



Tech Talk

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Comfort While Using The Computer

Posture

Keep your back straight

- Slouching in the chair, arching your back, and/or rounding your shoulders is a common cause of fatigue and muscle soreness. Try to keep your feet flat on the floor or on a foot rest and keep your upper legs parallel to the floor.

Sit an appropriate distance from the computer

- Try to maintain a viewing distance of 20-30" from the monitor (see the special section for corrective lens wearers).

Use wrist and/or arm support when typing

- Many commercial wrist supports are available; at the very least try to keep your elbows at the same level as the keyboard or with your elbows slightly lower than the keyboard.

Keep a "light touch" on the keyboard

- Computer keyboards do not require a great deal of pressure to depress keys; pressing very hard on the keyboard will contribute to hand fatigue.

Take a break if you start to feel fatigued

- Work on something else for a while, take a walk, or get something to drink.

Eye fatigue

Take frequent "eye breaks"

- Focusing on close objects for extended periods of time can contribute to eye fatigue. Take frequent breaks and periodically focus on objects further away

Check for "hidden" reflections in your monitor

- Turn your monitor off and position yourself as you would normally. Check to see if you can see any lights reflecting from above or behind you; any reflection seen when the monitor is off is still there when the monitor is on, but may not be as noticeable. These "hidden" light reflections can cause eye strain; move any lamps or lights, tilt the monitor to avoid glare from overhead lights, and adjust window blinds against sunlight.

For people who wear bifocals/trifocals/ reading glasses

During workshops and trainings in computer labs, we have noticed that people wearing bifocals were leaving at the end of the day with neck and back fatigue. What follows are some suggestions that we have begun giving to people who wear bifocals or reading glasses while working on a computer. **Please note:** These are suggestions only; please consult a licensed optometrist or ophthalmologist for more specific information.

Think about purchasing special "computer glasses"

- One of the most comprehensive solutions would be the purchase of computer glasses. This is a particularly helpful option for those individuals who currently use reading glasses or the reading portion of bifocals or trifocals to view their computer screen. The main problem with using a reading-range lens for viewing a computer screen is simply that the distance is incorrect; most people keep their monitor further away from their eyes than the distance of the standard reading range. In order to see the monitor, a bifocal-wearer will often tilt his or her head back (to see through the lower portion of the lens) and move in closer to the screen (moving toward reading distance). This action then naturally leads to slouching and rounded shoulders, which causes muscle fatigue and soreness.
- Computer glasses are specifically designed for use during extended periods of working on computers. In addition to the range options below, most computer glasses are also coated with a light tint to filter ultraviolet rays and may also come with an anti-reflective coating.
- Following are some of the lens options available:
 - Single vision* – entire lens is within intermediate range
 - Bifocal* – lenses are intermediate and reading ranges
 - *Progressive bifocals* provide a gradient between intermediate and reading ranges
 - Trifocal* – lenses are distance, intermediate, and reading ranges

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Comfort While... (continued from page 1)

Maximum Power Safety

Recessed-Monitor Desks

- These desks have a recessed area in which the monitor sits (similar to what newscasters use). Situating the monitor in this manner allows the user to look down at the monitor and may work well with bifocals or reading glasses, depending on the distance.

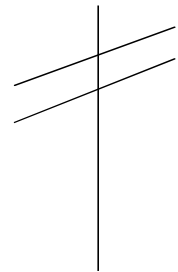
Move the monitor to a lower position/Move yourself to a higher position

- One inexpensive option, particularly for the wearer of bifocals or reading glasses, is simply to move the monitor to a lower position so that the user is looking down to the monitor. For example, if the monitor currently sits on top of a desktop computer case, try moving it onto the desk.
- Monitors may also be moved onto a shorter table or desk.
- The same effect may be reached by raising the seating height of the user. Many desk chairs are equipped with features to raise and lower the seating height. Users may also try some sort of "booster seat."



Though becoming more resilient to small power fluctuations, computers still need reliable power supply to perform at maximum efficiency. Power fluctuation can cause data errors, and a poorly timed surge, blackout or brownout can wreak havoc or even destroy a system.

One component that may be added to a computer system is an Uninterruptable Power Supply, or UPS. Most computers are, or should be, connected to a surge protector which then plugs into the wall. UPS's provide surge and spike protection, like surge protectors, but also provide additional safety features. A UPS is essentially a high-level battery backup for a computer or system which provides both hardware and software protection in the event of loss or instability of power. When the power turns off, there is rarely any warning; users do not have time to save their work and gently (properly) shut down the machine.



Power outages regularly cause data loss even when files have been saved prior to the loss of power, the main reason being that computers of all kinds need to be turned off correctly.

Uninterruptable Power Supplies plug directly into the computer and are integrated into the operating system itself, providing a consistent flow of power during a power outage for a specified length of time. If power is not restored before that time has expired and a user hasn't intervened, the UPS will gently and properly shut down the system on its own. UPS's also provide protection against brownouts (brief power drains), power spikes, and power surges - all of which can cause data corruption and loss and contribute to reducing the life span of hardware. If power instability is a problem, a UPS can provide "line conditioning," which keeps power flow to the machine steady and constant, increasing hardware life and decreasing data loss and corruption.

Web sites to visit for more information

Computer Related Ergonomics Information and Products
<www.distrib.com/ergonomics/homepage.html>

Ergonomics Guidelines: Workstation Health Information for General Libraries Staff (from the General Libraries - The University of Texas at Austin)
<mahogany.lib.utexas.edu/Pubs/eff/guidelines.html>

Ergonomics Checklist for Computer Workstations (from Cornell Cooperative Extension - College of Human Ecology) <www.human.cornell.edu/extension/workplacemgmt/ergochklist.html>

ErgoWeb <www.ergoweb.com>

Most UPS's have a number of outlets that allow a user to plug in multiple components; unless some sockets are blank, only the components with the most potential for damage are plugged into the UPS. UPS's are available from a number of vendors and are priced from \$60-\$750 depending on the number of components that will be plugged into it. The low range will handle power conditioning for a single machine and the higher end price will purchase a UPS that will handle more workstations. Software is included with the unit and the quality UPS's provide warranties against equipment damage. Please contact your technology coordinator, local computer store, or the OLRC for more information.

One important note is that a UPS is not designed to be a power generator, allowing the user to continue working after a loss of power. Though actual time can vary quite a lot, the average length of time that a UPS will carry the full power load for a single-user machine during an outage is about 5 minutes. The job of the UPS is to maintain data integrity during power instability, and in the event of a total power blackout, maintain the system and, if there is no human intervention, gently shut down the machine and preserve software and hardware integrity.

NIFL-Technology Listserv

The National Institute for Literacy has a new listserv on technology. Instructions for subscribing to the listserv can be found at the NIFL web site:

novel.nifl.gov/nifl-technology.

The list is for adult educators, basic skills instructors, literacy providers, technology coordinators, researchers, policy developers, and others interested in the use of technology for adult literacy instruction, communications, and administration.

The NIFL-Technology listserv has 3 primary goals:

- Improve the use of technology in literacy practice by fostering discussions and information exchanges among professionals and volunteers in the field.

- Enrich and improve the public policies related to technology and adult literacy by providing an open forum for the exchange of relevant policy ideas involving technology.
- Provide the field with a first-stop resource on issues related to adult literacy and technology.

OLRC Discussion Groups

Do you want to stay informed about issues without having your email account full of listserv messages everytime you log on? The OLRC is providing an alternative to listservs through a new web-based technique called Discussion Groups. Users can go to the Discussion Groups at their leisure and read messages and post new messages. The following Discussion Groups can be found at

literacy.kent.edu/Oasis/olrcgroups.html:

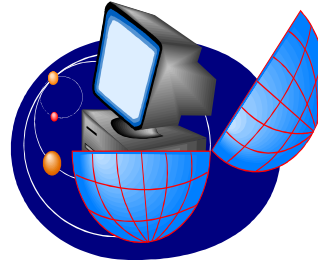
- Ohio Technology Issues: Discussion focuses on technology issues and concerns in Ohio adult education.
- Ohio Students: For adult students in Ohio to discuss technology issues and concerns.
- Conferences and Workshops: Areas for posting upcoming events and discuss workshops/conferences that have been attended. Includes an area for carpooling/sharing rides to professional events.
- Family Literacy: Discussion groups for family literacy practitioners in Ohio.

Let us know what you think about this new technology. Also, let us know if there are other Discussion Groups you would like started.





WEB RESOURCES



- A one-stop web site for non-profit groups was developed by 15 federal agencies. The U.S. Nonprofit Gateway at www.nonprofit.gov serves as a directory to web pages on grants, budgets, volunteer opportunities, and agency partnerships.
- A Welfare-to-Work web site from the U.S. Department of Labor can be found at www.doleta.gov. This site has background material, the Interim Planning Guidance for the Formula Grants, and a section for email comments. This site can be useful if you need information or want to let policy makers know your views on how adult education can play a key role in welfare reform.
- The Women's Education Equity Act (WEEA) has a new web site at www.edc.org/WomensEquity which contains such features as a large library of gender equity facts and quotes, 52 women of the week in traditional and nontraditional professions chosen for inspiration and as role models, catalog of productions for all levels of education, and opportunity for discussions.
- CNET: The Computer Network can be found at www.cnet.com and is a good place for computer information. The Review option, which can be found on the left menu bar or by going directly to www.cnet.com/content/Reviews/ contains reviews on equipment and software. A recent look at the page found comparative reviews on such items as bargain notebooks, services that back up your data over the Net, Quicken 98 vs. Money 98, Internet Explorer 4.0 vs. Netscape Communicator 4.0, 56K modems, and graphics.
- The U.S. Census Bureau has just posted 16 tables of new statistics entitled *Educational Attainment in the United States: March 1996 (update)* on the Internet at www.census.gov/population/www/socdemo/education.html. The tables correlate attainment with various characteristics such as age, race, sex, labor force status, occupation, income, and marital status.
- The National Center for Education Statistics has posted an Education Department study that found that children do better in school when their fathers are involved in their education. The article is at nces.ed.gov/pubs98/fathers/index.html.
- More student success stories can be found at the LVA-Washington DC web site at www.fray.com/lva/.
- The Department of Education has many new publications available online. Among the ones to check out are: *Dropout Rates in the United States: 1995* at www.ed.gov/NCES/pubs/dp95/index.html; *The Social Context of Education: Findings from the Condition of Education 1997* at www.ed.gov/NCES/pubs97/97981.html, and *Participation of Adults in English as a Second Language Classes: 1994-95* at www.nces.ed.gov/pubs97/97319.html.
- The Welfare to Work Partnership launched at the White House in May has a web site at www.welfaretowork.org which includes facts and statistics, model programs, and information on their publication, *Blueprint for Business: Reaching a Workforce* (see Resources on page 4).

THE OHIO LITERACY RESOURCE CENTER IS LOCATED AT
KENT STATE UNIVERSITY, 414 WHITE HALL, P.O. BOX 5190, KENT, OH 44242-0001
1-800-765-2897 OR 330-672-2007
EMAIL ADDRESS: olrc@literacy.kent.edu
WEB SITE: literacy.kent.edu