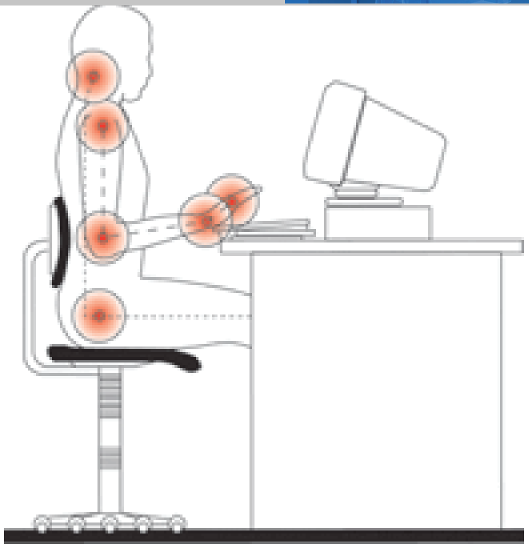
Guide to Setting Up an Ergonomic Computer Station

THE SEATED POSITION



The chair is a key component in the ergonomics of a computer workstation. A good chair is one that allows you to maintain a variety of comfortable task positions while working throughout the day.

While there is no "perfect" working posture for everyone, the following guidelines are useful for improving the body geometry of the workstation:

- The seat height should be adjusted so that the thighs are nearly horizontal and the feet are resting flat and comfortably on the floor.
- Use a footrest if your feet are not resting comfortably on the floor.
- When the chair orientation has the user placing the feet flat on the floor or on a support, the resulting angle between the upper and lower legs should be from 60 to 100 degrees.
- The angle between the seat pan and seat back should permit the person to assume a working posture in which the thigh-torso angle is not less than 90 degrees, with 100 degrees as preferable.
- The chair should have a backrest with support for the curvature in the lower back. The back rest should be adjusted to fit your individual spinal curvature for maximum comfort.

Feeling tension in your legs, back or shoulders could be a sign of poor chair adjustment, such that it is not providing the body adequate support.

Sometimes sitting in a stationary position for a long period of time can lead to muscle fatigue. Moving your body around during the day can help reduce muscle strains and lower wear and tear on your disks and spine.

A key point to remember is that you should be able to rest your feet flat on the floor without the chair putting pressure on the backs of your legs, which may in turn reduce whole-body blood circulation.

PROPER POSTURE DURING COMPUTER SCREEN USE

Proper posture while using a monitor can help prevent tension or stiffness in the neck, back and shoulders.

Use these posture checkpoints to reduce stress on the muscle and skeletal system:

- Keep your elbows close to your sides. This will reduce upper back and shoulder muscle tension.
- Try to maintain a 90 degree angle between the upper and lower arm. This is considered "neutral," although any position between 70 and 135 degrees is acceptable.

PROPER POSTURE DURING COMPUTER SCREEN USE, Continued

- Hold the wrist and forearm in a straight line to reduce tendon and nerve stress. The forearm should be roughly parallel to the floor.
- Ideally, your wrist should be supported near the keyboard by a wrist support to help provide a neutral (straight) arm/wrist position.
- Retract the keyboard support legs to keep the keyboard flat.
- Keep your head up, with the ideal monitor about 48 to 25 inches from your eyes.
- Maintain a line of sight from your eyes to the screen's primary viewing area that is between 0 and 60 degrees below the horizon. The optimal viewing angle is 20 degrees below the horizon.

Following these guidelines helps your body maintain a healthy, natural geometry at the monitor. For best results stay within stated ranges when making adjustments for individual preference.

VISION AND LIGHTING

Screen clarity to the eye and office lighting both affect your well being when using a monitor. Some technical parameters of the computer screen, as well as the eye itself, are influencing factors.

Here are guidelines for the best interaction between the computer screen and your eyes.

- Remember that glare from outside light sources creates eye strain.
- Try to position the monitor at a 90 degree angle to strong light sources such as windows or bright lights.
- Adjust screen angle if needed to reduce glare.
- Consider using screen filters to reduce glare if other methods fail.
- Make sure that the screen has adequate character resolution and luminance. Adjust the screen intensity if necessary.
- Avoid intense light sources in your peripheral field of vision if possible.
- Place your document holder near the screen and in the same plane as the screen to avoid eye strain and fatigue.
- Take breaks as your work schedule permits to get your eyes focused off of the screen and into the distance to relax the eye muscles.
- See your eye healthcare professional if you experience any visual discomfort from your monitor work.

EXERCISE AND STRETCHES

Take a 1 to 2 minute break after every 30 minutes of continuous computer use, pause to perform a few office exercises.

Eyes

- To relieve dry eyes, close your eyes tightly for a second, and then open them widely. Repeat several times.
- Blink to produces tears to help moisten and lubricate the eyes.
- Refocus your eyes momentarily on an object that is at least 20 feet away.

Hands and Wrists

- Spread your fingers wide and hold, form fists and hold. Repeat several times.
- Place your hands together with fingers pointing upwards and at chin level. Slowly lower your hands, part them, and reverse the process. Repeat several times.
- Hold arm straight out in front of you and pull the hand backwards with the other hand, then pull downward.
- While sitting, drop arms to the side and shake hands downward gently.

Neck

- Keeping your chin tucked in, slowly turn your head to one side and hold. Alternate sides and repeat several times.
- Stretch neck by tilting the head to one side (ear towards shoulder).

Shoulders

- Slowly bring shoulders up to the ears and hold for approximately 3 seconds. Rotate shoulders back and down.

Back

- While standing with your feet about shoulder width apart and with your hands on hips, slowly lean hips forward and shoulders slightly back.

Any exercise program should be approved by your physician. If you have an injury or any type of recurring discomfort, you should immediately report this information to your supervisor and obtain a medical evaluation. These stretching exercises are not provided to cure any existing problems, but they may help in preventing any future ones.

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GENERAL CONSIDERATIONS

Use of computer workstations is becoming the standard in a growing number of occupations. Ergonomics can assure that individuals function most effectively and protect their health as modern technology is applied in more areas of our society.

These general guidelines will help you stay more alert and reduce strain and fatigue while using a computer screen:

- Change positions, stretch, or walk around during the day if you begin to feel tired.
- Use a "light touch" on the keyboard to reduce hand stress and lower your risk of developing cumulative trauma disorders.
- Rest your eyes throughout the day.
- Keep the monitor screen and your eyeglasses clean.

Following the guidelines will help you to be more productive and enhance the health and well-being of your body. At the end of the day, you will also feel better and enjoy your leisure hours free of pain and stiffness.