



General Workstation Ergonomics

Disclaimer: The information contained in this document should not be taken as medical advice. If you are experiencing pain or discomfort you should consult your chiropractor. Do what feels right - learn to listen to your body. If something feels uncomfortable don't continue doing it, and go to your chiropractor for a subluxation check-up.

Head/Neck Basics

- Head centered over shoulders
- Shoulders relaxed
- Computer monitor centered on user's head
- Monitor at proper distance and height (see "Monitor" section below)
- Do not bend your neck forward or to the side

Eye Basics:

To avoid eyestrain associated with computer use:

- Blink frequently (about every 5 seconds)
- Refocus your eyes periodically every 20 minutes on a distant object 20 or more feet away for 20 seconds (20/20/20 Rule)
- Eyeglasses should be clean and have a comfortable focal distance for computer work

Monitor

- Monitor distance should be 18-26 inches from user (approximately an arm's length)
- Monitor centered on user
- Neither monitor nor user should face a window
- Monitor should be placed at a right angle to windows or between rows of fluorescent lighting rather than directly under them
- User's eyes should be in line with the top of the monitor or a point 2-3 inches below the top of the screen

Document Holders

If your work requires frequent reference to a document, you should use a document or copyholder. Place the holder next to the monitor at the same height and distance from your eyes as the monitor.

Hand/Wrist Basics

- Keep hands and wrists straight and relaxed
- Avoid bending your wrists or putting pressure on them
- Work in a "neutral" position (about halfway through the range of motion for the joint)
- Use as light a keystroke as possible
- When moving the mouse, use your whole arm not just the wrist or elbow

Keyboard

- You should be able to work comfortably with your elbows close to your sides
- Forearms should be extended out at approximately a ninety-degree angle to the upper arms
- Using a wrist rest can be problematic - avoid putting pressure on the underside of the wrist while typing
- Do not use armrests while typing as this increases the stress on tendons and ligaments
- Keyboard should remain flat or at a slightly raised angle (0-15 degrees)

Mouse

- Position and use mouse as close to yourself as possible (next to the keyboard is ideal)
- Keep wrists straight and relaxed
- Use your whole arm when moving the mouse

Back Basics

- Try to maintain the natural "S" curve of your spine (use your seat back to support your lower back)
- Sit fully back in your chair with your back firmly against the backrest
- Shift your position from time to time to avoid fatigue

Chair

An adjustable chair is necessary for any shared workstation to accommodate users of differing sizes. Having an ergonomic chair is important if the user is spending the majority of his or her workday using a computer. So what is an ergonomic chair?

- It should have five legs for stability
- Height should be adjustable (in the range of 15-21 inches for most users)
- The seat pan should have a depth of 17-20 inches (deeper for taller people, shallower for shorter people). The user should be able to sit back fully in the chair with the lumbar (lower back) region of the back making contact with the seat back while still allowing the feet to rest flat on the floor. The front edge of the seat should be rounded with a slight downward slope to prevent loss of circulation in the thighs.
- The backrest should support the lumbar region and should be adjustable. Ideally the user should maintain the natural "S" curve of the spine. Conventional wisdom dictates that the ideal posture is an upright posture with the hips at a ninety-degree angle to the legs.
- Armrests are optional. They should be adjustable. If the armrests on your chair will not allow you to get close enough to your desk you should look into having them removed. You should not rest your arms on the armrests while typing.

Work Surface

Try to keep your work surface as free from clutter as possible. Keep items you use often close at hand. The work surface should be stable with adequate room for proper arrangement. It should be at least as big as the standard desk - 30 by 60 inches. Correct table height depends on many factors. 26 to 28 inches is recommended for computer workstations, but if the surface is also going to be used for writing on paper the recommendation is 28 to 30 inches above the floor.

Leg Room

Knee space should allow the user to change the position of his or her legs frequently to minimize fatigue. The knee space should be at least 30 inches wide by 19 inches deep by 27 inches high to comply with the requirements of the Americans with Disabilities Act. For shared workstations leg clearance should be greater than the height of the thigh and knee of the largest person using the station; for those using a footrest, clearance must be calculated with the legs in place on the footrest.

Footrests

Footrests can be used in two different circumstances: when the user's feet do not rest flat on the floor after a workstation is properly adjusted; or when the seat compresses the back of the legs limiting circulation. In the latter case the footrest can be used to help lift the back of the thighs slightly off the seat to allow for more blood flow.

Exercise/Breaks

- **Eye Breaks** - looking at a computer screen for long periods of time causes some changes in how the eyes work, causing you to blink less often, and exposes more of the eye surface to the air causing dryness. Every 20 minutes you should look away from the screen for a while preferably at an object 20 or more feet away for 20 seconds. This will allow your eyes to relax and refocus on a more natural plane. Blink your eyes rapidly for a few seconds. This refreshes the tear film and clears dust from the eye surface.
- **Micro-breaks** - most typing is done in bursts rather than continuously. Between these bursts of activity you should rest your hands in a relaxed, flat, straight posture. During a micro-break you can briefly stretch, stand up, move around, or do a different work task (e.g make a telephone call). A micro-break isn't necessarily a break from work, but it's a break from the use of a particular set of muscles that's doing most of the work.
- **Rest breaks** - every 30-60 minutes you should take a brief rest break. During this break stand up, move around and do something else. Go and get a drink of water, do some stretches, or whatever. This allows you to rest and exercise different muscles and you'll feel less tired.

Here are a few exercises you might try to relieve stress and promote relaxation.

To relax your **wrists and hands** try the following:

- Make a tight fist, hold for a second, then stretch your fingers out wide and hold for five seconds. Repeat.
- With your arms outstretched in front of you, raise and lower your hands by bending them at the wrist (as though you are waving "Goodbye", but slower). Then rotate your hands ten times in the air with your open palm facing outward (as though you were erasing something from a chalkboard).

For the **back, arms, and shoulders**:

- While seated at your desk or workstation, stretch your shoulders, arms, and ribcage by reaching overhead as far as you can and hold for a few seconds. Holding your arms above your head, intertwine the fingers of both hands and bend your torso slightly to the left and right.
- Also while seated you can help relieve tension on your neck and shoulders by rotating your head slowly from side to side. Other neck stretches include tipping your head towards your shoulders, lowering your chin to your chest, and neck extension exercises.