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# Acknowledgments

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# Introduction

**M**ore than 10 million people in the U.S. suffer from computer-related health problems ranging from eyestrain to disabling hand and wrist injuries. According to state and federal regulators, most of these injuries occur on the job. You may be concerned about preventing such problems in your own workplace, but don't know where to start.

Whether you are a computer user, a supervisor, a risk manager, or a union representative, this workbook is designed to help you. It outlines a six-step approach to help you identify and prevent computer-related health problems on the job. The various checklists and worksheets here are tools you can use to get started. Choose the ones that work best for your own workplace.

The final step in the six-step process is development of a comprehensive computer health and safety program for your workplace. The elements of a successful ongoing program are described.

In all your efforts, try to combine strong **employer commitment** and active **employee involvement**. These are the key ingredients of any effective workplace health and safety program.



# Analyze the Problem

The first step in developing a computer safety plan for your workplace is to understand the problem clearly. Get the facts about the problem and try to identify its causes.

## Do employees have any health problems that might be computer-related?

Here are some ways you might find out if people in your workplace have computer-related health problems or symptoms. Check the best ways to get information in your workplace.

- Talk to employees to see if they are experiencing such problems.
- Raise the issue for discussion at a staff meeting.
- Check out workplace health and safety records such as:
  - OSHA 200 Log. Most employers with 11 or more employees must post an OSHA Form 200, "Log and Summary of Occupational Injuries and Illnesses," in the workplace during the month of February each year. This log summarizes job-related injuries and illnesses during the previous year. This information must also be given to any employee who requests it, at any time of the year.
  - Injury reports and workers' compensation records.
  - Health and safety committee reports.
- Conduct a workplace health survey. The **Health Problems Checklist** on the next page is one example of a health survey.

# Health Problems Checklist

Fill out a copy of this form for every person you survey.

How many hours do you use a computer at work on an average day? \_\_\_\_\_

Do you have any health problems that you feel might have been caused or made worse by your computer work?                      YES \_\_\_\_\_                      NO \_\_\_\_\_

Do you currently experience any of the following?

**SOMETIMES**

**OFTEN**

- |       |       |   |
|-------|-------|---|
| _____ | _____ | Back pain, stiffness, or soreness   |
| _____ | _____ | Shoulder pain, stiffness, or soreness                                     |
| _____ | _____ | Neck pain, stiffness, or soreness   |
| _____ | _____ | Arm pain, stiffness, or soreness  |
| _____ | _____ | Cramps in wrists, hands, or fingers                                       |
| _____ | _____ | Pain, tingling, or numbness in fingers, either in the daytime or at night |
| _____ | _____ | Headaches   |
| _____ | _____ | Eyestrain or sore eyes  |
| _____ | _____ | Tears, or eyes that itch or burn  |
| _____ | _____ | Blurred vision  |
| _____ | _____ | Fatigue or exhaustion   |
| _____ | _____ | Stress or anxiety   |
| _____ | _____ | Other ( <i>please describe:</i> )   |

\_\_\_\_\_  
\_\_\_\_\_



## What are some causes of computer-related health problems?

Health problems related to computer use may have many causes, including the work environment, the design of the job, or the workstation setup. A worksite survey or staff meeting discussion can get employees involved in identifying conditions that need improvement. Or use a checklist to identify problem areas. If you wish, you may use either:

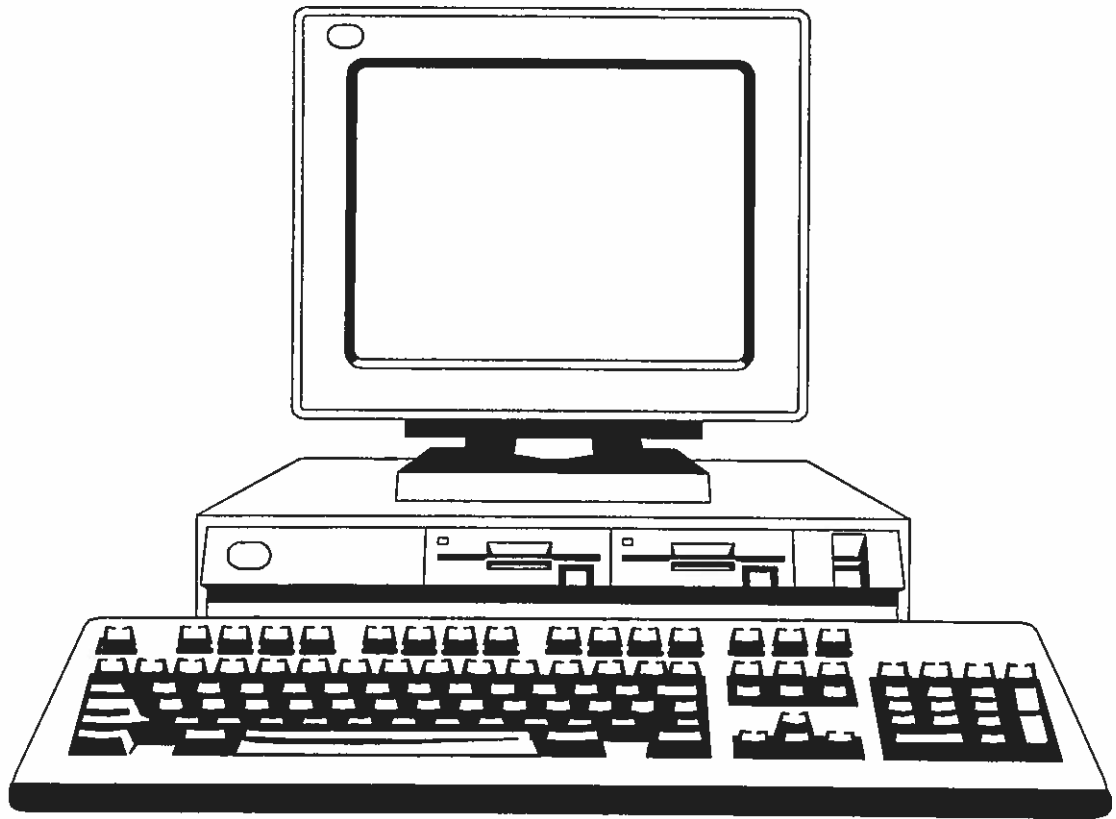


The **Worksite Evaluation Checklist** on the next page, which has some key factors to consider.

—or—



The more detailed **Computer Workstation Checklist** in the back of this book.



# Worksite Evaluation Checklist

## The Work Environment

*If you answer yes to any of these questions, you may have a problem that needs attention.*

**YES NO**

- \_\_\_ \_\_\_ Is room lighting so bright that computer screens are hard to see?
- \_\_\_ \_\_\_ Is there glare on computer screens?
- \_\_\_ \_\_\_ Is there adequate ventilation? Is the office too hot or too cold?
- \_\_\_ \_\_\_ Are employees bothered by noise from printers or other sources?

## The Design of the Job

*If you answer yes to any of these questions, you may have a problem that needs attention.*

**YES NO**

- \_\_\_ \_\_\_ Do workloads, tight deadlines, or other conditions cause stress?
- \_\_\_ \_\_\_ Are jobs very repetitive, requiring the same tasks or movements over and over?
- \_\_\_ \_\_\_ Do employees use keyboards or pointing devices (mice, trackballs, etc.) for long periods of time with no break?
- \_\_\_ \_\_\_ Is the work pace set by the computer rather than the individual?
- \_\_\_ \_\_\_ Do employees have high productivity demands but little control over tasks?

## The Workstation Setup

What tools are required for the job?

- keyboard                       pointing device                       telephone
- hard copy documents                       calculator                       other (*please specify:*)
- 

**YES NO**

- \_\_\_ \_\_\_ Is the workstation set up to promote a comfortable posture and allow for changing positions?
- \_\_\_ \_\_\_ Is workstation equipment easily adjustable?
- \_\_\_ \_\_\_ Are accessories such as document holders, wrist rests, foot rests, glare screens, and telephone headsets available if needed?

# Decide What You Need

By now you may have identified some potential problems in your workplace. List below **all** the possible solutions you can think of. Here are some suggestions to keep in mind.

- Involve computer users in finding possible solutions. They are the best “experts” on the problems they face and can provide valuable and creative problem-solving ideas.
- Remember that a problem may require more than one solution. For example, a wrist rest may not be enough to prevent wrist pain. More frequent rest breaks or a different keyboard height may also be needed.
- Think of inexpensive solutions whenever possible. Low-cost alternatives, such as using phone books to raise a monitor screen, may be as effective as expensive commercial products designed for the same purpose.

Refer to the **Worksite Evaluation Checklist** that you completed earlier. Try to determine what you need in each area. List **all** your needs below.

*Work environment changes needed:*

*Job design changes needed:*

***Workstation changes needed:***

Later, you can go through this list and choose the best and most realistic solutions.

# Set Goals & Priorities

Now that you have a list of possible solutions, it's time to decide which ones to work on first. Most likely, you can't do everything at once. You need to set priorities.

Try to set both short and long-term goals. Short-term goals are those that can be accomplished quickly and easily, or that deal with the most urgent or dangerous situations. Long-term goals require more elaborate planning and greater resources.

Be sure to involve computer users when you set your goals and priorities.

The **Goals and Priorities Worksheet** on the next page will help you decide what to focus on first.

## Short-term and long-term goals

---

**A** health and safety committee at a large company surveyed the computer users and determined that approximately 50 employees needed new workstations. However, in one department there were two people who had reported wrist and hand pain. As a short-term goal, the committee decided to direct some special funds to that department to assist the people reporting symptoms. As a long-term goal, the committee proposed that funds for the other computer users be included in an upcoming budget.

# Goals and Priorities Worksheet

## Areas of Greatest Need

Which problems have computer users identified as most important to them?

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Which employees already have experienced injuries or symptoms? (They may require more immediate attention.)

*Name and Department*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Which jobs require employees to spend the most time on computers? (They may have more risk of injuries.)

*Job Title and Department*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Which computer jobs require repetitive tasks? (Repetitive tasks increase the risk of injury.)

*Job Title and Department*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Which employees have special needs (for example, people with disabilities, or people who are taller or shorter than average)? (Workstations may need special adjustment.)

*Name and Department*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

## Goals and Priorities Worksheet — continued

Which departments or areas require users to share workstations? (Shared workstations must be easier to adjust than single-user workstations.)

### *Departments with Shared Workstations*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Are there particular departments and/or job titles where the problems in the previous sections are centered?

YES  NO

### *Departments or Job Titles*

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

How many people are affected by each of the problems you have identified?

<i>Problem</i>	<i># People</i>	<i>Problem</i>	<i># People</i>
1. _____	_____	2. _____	_____
3. _____	_____	4. _____	_____

## Choosing Solutions

How much money is available to solve computer health and safety problems? \_\_\_\_\_

What low-cost solutions for each problem may be effective?

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

What is the best long-term solution for each problem?

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

## Goals and Priorities Worksheet — continued

Which of these solutions will help the most people?

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Will computer users be supportive of the proposed solutions?

YES     NO

Have employees been involved in setting priorities?

YES     NO

### Your Goals

Now that you've considered these questions, select your short and long-term goals from the overall list of solutions you made on the previous page.

*Short-term goals:*

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*Long-term goals:*

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# Develop a Plan of Action

Now that you have analyzed the problem, found some solutions, and set priorities, the next step is to develop a plan of action to make sure that the needed changes get implemented. An action plan will help you identify workable strategies and overcome barriers to success. An action plan involves several steps.

You need to:

- Understand how changes are usually made in your workplace
- Build your case for change
- Gain the support of others
- Identify barriers to change and ways to overcome them
- Prepare to present your proposal for change..

Let's look at each of these in more detail.

## How are changes usually made in your workplace?

Your workplace has a particular organizational structure and culture that determine how decisions and changes are usually made. To successfully implement your proposed solutions, you need to understand this decision-making process. Here are some questions to consider. For each question check **all** the answers that apply at your workplace.

Who has the authority to make decisions about health and safety, equipment, work processes, and expenditures?

- |  |   |
|--|---|
| <input type="checkbox"/> Work teams                        | <input type="checkbox"/> Supervisors                  |
| <input type="checkbox"/> Management team                   | <input type="checkbox"/> Department heads or managers |
| <input type="checkbox"/> Personnel office or officer       | <input type="checkbox"/> Chief executive officer      |
| <input type="checkbox"/> Safety office or officer          | <input type="checkbox"/> Health and safety committee  |
| <input type="checkbox"/> Other ( <i>please describe:</i> ) |   |

What is the most effective way to interact with these decision-makers?

- |  |   |
|--|---|
| <input type="checkbox"/> Staff meetings                        | <input type="checkbox"/> Informal networking              |
| <input type="checkbox"/> Written proposals                     | <input type="checkbox"/> Special meetings on safety       |
| <input type="checkbox"/> Labor-management negotiations         | <input type="checkbox"/> Through a supervisor             |
| <input type="checkbox"/> Through a safety officer or committee | <input type="checkbox"/> Recommendations from consultants |
| <input type="checkbox"/> Other ( <i>please describe:</i> )     |   |

Which workplace policies may be helpful?

- Injury and Illness Prevention Program (IIPP)  
(Cal/OSHA regulations require each employer in California to establish an effective Injury and Illness Prevention Program to promote health and safety, including computer health and safety. Some other states have similar requirements.)
- Union contract language on health and safety
- Personnel rules
- Workplace health and safety regulations
- Other (*please describe:*)

## How can you build a case for change?

Once you've decided upon the appropriate decision-making channel, make sure that you can present your case in the most convincing way possible.

Pull together the facts that support your case. Include specifics on how computer-related health issues affect your workplace. Use information from the Checklists and Worksheet you completed earlier in this workbook. Be sure to point out the **benefits** to the employer of addressing computer health and safety issues—reduced injuries, lower workers' compensation and sick leave costs, and potentially higher productivity.

To prepare your case, try to answer these questions:

- What health problems are employees experiencing?
- How many employees are affected?
- Which individuals, jobs, or departments are most at risk?
- What do you believe is causing the problems?
- What solutions do you propose?
- How much will the solutions cost?
- How much have computer-related injuries cost your employer?
  - Workers' compensation costs
  - Sick leave costs
  - Lost productivity
  - Overtime costs
  - Retraining and employee replacement costs
  - Impact on employee morale
- Which federal, state, or local health and safety regulations may apply?

## How do you gain the support of others?

Get support from fellow employees and others when you work for change. By talking to other people who share your problems and concerns, you may learn creative solutions that they have used in similar situations. Working together, you can design strategies that will address everyone's needs. Communication and networking also help build a broad base of support for needed changes.

Below are some ways to link up with others. Check which ones you will use at your own workplace:

- Organize workshops on computer health and safety issues.
- Form a committee to investigate the causes and costs of computer health problems in your workplace. Get information about possible solutions, too.
- Enlist the support of your workplace or union health and safety committee.
- Join or start a support group for people experiencing computer-related health problems.
- Network with others outside your workplace who are dealing with similar situations.
- Ask your purchasing department or staff to find out more about workstation furniture and accessories that are safer, healthier, and more comfortable to use.
- Work with the employer's or union's safety officer, Injury and Illness Prevention Program coordinator, or occupational health specialist.
- Other (*please describe:*)

## What barriers to change might there be? How can you overcome them?

Even with a good case and a strong base of support, you may meet some resistance to your proposals. Below are some common arguments you may hear, and some suggestions on how to answer them.

### 1. "There is no money."

Money is almost always a barrier. In the short run, you may need to improvise creative, low-cost changes. In the long run, you may want to find ways that money can be shifted to health and safety. Be prepared to show those in authority how spending money on solutions now can save money in the long run. Here are some ideas you can use to overcome financial barriers to change. Choose those that work best for you.

- Spell out the costs of doing nothing. Show how much the problem has cost already in workers' compensation claims, lost productivity, overtime, employee replacement, and training. Project how continuing and increasing costs of this type would compare to the cost of solving the problem.
- Try, when possible, to suggest low-cost solutions. Often you can effectively modify workstation equipment without replacing it.

*Low-cost solutions that may work:*

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- Find out when budgeting is done at your workplace. Make sure that there is a line item for health and safety improvements.

*Important dates for budgeting:*

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- Develop purchasing guidelines that ensure when old equipment is replaced, the new equipment meets health and safety recommendations. Get equipment that meets

American National Standards Institute (ANSI) standards. These are voluntary health and safety standards that apply to computer terminals, furniture, and the work environment. Equipment meeting ANSI standards isn't necessarily any more expensive.

- Other strategies you might use (*please describe:*)

### No-interest loans

One large university set up a loan program that allowed departments to borrow money so they could upgrade unsafe computer workstations. Departments had three years to pay back the loans interest-free.

## 2. "We don't know enough about computer health and safety."

Some resistance may come from people who just don't know much about the issues. Here are some ways to overcome the knowledge gap.

- Provide educational materials and/or set up training workshops about computer health and safety for management and employees. Be sure to cover both problems and solutions. Present information in a way that is understandable to everyone. You'll need training materials in simple, straightforward English and possibly in other languages as well.
- Gather and present research data on the problem. For example, get figures on the growth of computer-related health problems (such as cumulative trauma disorders) nationally as well as in your own workplace. Also look for information on the link between health problems and computer work. Many government agencies, universities, and labor unions have information on these issues. Check websites such as the National Institute for Occupational Safety and Health ([www.cdc.gov/niosh](http://www.cdc.gov/niosh)), the National Academy of Sciences ([www.nas.edu](http://www.nas.edu)), and the federal Occupational Safety and Health Administration ([www.osha.gov](http://www.osha.gov)).
- Other strategies you might use (*please describe:*)

## On-the-job training programs

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One employer worked with the union to develop a computer health and safety training workshop as part of the company's Injury and Illness Prevention Program. The training consisted of two types of classes. One was "awareness" training for computer users which included basic information on health issues related to computer use and preventive measures. Another class was aimed at individuals with more responsibility for overseeing computer health and safety in their departments. It provided hands-on practice in evaluating and modifying computer workstations to make them safe.

### 3. "It is not a work-related problem."

Some employers and employees deny there is a connection between computer work and health problems. A complicating factor is that with some computer-related injuries, such as carpal tunnel syndrome, symptoms often occur at night rather than while working. Here are some strategies to convince people of the relationship between computer work and health.

- Use health and safety records or employee surveys to document whether employees using computers in your workplace have health complaints. Make a list of departments or job classifications where symptoms have occurred. Use information from the Checklists and Worksheet you completed earlier in this book.
- Ask employees to track their symptoms by keeping diaries of when the symptoms occur. Are they more noticeable when at work? Are they worse late in the afternoon or after typing for long periods? How do they change through the week? Do they improve on the weekend?
- Present research results you have found that show a relationship between symptoms and computer work. Check the websites mentioned on page 19.
- Other strategies you might use (*please describe:*)

#### 4. "There is nobody in charge of health and safety."

Sometimes there is no one specifically in charge of handling health and safety problems on the job. Or the person in charge is overworked, resistant, or has been given inadequate resources to make health and safety improvements. Here are some strategies that may help.

- Get a copy of your workplace Injury and Illness Prevention Program (IIPP). Cal/OSHA requires California employers to have a written health and safety program. Among other things, it should specify who's in charge of health and safety. Find out if the designated IIPP representative at your workplace will help you with computer health and safety.
- Form a computer health and safety committee made up of employees and supervisors. Involve the union if there is one.
- Make sure that computer health and safety responsibilities are clearly spelled out in your workplace health and safety coordinator's job description.
- Other strategies you might use (*please describe:*)

#### **Form a committee**

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In one company, there was no one individual who had the time or authority to deal with computer issues. So a computer health and safety committee was formed, made up of employees and supervisors. The committee was responsible for gathering information about the problem, coming up with proposed solutions, and evaluating workstation furniture and accessories.



## What should you keep in mind when you present your proposal?

Present your case for change through the decision-making channels you identified earlier. Remember that the most effective health and safety approaches combine strong **employer commitment** and active **employee involvement**. Support by all parties will improve your chances of success. Here are some tips to keep in mind when moving your proposal through the approval process.

- Keep your priorities in the forefront throughout the process.
- Be prepared to consider other options or solutions that might not have occurred to you.
- Keep everyone who is concerned about the issues informed and involved throughout the process.



# Implement & Evaluate Changes

After you reach agreement on your proposals for improving computer health and safety, the implementation stage begins. Here are some tips for making your efforts successful.

- Involve employees in implementing the changes. They have firsthand knowledge of their own job needs and difficulties. They can often provide valuable information to help you identify and correct problems. Always keep them informed of progress.
- Whenever possible, try out new equipment before purchasing. One solution doesn't work for every person in every situation. Ask vendors if they can provide sample products so employees can test them.
- After solutions are in place, evaluate how well they are working. Sometimes a problem is not completely solved with your first attempt. There may be a need to modify and fine-tune what you have done. Involve everyone in this evaluation.
- Anticipate problems that may occur when new computer equipment or work processes are introduced in the future.
- Publicize your successes so that other everyone knows action is being taken to improve working conditions.

## **New equipment didn't solve all our problems**

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**O**ne group of employees found that even after getting new workstation furniture and accessories they still faced problems due to tight deadlines and high workload demands. They found that the design of the job and work practices were also important considerations. So they developed proposals for more rest breaks and increased staffing levels during peak periods.



# Design an Ongoing Program

Once you've successfully made some initial improvements, encourage your employer to adopt a **comprehensive** computer health and safety program. Such a program insures that you have an ongoing system to identify and correct problems as they arise. A comprehensive program should include these elements:

- Employer commitment
- Active employee involvement
- Administrative structure (perhaps a health and safety committee)
- System to identify and analyze hazards
- Procedures for hazard prevention and control
- Training
- Medical management of injured employees
- Regular evaluation of the program's effectiveness.

The checklist beginning on the next page identifies possible components of a comprehensive computer health and safety program.

# Program Checklist

A comprehensive computer health and safety program is made up of a number of elements. You may already have some of these in your own workplace. Use this checklist to see what else you need.

## Administration

- |  | <u>Have Now</u> | <u>Have Partially</u> | <u>Needed</u> |
|--|-----------------|-----------------------|---------------|
| 1. A written computer health and safety program that is available to all staff.                          | _____           | _____                 | _____         |
| 2. A high level management commitment to the program.  | _____           | _____                 | _____         |
| 3. Employee involvement in the program.  | _____           | _____                 | _____         |
| 4. A structure for getting the work done effectively (like a committee).                                 | _____           | _____                 | _____         |
| 5. A system for responding to health and safety complaints from employees.                               | _____           | _____                 | _____         |
| 6. A designated management official (with sufficient authority) assigned responsibility for the program. | _____           | _____                 | _____         |
| 7. Adequate resources committed to maintaining the program and implementing needed changes.              | _____           | _____                 | _____         |

## Worksite Analysis

- |  | <u>Have Now</u> | <u>Have Partially</u> | <u>Needed</u> |
|--|-----------------|-----------------------|---------------|
| 8. A system for evaluating computer problems in the workplace. (For example, systematic ways to collect information on health problems and to check workstations.) | _____           | _____                 | _____         |
| 9. A team of individuals in the workplace who have been trained to conduct ergonomic assessments.  | _____           | _____                 | _____         |
| 10. A system for employees to report hazardous situations to a person or committee.  | _____           | _____                 | _____         |
| 11. A system for prioritizing and addressing computer hazards that are identified.   | _____           | _____                 | _____         |
| 12. A process for evaluating the effectiveness of any improvements that are made.  | _____           | _____                 | _____         |

## Program Checklist — continued

### Hazard Prevention and Control

- |  | <u>Have Now</u> | <u>Have Partially</u> | <u>Needed</u> |
|--|-----------------|-----------------------|---------------|
| 13. Purchasing guidelines that set standards for all new equipment. (For example, workstations and chairs should be adjustable, and monitors should have adjustable brightness and contrast.)                      | _____           | _____                 | _____         |
| 14. Purchasing carried out by knowledgeable individual or group.   | _____           | _____                 | _____         |
| 15. A plan for replacing equipment that does not meet ergonomic standards (including budget).  | _____           | _____                 | _____         |
| 16. Document holders, foot rests, wrist rests, and other auxiliary equipment available, as needed.   | _____           | _____                 | _____         |
| 17. Lighting guidelines to control glare and visual strain. (For example, proper shielding of light from windows, availability of task lighting, proper placement of computers in relation to light sources, etc.) | _____           | _____                 | _____         |
| 18. A policy that provides adequate rest breaks, or alternative work assignments, to relieve employees from repetitive tasks.  | _____           | _____                 | _____         |
| 19. Equipment kept in good working condition through a system of regular equipment maintenance.  | _____           | _____                 | _____         |

### Training

- |  | <u>Have Now</u> | <u>Have Partially</u> | <u>Needed</u> |
|--|-----------------|-----------------------|---------------|
| 20. A training program for all new computer users covering the causes and solutions of potential health problems. The program should also include instruction on how to adjust workstations and work safely, and information on the employer's computer health and safety policies and procedures. | _____           | _____                 | _____         |
| 21. A training program for supervisors and/or managers on ergonomics-related health problems and solutions, as well as on implementing relevant policies and procedures.   | _____           | _____                 | _____         |
| 22. Additional training when new equipment is purchased.   | _____           | _____                 | _____         |
| 23. "Refresher" training. (For example, an annual update.)   | _____           | _____                 | _____         |





## Following Up

After the **Program Checklist** has been completed, you and your employer should have a clear idea of which program elements need to be strengthened or added. Try to prioritize these needs and work together toward a comprehensive program.

As part of your program you may want to use the **Computer Workstation Checklist** in the next section to assess user needs. Have each user fill out a copy. You can also distribute the checklist on an ongoing basis to new employees or when conditions change.



# COMPUTER WORKSTATION CHECKLIST

*Each user should fill out a separate copy of this checklist.*

User Name: \_\_\_\_\_

Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Hours per day spent working on a computer: \_\_\_\_\_

Description of computer job tasks: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



—Adapted by the Labor Occupational Health Program from a checklist developed by the Occupational Health Service at UC Berkeley

## ✓ Chair Adjustment

	YES	NO
● Is your chair height adjustable?	_____	_____
● Does your chair support your lower back?	_____	_____
● Is there room between the front edge of the seat pan and the back of your knees?	_____	_____
● Can you easily reach your work without interference from the arms of your chair?	_____	_____
● Are your arms and shoulders relaxed and not forced into an awkward position by chair arms?	_____	_____
● Do your feet rest flat on the floor or footrest with your knees bent at approximately 90 degrees?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

Sitting with your feet flat on the floor (or on a footrest) will help support your spine. Having your thighs parallel to the seat with knees bent at approximately a 90 degree angle, and having adequate clearance behind your knees, will keep the chair from interfering with the circulation to your legs.

If the back of your chair is adjustable, raise or lower it so that the contour of the chair provides maximum lumbar (lower back) support. If possible, adjust the tilt of the back rest to support your body in an upright position. A slight angle, either forward or back, is also acceptable. Adjust the chair according to what is most comfortable for you.

If your chair has arms, they should allow you to get close to your work without getting in the way. Chair arms should not force you to elevate your shoulders or hold your arms out to the side.

### Recommendations

- New chair, adjustable for height and tilt of seatpan and backrest. Computer users should be able to adjust chairs from seated position without use of tools. Armrests, if provided, should be removable.
- Another chair swapped from within the department.

- Lumbar support cushion if chair does not provide adequate lower back support.
- Footrest if computer user's feet do not rest firmly and comfortably on the floor.
- Other (*please describe:*)

## ✓ Work Surface/Keyboard Adjustment

	YES	NO
● With your chair adjusted properly, is your keyboard at approximately elbow level?	_____	_____
● Are your arms resting at your sides rather than stretched out in front of you?	_____	_____
● Are your shoulders relaxed and not elevated when you work at your work surface?	_____	_____
● When typing or writing at your work surface, are your forearms parallel to the floor, and your wrists in a straight, neutral position?	_____	_____
● Are there at least two inches of clearance between the bottom of your work surface and the top of your thighs?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

Ideally, with your arms resting comfortably at your sides, the home row of your keyboard (the row with the letters a, s, d, etc.) should be at approximately elbow level. If your work surface is adjustable, start by adjusting your chair so that your feet rest on the floor. Once that's at the proper height, adjust the work surface. If your work surface is too high and cannot be adjusted, adjust the chair to bring your elbows to the home row level of the keyboard and support your feet with a footrest if necessary.

### Recommendations

- A bi-level table, easily adjustable for screen and keyboard height.

- A lower or higher table swapped from within the department.
- A height adjustable keyboard and mouse tray that can be attached to existing desk or table.
- A chair that is height adjustable; may need to provide footrest.
- Other (*please describe:*)

## ✓ Monitor Adjustment

	YES	NO
● Is the viewing distance to your computer monitor somewhere between 16 and 24 inches?	_____	_____
● Is the top of your computer screen at or just below eye level?	_____	_____
● If you wear bifocals or trifocals, are you able to look at the monitor without tilting your head?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

Once your chair and work surface are properly adjusted, adjust your computer monitor so that the top of the screen is at or just below eye level.

People who wear bifocals or trifocals often end up tilting their heads back to read through the lower portion of their glasses. This can sometimes lead to neck, shoulder, and back discomfort. Lowering the computer monitor slightly, or purchasing glasses specifically designed for the viewing distance to your terminal screen, can help alleviate this problem.

### Recommendations

- Bi-level table, adjustable for screen and keyboard height.
- Raise monitor by putting it on top of the computer, on a platform, on boxes, or on books.
- Lower monitor by removing it from the top of the computer or other platform.

- Swinging, adjustable monitor arm.
- Eye exams and special viewing glasses, if necessary.
- Other (*please describe:*)

## ✓ Workstation Accessory Adjustment

	YES	NO
● Are your input devices (mouse, trackball, digitizing tablet) at the same level as your keyboard?	_____	_____
● Are your primary work materials and input devices located in front of you?	_____	_____
● Do you have enough room on your work surface for all your computer accessories?	_____	_____
● Are you able to keep your arms from resting on any hard or square edges on your work surface?	_____	_____
● Do you avoid cradling the phone between your ear and shoulder?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

Work surfaces often don't allow enough space for computers and related accessories. Keyboard trays or similar devices can increase desk space, but be sure they are wide enough to accommodate your mouse, trackball, etc. and don't cut down on your leg room.

As you change tasks, remember to move primary materials and input devices in front of you. If you look at reference materials as you type, use a document holder or slant board placed at the same height and distance as your monitor.

A wrist or forearm support can help you maintain your forearms, hands, and wrists in a straight and neutral position. This helps relieve the strain on your shoulders and back. It also keeps your wrists from resting on the table edge. A wrist rest should be made of a soft foam and constructed so that the pad height matches the front height of your keyboard.

Talking on the phone with the receiver cradled between your ear and your shoulder can cause neck, shoulder, and back pain. A headset will allow you to maintain your spine in alignment while talking on the phone.

### Recommendations

- Surface large enough for keyboard, mouse, etc.
- Padded wrist or forearm support for keyboard and mouse use.
- Document holder that is adjustable to screen height.
- Telephone headset.
- Other (*please describe:*)

## ✓ Glare Reduction

	YES	NO
● Is your computer screen free of glare?	_____	_____
● Is your overhead lighting adjustable?	_____	_____
● Is your computer screen at a right angle to the window?	_____	_____
● Are window coverings available?	_____	_____
● Is task lighting (desk lamp, etc.) available?	_____	_____
● Is a glare screen available?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

To control glare, first identify where it is coming from. Glare can come from windows, indoor lighting, and reflective surfaces. Once you identify the source there are several possible ways to block it.

You could:

- Position the terminal so neither the screen nor your eyes are facing the light source
- Install window coverings
- Turn overhead lights down or off
- Use individual desk lamps instead of overhead lights.

If you can't eliminate glare at the source, glare screens can also be helpful.

### Recommendations

- Use blinds or curtains over windows when necessary.
- Position monitor to avoid direct light in user's eyes or on user's screen.
- Position monitor screen to be at right angle to window.
- Install dimmer switches for overhead lighting.
- Turn off some lights; use task lighting such as desk lamps, if needed.
- Remove some fluorescent tubes if necessary.
- Use a glare screen.
- Other (*please describe:*)

### ✓ Work Practices

	YES	NO
● Do you take short and frequent breaks throughout the day to reduce fatigue?	_____	_____
● Do you frequently change your body position while working?	_____	_____
● Do you provide your eyes with 10 second mini-breaks every 15-20 minutes?	_____	_____



	<b>YES</b>	<b>NO</b>
● Do you work fairly regular hours without a lot of overtime?	_____	_____
● Are you able to complete your daily workload and meet deadlines without excessive stress?	_____	_____
● Are you able to set your own work pace?	_____	_____
● Do you work on tasks away from the computer for some portion of the day?	_____	_____
● Have you received adequate training in how to use the computer?	_____	_____

**—IF YOU ANSWER "NO" TO ANY OF THE ABOVE QUESTIONS  
YOU MAY NEED ERGONOMIC MODIFICATIONS—**

Regular breaks help to alleviate fatigue and strain to your eyes and upper body. Changing position periodically helps maintain circulation and prevents putting pressure on any one area of the body for an extended period of time.

It is also important to consider how the job itself is designed. Healthy jobs include varied tasks and reasonable work loads.

### **Recommendations**

- Regular rest breaks.
- Varied job tasks.
- Reasonable job demands.
- Elimination of electronic monitoring and computer-paced work.
- Adequate training.
- Other (*please describe:*)

# ✓ Priority Recommendations

Reviewing all of the recommendations listed on the previous pages, the top 3 priorities are:

1. \_\_\_\_\_

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_