases include incident/illness description summary as well as what caused the incident (Work procedure, equipment, tool, etc.)						
<b>FACILITATOR:</b>							
<b>ATTENDEES:</b>							
<b>ITEM #</b>	<b>AGENDA</b>						
<b>ITEM #</b>	<b>MINUTES</b>						
<b>ACTION ITEMS</b>							
<b>ITEM #</b>	<b>DESCRIPTION</b>			<b>ASSIGNED TO</b>		<b>DUE DATE</b>	

## APPENDIX F ERGONOMIC WORKSTATION ANALYSIS CHECKLIST

### ERGONOMIC WORK STATION ANALYSIS CHECKLIST

**Instructions:** Any response checked in the “Problem” column indicates a potential injury source. These tasks should reflect a priority for a more detailed task analysis using ergonomic risk assessment methods or a video review with a focused approach for other high-risk jobs.

Workspace			
Workspace	Problems?	Name of Task	Observations
Workstations lack adjustability for multiple operators?			
Dim lighting causing eyestrain?			
Excessive background or task noise sources present?			
Inadequate clearances for head, arm, legs, and feet?			
Workspace storage, aisles, neighboring workstations encroach on each other?			
Administration			
Administration	Problems?	Name of Task	Observations
Health records, claims data indicate loss trends?			
Worker complaints target ergonomic problems?			
Evidence of employee modifications at workstations?			
Are wrist splints or back belts used? Why?			
Supervisors educated on ergonomics issues?			
Incident investigation reports target employee carelessness as WMSD causes?			
Incident reports fail to consider workstation improvements/engineering controls?			
Management lacks post-injury control methods?			
Incident investigation report missing?			
Need for follow-up ergonomic evaluation on claimant workstations			
No follow-up with injured employee or treating healthcare provider or treating specialist?			
Work rotation/job enlargement system needed to reduce repetitive exposures?			
Employee input solicited?			
Recommended for Ergo Improvements			
Recommended for Ergo Improvements	Problems?	Name of Task	Observations
Improved types of tools necessary?			
Fixtures, jigs or hold-down devices needed?			
Use of mechanical assists (hoists, articulating arms, lift tables, conveyors, chutes) feasible?			
Improved workstation layout help? Neutral positions possible?			
Increased mobility/flexibility in work posture? Sit/stand positions feasible?			
Storage arrangement reduces frequency of awkward, heavy lifting or over-reaching?			
Better material handling/workflow help? Smaller containers possible?			
Eliminate motions, tasks, or operations from up/down line improvements? Material flow logically organized?			
Would a detailed “workflow analysis” help identify opportunities for completely changing the way a task is done?			



**FINAL**

**III. REACHING/LIFTING**

- Do you arrange materials you use most often within easy reach without stretching or twisting?
- Do you avoid stretching and twisting when lifting?
- Do you keep objects close to your body when lifting, lowering, or carrying?
- When reaching low, do you crouch, rather than bend over from the waist, whenever you can?
- Do you keep frequently used materials, supplies, manuals, and files within easy reach at a height between your knees and shoulders?
- Do you ask for help with heavy or awkward loads?

Yes	No	N/A

**IV. PHYSICAL SYMPTOMS OF POSSIBLE ERGONOMIC STRESS**


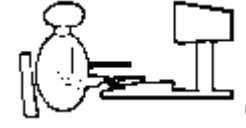

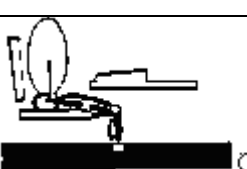
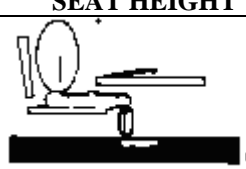
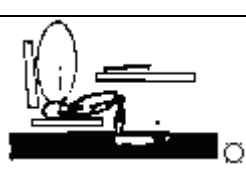
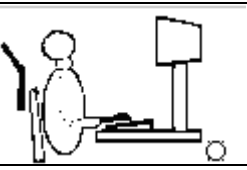
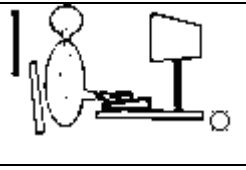
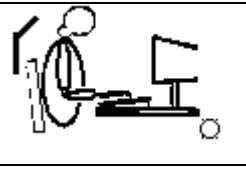





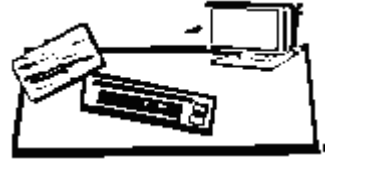
Do you occasionally experience...

- Pain, tenderness, or swelling in the elbow or wrist?
- Numbness, tingling, or pain in the hands at night or at rest?
- Losses of feeling, control, or decreased grip strength?
- Weakening of muscle in the heel of the hand below the thumb?
- Back or neck pain?
- Feet or legs falling asleep?
- Shoulder pain?
- Headaches?

Yes	No	N/A



**APPENDIX I VDT OBSERVATION WORKSHEET**

Employee		Work Area:							
<b>WRIST POSTURES</b>									
									
Extension	Neutral	Flexion							
<b>SEAT HEIGHT</b>									
									
Extension	Neutral	Flexion							
<b>MONITOR HEIGHT</b>									
									
Extension	Neutral	Flexion							
<b>KEYBOARD PLACEMENT</b>		<b>LEG CLEARANCE</b>							
		<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> <tr> <td>Knee</td> <td></td> </tr> <tr> <td>Leg</td> <td></td> </tr> </table>	YES	NO	Knee		Leg		
YES	NO								
Knee									
Leg									
Too Far	Neutral								
<b>DESKTOP ARRANGEMENT</b>									
									
Monitor	Left	Neutral	Right						
Keyboard	Left	Neutral	Right						
Had	Wrist	Copy Holder	Chair Cushion						
Provided									

**Additional Suggestions:**

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**FINAL**

**APPENDIX J WORKSTATION ERGONOMIC ASSESSMENT GUIDELINE**

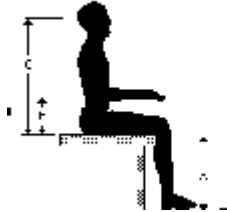
**BUILDING:**  
**DEPARTMENT:**  
**JOB TITLE:**  
**NAME:**

**AVG. DAILY USE**  **LESS THAN 4 HRS**  
 **4 OR MORE HRS**

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**OPERATOR MEASUREMENTS**

'A' = \_\_\_\_\_ Measure from heel to top of seat  
'B' = \_\_\_\_\_ Measure from top of seat to bottom of elbow  
'C' = \_\_\_\_\_ Measure from top of seat to eye level



<u>IDEAL</u>			<u>ACTUAL</u>	
A + B	_____	KEYBOARD AT HOME ROW	A =	_____
A + C	_____	TOP OF SCREEN	A + B	_____
			A + C	_____

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**TYPES OF AUXILIARY EQUIPMENT NEEDED**

Document Holder	_____	Wrist Rest	_____
Adjustable Monitor Stand	_____	Pneumatic Chair	_____
Keyboard Tray	_____	Phone Headset	_____
Foot Rest	_____	Articulated Keyboard Tray	_____
Glare Screen	_____	Adjustable Computer Tray	_____
	_____		_____
	_____		_____

**COMMENTS:**

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**Evaluation Completed By:** \_\_\_\_\_ **Date Completed:** \_\_\_\_\_

## **FINAL**

### **APPENDIX K QUESTIONS FOR ERGONOMIC EVALUATIONS**

1. What does the employee's job consist of?
2. How long does the employee spend at the computer?
3. How often are breaks taken?
4. Have there been any recent changes in job tasks or workstation design?
5. How often does the employee key when working on the computer? How often is the mouse used?
6. What is the office environment like? Is it too hot or cold? How is the lighting?
7. Does the employee have any symptoms?
8. Is the employee right or left handed?
9. Does the employee use the telephone and computer simultaneously?
10. Does the employee have any hobbies that may aggravate the situation?