Make Your Computer Workstation "Fit" Your Needs

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Over 30 million computers are in use throughout the United States, and the number is growing rapidly. Growing as rapidly as the numbers of computers are the health problems associated with prolonged computer use. Workers who use computers irregularly and intermittently are generally not affected by computer use. However, workers who use computers continuously, from 6 to 8 hours during the workday, can experience computer-related ailments and discomforts.

Health Problems Associated With Computer Use

The symptom most frequently associated with computer use is fatigue. Fatigue may be muscular, cognitive or emotional, visual, or a combination.

- Muscular fatigue is characterized by—
  - Pain.
  - Stiffness.
  - Physical discomfort.

- Cognitive or emotional fatigue is characterized by—
  - Weariness.
  - Loss of concentration.
  - Irritability.
  - Dizziness.

- Visual fatigue is characterized by—
  - Eye discomfort due to prolonged, fixed focus.
  - Eye irritation.
  - Headache.
  - Abnormal after-image.
  - Blurred and/or double vision.

Whether computer workers are experiencing one or a combination of these problems, the results are the same—a loss in proficiency and productivity, and the occurrence of work-related musculoskeletal disorders (WMSDs), particularly as a result of muscular fatigue.

Assessing the Components of a Computer Workstation

The components of a computer workstation are separate units but should be considered an interactive system. The frequent complaints about discomfort from computer use typically arise from the way in which these components are integrated in the workstation. The interdependent nature of different components makes intervention a challenge. When you act to achieve a well-designed computer workstation, you often discover that a change in one component affects others.

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The Workstation. More often than not, computers are placed on existing work surfaces that are neither adjustable nor comfortable for the majority of the workers. The person is fitted to the task, rather than the task being fitted to the person. Proper workstation design provides a computer operator with comfortable postures at an appropriate distance from the keyboard, source document, and screen, while also giving the operator enough space to perform a number of tasks efficiently. Optimal workstation design, however, is complicated by differences in anatomy and work habits among operators and the wide variation in tasks performed at a computer. Workstation "adjustability" is the key to minimizing or eliminating the amount of discomfort caused by prolonged computer use.

The Chair. The benefits of a well-designed workstation will be partially or totally offset if coupled with a poorly designed and uncomfortable chair. Therefore, the chair should not only adjust to the size and comfort of each worker, but should also adapt to each person's specific duties—whether in a conference room, at a computer workstation, or at a drafting stand.

Computer workstation chairs should meet the following basic requirements:

- Adjustable seat height.
- Five-point base with casters, as appropriate, depending on the floor surface.
- Can rotate 360^{o}, allowing for easy access to various surfaces within the work area.
- Adjustable backrest that includes a lumbar (lower back) support.
- Designed for a forward and reclining posture.
- Rounded, waterfall-type front edge of the seat surface.