Keys to Your Good Work

Safe Computer Use for Maine Workers



This booklet gives information and ideas to help computer users be safe and comfortable at work. You'll learn about ergonomics, how to set up your workstation, and Maine's law to protect computer users. We've included some stretches to relieve stress and web sites where you can get more information.

What is ergonomics?

Ergonomics means designing jobs and workplaces to fit workers and the work that they do, instead of trying to change the worker to fit the job.

Although this booklet is about computer work, ergonomics is important for all jobs. "Good" ergonomics helps to prevent injuries, increase comfort and reduce fatigue. It can also help improve the quality and quantity of work.

Does Maine have a computer safety law?

The Maine Video Display Terminal (VDT) Law gives computer operators certain rights. If you work at a computer for more than four (4) hours in a row on most days, this law covers you. Your employer must train you:

- how to use your computer safely.
- how to properly adjust your workstation.

Your employer must train you within the first month after you start your job and once a year after that. No test is required. Employers can use the **SafetyWorks!** *Working Safely with Computers* training program, which is on the internet at www.Maine.gov/labor/bls/VDT-Main.htm. **SafetyWorks**! also offers classes which prepare people to teach others about computer safety.

Your employer must post a copy of the law and the VDT Law Poster in a place where you can see them. The poster and the law are also on the **SafetyWorks!** Web site.

What kind of injuries can I get from using the computer?

Musculoskeletal Disorders (MSDs) is a term that includes a variety of ailments that usually develop gradually, over a period of time. They can be serious and painful, especially if they are not taken care of early. Tendonitis and carpal tunnel syndrome are two types of MSDs.

Symptoms of MSDs include discomfort, pain, dull ache, numbness, tingling, decreased range of motion, decreased grip strength, and swelling of joints or limbs.

Computer users may also develop eyestrain. Vision problems may worsen with long-term computer work.

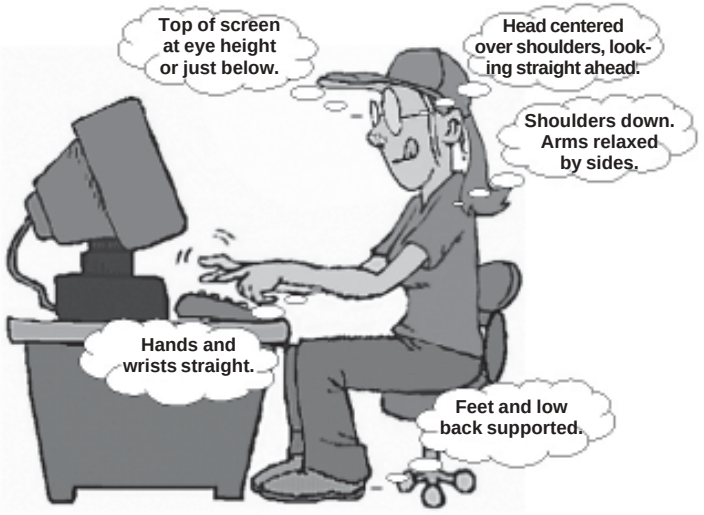
What causes these injuries?

While there is no one cause, several factors increase the chance of developing a MSD, such as:

- Repetitive motion (keying too much or too fast)
- Forceful exertion (hitting the keys too hard, reaching for a heavy book)
- Awkward posture (bent wrist, head forward)
- Static posture (too long in one position)
- Mechanical pressure (leaning against hard edges)
- Poor nutrition, smoking, hormonal changes and stress

What's the best way to prevent injuries?

Correct workstation setup may be the single best way to prevent computer-related injuries. It's important to be comfortable.



Your chair

Your chair is one of the most important parts of your workstation. It can encourage good posture and circulation, which help avoid injury. Select a chair you find comfortable, is adjustable and provides good back support. If you use a chair with arms, use the arms for resting, not while keying. Armrests should adjust for height. Adjust your chair so that:

- Your forearms and upper arms are at approximate right angles, your shoulders are relaxed and your wrists are straight.
- Your hips and knees are in a straight line.
- Your back has support. You should feel contact with the backrest at your waist. Use a pillow or rolled towel if necessary.
- Your feet rest flat on the floor when you are seated. If they don't, use a footrest.

Change your sitting position during the workday. Sitting in a fixed (or static) position for too long, even if it starts out being comfortable, reduces circulation and can lead to injury. Get up and move whenever possible. Instead of e-mailing the person who sits around the corner, walk over!

Your monitor

- **Center your monitor.** For most workstations, the best position for your monitor is directly in front of you. If you look at the screen only occasionally, it can be placed to the side.
- **Place your monitor where you focus.** How far you sit from your monitor depends on where your eyes focus most easily. And, the larger the screen the greater the distance. Eighteen to twenty-four inches (18-24") from the monitor works for many people.
- **Position the top of your screen.** Keep the top of the screen at or slightly below eye height. Bifocal and trifocal wearers often need the monitor lower, even resting on the desktop.
- **Cushion sharp desk edges** so they don't press into your forearms.
- **Place your documents close to your monitor.** Angling the document between your keyboard and monitor can reduce stress and fatigue.

- **Look away from your screen and into the distance every 15-30 minutes.**
- **Pay attention to glare and lighting.**
  - Adjust color and brightness. The screen should be the brightest object you see.
  - Bright light in the room may “wash out” the screen image, making it hard to see. So:
    1. Remove some bulbs or replace with lower wattage bulbs.
    2. Install parabolic louvers on fluorescent lights.
    3. Use indirect or “task” lighting.
  - Glare increases eye strain. Try these ideas:
    1. Place the monitor at right angles to windows and light fixtures.
    2. Use curtains or blinds on windows.
    3. Use glare filters.
    4. Have nonreflective work surfaces.
    5. Keep the screen clean.

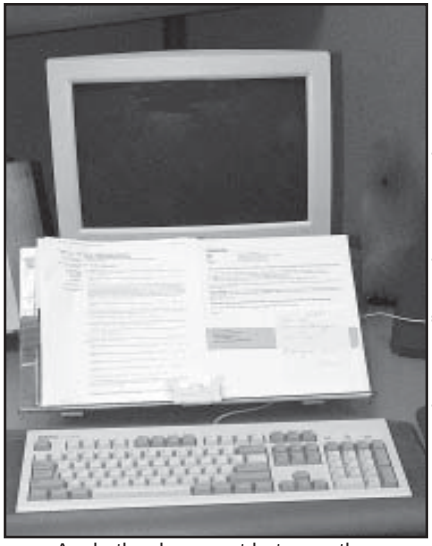


Photo credit: Robert Pomerleau

Angle the document between the monitor and keyboard.

Your keyboard & mouse



Photo credit: Robert Pomerleau

Place the mouse close to the keyboard.

- Use an adjustable keyboard/mouse tray.
- Place the keyboard just above the level of your lap.
- Keep your mouse close to your keyboard so that you don’t have to reach far for it. Make sure the mouse is a comfortable size for your hand.
- Keep your wrists in a neutral (straight) position—not bent up or down.
- Use a light touch when typing (don’t bang on the keyboard!).
- Keep your elbows bent so your forearm is parallel to the floor or sloping downward slightly.
- Keep your shoulders relaxed and elbows at your side.

- Wrist rests help keep your wrists straight and give your arms a place to rest between keying. Use wrist or arm rests only when resting, not when keying.
- Use macros or keyboard shortcuts for common functions to reduce the amount of typing and mousing you do.
- Take frequent short breaks from keying and mousing.
- If you write a lot, make sure your writing surface is 1-3 inches above keyboard height.



Photo credit: Robert Pomerleau

Straight wrists with a rest.

What about Laptops?

- Laptops are designed for short-term use. The smaller screens and keyboards can lead to discomfort or injury if used for long periods of time without breaks.
- If you use a laptop in place of a personal computer, consider using an external monitor, keyboard and mouse.
- Take frequent short breaks. Change your position.
- Change the position of the laptop occasionally (for example, move it from your lap to a table).
- Keep your wrists in neutral (straight) position and use a light touch.
- Reduce the extras you carry in the laptop case to reduce shoulder stress.

Does Stretching Help?

Stretching can reduce your chance of injury. Try stretching every hour. If you have injuries or pain, speak to your medical provider before starting a stretch program. Don't do a stretch if it hurts. And remember — regular exercise will help keep you healthy at home and at work. Here are some simple stretches you can do at work.

- **General:** Stand up and stretch your arms over your head. Hold 15 seconds. Repeat 2-3 times.
- **Eyes:** Rest your eyes by occasionally looking into the distance and/or closing them for a few seconds.

- **Neck:** With your head directly over your shoulder and your hand on your head, gently ease your head to the side, guiding it with your hand. Hold 15 seconds. Repeat 1-2 times on each side.
- **Arms:** Let your arms relax at your side and then raise your shoulders, rotating them up and back in a circular motion. Repeat several times.
- **Upper Back:** Tuck your chin into your neck as you bring your head upright. Hold for 10 seconds.
- **Chest/back:** Place your hands on your low back. Pull your elbows back as far as you can and gently arch your back. Hold 15 seconds. Repeat 2-3 times. Do it sitting or standing.
- **Wrists:** With your hands held in front of you, gently rotate your wrists so that the fingertips form circles in the air. Repeat several times.
- **Fingers:** Clench both fists, hold for 5 seconds, then release. Then spread your fingers as far as you can and hold for 5 seconds. Relax and repeat several times.



Photo credit: Sarah Blake

Afternoon stretch

What can I do?

- Set up your workstation according to the guidelines in this booklet. The **SafetyWorks!** *Working Safely with Computers* training program includes a detailed workstation checklist.
- Recognize and report symptoms. Early treatment of MSDs is more successful. Never work past the pain.
- Take frequent short breaks from using the computer. Stretch and change positions frequently.
- Talk to your supervisor if you have questions or concerns.
- Take good care of yourself on and off the job.
- Remind your coworkers about the importance of good ergonomics.

Where can I get more information?

- **SafetyWorks!** *Working Safely with Computers* training program - www.Maine.gov/labor/bls/VDT-Main.htm
- IBM Healthy Computing – www.pc.ibm.com/us/healthycomputing
- Typing Injury FAQ – www.tifaq.com
- Healthy Computing – www.healthycomputing.com
- OSHA computer workstation page - www.osha.gov/SLTC/computerworkstation/index.html
- ERGOnext – www.ergonext.com
- National Institute for Occupational Safety and Health ergonomics page - www.cdc.gov/niosh/ergopage.html

Questions?

If you have questions or concerns about working with your computer, speak to your supervisor or contact **SafetyWorks!** – tel: 877-SAFE345 (877-723-3345); TTY: 800-794-1110; email: webmaster.bls@Maine.gov

SafetyWorks!
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The Maine Department of Labor provides equal opportunity employment and programs. Auxiliary aids and services are available upon request to individuals with disabilities.

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