

Ergonomics Policy for Personal

**Computer and Video Display
Terminal**

Operations



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1. INTRODUCTION

As an employer, San Mateo County has the responsibility to minimize hazards in the workplace. This policy sets forth accepted guidelines for personal computer and video display terminal (VDT) use. It updates information and guidance for the proper selection and use of equipment based on changing technology as well as increased knowledge and experience to assist in assuring employee health and safety.

2. BACKGROUND

In 1990, the Service Employees International Union (SEIU Local 715) and the County met to address vision problems of employees using personal computers and VDTs. It was determined that the issue of safe VDT use went well beyond vision problems. In addition, upper and lower extremity complaints, back and neck pain and headaches were identified as potential related health problems. A comprehensive policy was developed to address these concerns.

In the 1998 Grand Jury report, recommendations were made regarding VDT policies and standards. Cal-OSHA and Federal OSHA have been working on their own standards that, when finalized, will be incorporated into this policy.

3. STATEMENT OF COUNTY POLICY

To assure the health and safety of County workers, the County establishes an Ergonomic Policy for Video Display Terminal Operations which outlines Electronic Equipment Specifications, Furnishing and Work Station Specifications, Job Design Modifications and addresses Operator Education and Training. This policy provides ergonomic guidelines that departments must consider when automating any activity or operation.

4. OBJECTIVES

The objectives of this policy are to:

- ◆ provide **a safe working environment** for employees who operate personal computers (P.C.'s) or VDTs as part of their work assignment;
- ◆ **encourage employees to take steps to assure that their working environment is safe;**
- ◆ **provide guidelines to assist departments;**
- ◆ **save money** by reducing Worker's Compensation costs and increasing efficiency and productivity.

5. RESPONSIBILITY

This section outlines responsibilities for providing a safe work environment for employees.

OPERATING DEPARTMENTS are responsible for:

- ◆ assigning an employee (Department Information Technology (IT) Coordinator or equivalent) to implement and monitor this policy at the department level;
- ◆ purchasing and maintaining new electronic equipment and furnishings that conform to the specifications and ergonomic standards of this policy;
- ◆ evaluating the workstation of each operator through the completion of an ergonomic evaluation checklist for each operator, and purchasing necessary adaptive devices for the operator;
- ◆ maintaining and servicing any electronic equipment or securing appropriate service and maintenance agreements with outside vendors in coordination with Purchasing, as necessary;
- ◆ providing appropriate cleaning supplies for use by the operator;
- ◆ assuring the availability of operators to attend necessary training in ergonomics and other VDT education programs and activities;
- ◆ establishing an internal review/resource and referral process through its Department Safety Committee;
- ◆ working with Risk Management in correcting any workstation deficiencies when an employee reports a workers' compensation claim;
- ◆ using the assistance of Purchasing Division a space planner and an ergonomist in office moves and remodels.

The OPERATOR is responsible for:

- ◆ properly operating the electronic equipment and furnishings;
- ◆ following the guidelines of this policy for the proper adjustment of furnishings;
- ◆ promptly reporting equipment problems to the Department;
- ◆ requesting service and cleaning maintenance for the electronic equipment on an as needed basis;
- ◆ cleaning and caring for the exterior of the electronic equipment on an as needed basis;
- ◆ not smoking within five feet of any electronic equipment (telecommuters);
- ◆ using safe work habits.

DEPARTMENTAL IT COORDINATORS AND INFORMATION SERVICES DEPARTMENT are responsible for:

- ◆ working with Purchasing Division to identify and assist Departments in purchasing electronic equipment and equipment adaptive devices that conform to the ergonomic specifications of this

policy;

- ◆ coordinating with Purchasing Division regarding installation of major projects related to computer/VDT systems in Departments;
- ◆ providing consultative assistance to Departments, as requested, in developing their policy implementation plans;
- ◆ coordinating the installation of electronic equipment adaptive devices (e.g., vertical disk drive holders, monitor arms), as appropriate;
- ◆ maintaining and servicing all electronic equipment for ISD-supported systems, or securing appropriate service and maintenance agreements with outside providers;
- ◆ providing new operator orientation.

EMPLOYEE AND PUBLIC SERVICES DEPARTMENT is responsible for:

- ◆ administering this policy;
- ◆ providing technical assistance to departments and operators regarding VDT health and safety information;
- ◆ managing VDT ergonomics training for operators.

THE PUBLIC WORKS DEPARTMENT is responsible for:

- ◆ remodeling or completing new facilities/work areas that conform to this policy, including but not limited to workstation size, electrical, ventilation and lighting needs, and glare reduction; to evaluate, upon department request, and existing facility and/or workstation(s) and provide space planning support for workstation configuration to conform to this policy;
- ◆ working with departments to assure appropriate environmental conditions including lighting and ventilation.

The COUNTY MANAGER'S OFFICE is responsible for:

- ◆ assuring that this policy is complied with in the design of new facilities;
- ◆ reviewing budgetary and appropriation transfer requests from departments to assure adequate funds are provided to comply with this policy.

The COUNTY SAFETY COMMITTEE is responsible for:

- ◆ maintaining, reviewing and updating this policy on a periodic basis.

6. ASSISTANCE

If you have questions that are not answered by the content of this policy, please contact one of the

following:

- ◆ Your Departmental Safety Committee
- ◆ County Safety Manager – 363-4613
- ◆ Your Labor Organization
- ◆ Confidential Safety Hotline ("S-A-F-E" or 363-4000 x7233)

7. ELECTRONIC EQUIPMENT SPECIFICATIONS

The guidelines below are to be used by County departments in the lease or purchase of video display terminals, personal and laptop computers, multi-station word processing systems and multi-station key entry systems, and furnishings for use by the operator, and should be considered when purchasing or leasing electronic equipment for the operator.

VDTs:

All VDT's must have a separate control for brightness and contrast (monochrome) which is adjustable by the operator. The screen surface will have an anti-reflective coating or surface design to reduce glare. The VDT shall be adjustable for tilt and swivel and should be positioned to avoid glare. The VDT screen will be free of flicker or blur. There shall be luminance uniformity. If the VDT has multi-color capability, it should be adjustable for color preference by the operator. Knobs, buttons and covers shall have a matte finish to minimize glare.

Any existing VDT that does not meet this standard shall be replaced.

KEYBOARD:

All keyboards shall be thin and detachable. Keys and covers shall have a matte finish to minimize glare.

An operator may request the use of a palm or wrist rest or other adaptive device to assure operator safety and comfort.

For an existing detachable keyboard, the cable will be a minimum of 2 feet long.

A keyboard must be adjusted to the proper height and angle for the user.

PRINTER:

A new printer should not generate noise above 55dB. Noise from new or existing printers that exceeds 55dB should be fitted with a noise shield or cover constructed of sound-absorbing materials (such as acoustic screening) to reduce noise levels.

MOUSE or POINTING DEVICE:

If this is used, a device designed specifically for the right or left hand device must be provided. Also acceptable is a device for use by either the right or left hand at the discretion of the operator. The cord must be long enough to allow proper positioning.

8. ELECTRONIC EQUIPMENT INSPECTION AND MAINTENANCE

The operator will be responsible for cleaning and maintaining the exterior of the electronic equipment on an as needed basis:

- ◆ cleaning the terminal screen with cheesecloth and/or a non-static glass cleaner;
- ◆ dusting all exposed areas of the electronic equipment;
- ◆ cleaning the keyboard keys using an approved wet solution or wet wipe; and
- ◆ gently shaking the keyboard to loosen dirt or debris.

The operator shall report all electronic equipment problems to the departmental IT Coordinator.

DEPARTMENT or ISD Service Contract Language should specify a cleaning and service maintenance program that includes a semi-annual check for flicker, focus or clarity of image, size of image, contrast and adjustability. All maintenance records will be provided to the operator upon request.

9. FURNISHING SPECIFICATIONS

Furnishing specifications shall meet all ANSI mandatory requirements, and should meet all remaining ANSI guidelines and recommendations to the most reasonable extent possible.

WORK CHAIR:

A chair intended for use by an operator shall be adjustable for seat pan height, backrest height, and backrest angle. The backrest will be constructed to provide adequate lumbar support. The seat and backrest will be covered in a fabric that provides for air circulation and moisture absorption. The chair seat will have a rolled or waffled edge. The chair will have a five-pronged, honeycombed base and dual wheel casters with safety brakes appropriate for the surface, and will be capable of being swiveled. Chair will be capable of being fitted or retrofitted with no armrest or to various types of armrests. Adjustable armrests must be adjustable in height and provide rounded and padded support primarily for the forearm. An operator must be able to make all positional adjustments easily from the operating position and without the use of tools.

An existing work chair that does not comply with these ANSI specifications shall be replaced.

WORKSURFACES:

A work surface for use with a VDT will be of 29" high with an articulating keyboard support surface. The keyboard surface should be large enough to accommodate the keyboard, mouse and/or pointing device or multiple adjustable surfaces shall be provided for this equipment as is necessary. The height should be sufficient to allow the lower legs to be upright while sitting in the chair with feet on floor or footrest.

Work surface specification variances for an operator with exceptional circumstances (height, disability, weight) will be determined following an ergonomic evaluation. Edges and corners must be smooth and

without sharp edges. The underside of the work surface will be free of sharp protrusions and of obstructions for leg space; minimum legroom will be 24 inches deep and 27 inches wide. The work surface must have a matte surface to inhibit glare.

Any work surface that does not comply with these ergonomic specifications will be replaced or retrofitted to the most reasonable extent possible by one or more of the following:

- ◆ installing vertical disk drive holder to underside or side of work surface;
- ◆ attaching articulated monitor extension arms; and/or
- ◆ using adaptive devices to raise or lower electronic equipment (keyboard tray, tilt/swivel mount for terminal) to an appropriate position for eyes and/or hands;
- ◆ using adjustable footrest; and/or
- ◆ using a desk blotter (or equivalent) to reduce work surface glare; and/or
- ◆ any other adaptive device which safely modifies an existing work surface to closely conform to the ergonomic guidelines (see appendix A).

10. WORKSTATION SPECIFICATIONS

An adequate work area will be provided for an operator. It shall meet all Uniform Building Code requirements and will contain adequate workspace for document holder and other required materials. Upon request, an operator will be provided a document holder which is adjustable for height, distance and angle. Non-glare matte wall paint shall be used on all walls.

VENTILATION AND TEMPERATURE:

Electronic equipment components generate heat and should be arranged so that operators and other nearby workers are comfortable at their workstations.

There will be adequate ventilation for operators. If ventilation is not sufficient for personal comfort, an operator will be provided a personal fan upon request. Additionally, acceptable operator and equipment density will be determined by the amount of ventilation available.

LIGHTING:

There should be general lighting of moderate brightness that, if possible, can be turned off or dimmed. Ambient lighting should be in the range of 20-50 foot candles. Light sources should be designed and located to minimize glare. Upon request, an operator may be provided direct, adjustable task lighting for demanding visual tasks.

Window luminance should be controlled to the greatest extent possible by using reduced transmission glass, louvers, baffles, drapes, shades, or by a combination of such controls.

Ceiling or overhead lighting may be controlled to the most reasonable extent possible by using appropriate luminaries.

TASK LIGHTING:

Different tasks require different lighting levels. Some lighting needs are better met by putting light where it is needed on the working surface or document. Care should be taken to avoid glare, which in turn can make VDT's difficult to read.

11. JOB DESIGN MODIFICATIONS

WORKBREAKS:

The operator shall have regular work breaks from the screen to do alternate work. The operator's work breaks shall be no less than 10 minutes for every two hours of VDT work. These work breaks shall be in addition to regular breaks.

Alternate work is defined as any work assignment that does not involve interactive use of electronic equipment.

Additional time may be provided to an individual operator, as needed or requested for visual readjustment.

12. VISION CARE

Employees are responsible for seeking eye exams, eye care and corrective lenses from the doctor of their choice. This is normally covered through the employees' vision care benefits program.

Employees who are operators with a multi-focal prescription are eligible to receive near distance, single vision glasses through Risk Management. This is provided as an ergonomic tool to eliminate the risk of a repetitive motion injury due to the head and neck motion common to operators wearing multi-focal lenses.

Operators who qualify may contact Risk Management to request glasses for computer use. Employees may schedule an appointment with Risk Management to select frames and submit a current (within two years) multifocal prescription. Risk Management will replace these glasses when a prescription is updated or if the glasses become damaged.

13. OPERATOR EDUCATION AND TRAINING

The Employee and Public Services Department will maintain an education and training program for VDT operators which will include:

- 1) Distribution of this Ergonomic Policy to employees generally affected by its guidelines and any employee upon written request;
- 2) A training program that will include:
 - ◆ techniques to minimize physical discomfort, stress and eye strain;

- ◆ basic ergonomic concepts;
 - ◆ basic back care concepts;
 - ◆ environmental and workstation modifications that assure operator comfort and safety to the most reasonable extent possible;
 - ◆ explanation of this Ergonomic Policy and its guidelines;
 - ◆ appropriate use of medical and vision care benefits;
 - ◆ communication of occupational hazards of VDT use as specifically mandated by State or Federal legislation.
- 3) Development and maintenance of Reference Guide and Fact Sheets, and New Operator Orientation.