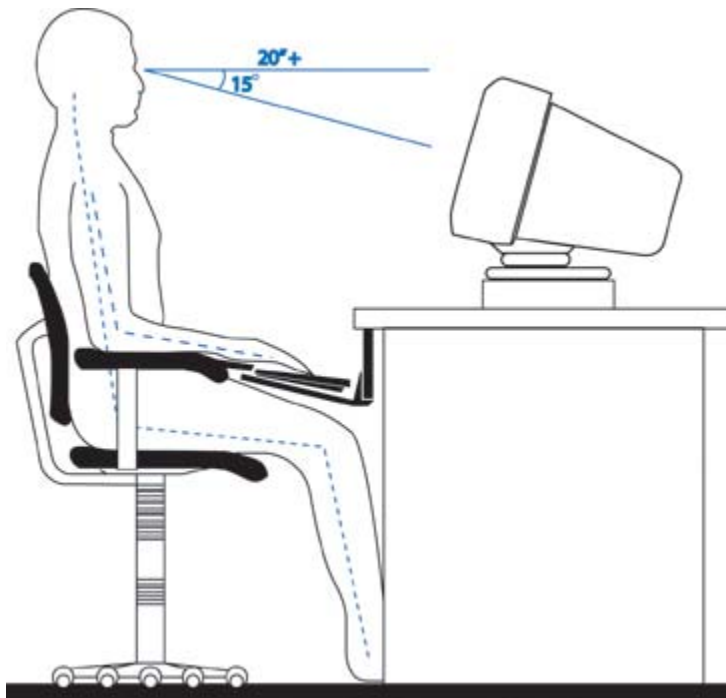




Guide to Setting Up an Ergonomic Computer Work Station

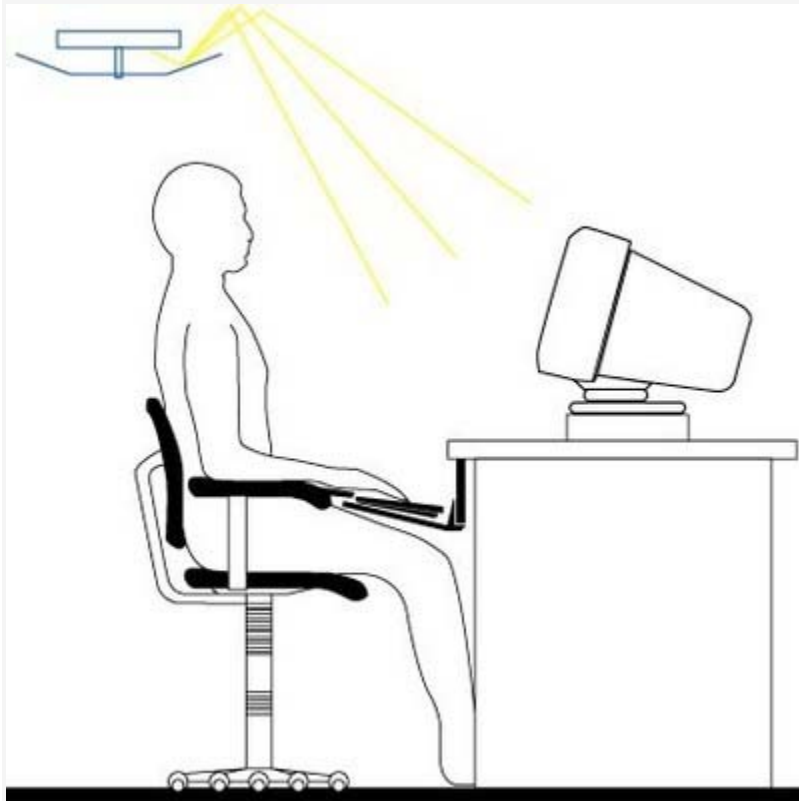
The Monitor



There are four areas that a computer user interfaces with: the monitor, the keyboard and mouse, the chair, and the lighting of the environment. Setting up the interfaces with these ergonomic guidelines as well as maintaining a good posture will enhance your comfort and efficiency as well as prevent repetitive stress injuries.

- Position the monitor to minimize glare by placing it at a right angle to light sources or windows.
- Place the monitor as far away from you as possible while maintaining the ability to read without consciously focusing. Keep a minimum distance of 20 inches.
- Place the center of the screen at a 15 degree down angle from your eyes with your neck only slightly bent holding your head perpendicular to the floor.
- Align the monitor and the keyboard / mouse.
- Set the refresh rate at a minimum of 70 Hz to limit flicker.

Lighting



- The office should be moderately bright (20-50 foot candles or equal to a nice day where sunglasses aren't needed).
- Do not use task lighting for computer work.
- A mix of incandescent and fluorescent lights reduces flicker and provides good light color.

The Keyboard



- Position the keyboard slightly below the elbow and at a negative angle to allow the wrists to remain straight when you sit in a slightly reclined posture.
- Do NOT use a wrist rest while actively typing. It's meant to rest on not to lean on when working. Hold your hands and arms off of any supports while typing.
- Do NOT use the keyboard supports to raise the back up. Do NOT tilt the keyboard tray so that the back of the keyboard is higher than the front. Though design and a lot of prevailing information say you should tilt the keyboard to a positive angle like this, it is wrong. A negative angle that allows the wrists to stay in their natural wrist position is better.

Before You Buy a Keyboard Tray - The keyboard is the main interface between you and your computer. It is also the cause of most repetitive stress injuries resulting from computer use. Having the right ergonomic features in a keyboard tray is essential to your health and well being at a computer work station.

Adjustable Height - The most important feature is the ability to adjust the height. Keyboard height is determined by your chair height (if sitting) and arm length. Being able to fine tune that and adjust it as you adjust your sitting position throughout the day is essential.

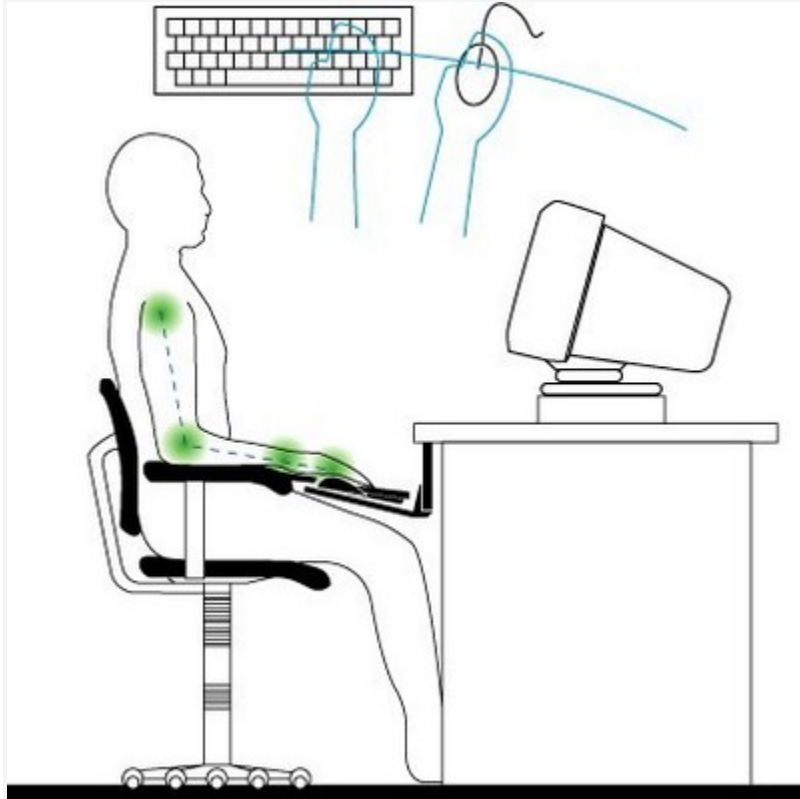
Keyboard Tilt - The keyboard needs to be held at a comfortable, negative angle that allows the wrists to remain unbroken. This angle should be easy to set once, but does not need to be changed often. Keyboard tilt does not need to be adjusted during posture changes as the angle of your arms should remain relatively constant.

Mouse House - The mouse should be placed next to and on the same level as the keyboard. Ideally it should be placed along the circular arc your lower arm makes when rotating from the keyboard to the side.

The Rest Stop - Wrist / Palm rests are helpful during periods where your hands are inactive. There should be room for these as well if they are not already built in.

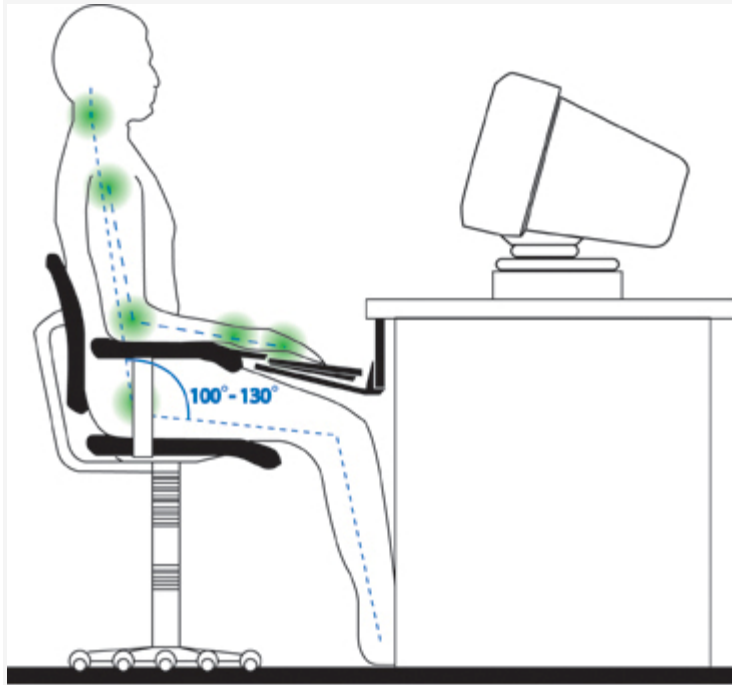
Slip & Slide - The ability to slide the keyboard tray in and out while still at operational height will allow you to scoot closer to or farther from the monitor to relieve eye strain while still maintaining an ergonomically sound setup.

The Mouse



- Place the mouse on the same level as and immediately next to the keyboard tray.
- Keep the mouse in the arc line of the keyboard so that you can reach it when rotating your arm from the elbow.
- Do NOT use a wrist rest while using the mouse. Your forearm needs to be free to move so you do not strain the wrist.

Chair Setup & Posture



The Chair

- Use arm rests.
- Place the lumbar support slightly below the waist line.
- Adjust the height of the chair so your feet can rest completely on the floor.
- Allow 1-3 inches between the edge of the seat and the back of your knees.
- Use a high back chair that supports your shoulder blades if at all possible

Posture

- Position your hips so that they are slightly higher than your knees while your feet are flat on the floor.
- Don't keep your feet flat on the floor. Move them around often. Use a foot rest if you have one, but only part of the time. Do NOT cross your ankles.
- Lean back slightly. Leaning the trunk back to somewhere between 100-130 degrees from parallel to the floor will open up the hips and ease pressure on the pelvis. Make sure your chair back will support your shoulders at this angle while still providing good lumbar support.
- Hold your head slightly up so that it is roughly perpendicular to the floor.
- Let your upper arms hang naturally from your shoulders.
- Let your lower arms rest on the arm rests of your chair either parallel or slightly below, to the floor.
- Keep your wrists straight.
- Change your position frequently. Move your feet, lift your arms, adjust your hips, and just make sure to subtly alter your posture continuously throughout the work day.

What Not to Do



Poor posture, lack of proper equipment and incorrect ergonomic information are all contributing factors to an improper computer setup. You can see, as illustrated here, that working at a computer can cause a lot of distress in a number of different parts of the body. With that in mind here are some key things not to do:

- Remember that ergonomics is personal. What works for someone else may not work for you.
- Do not settle for a desk without a keyboard tray or some other way to set the keyboard height and angle correctly. If your employer complains about the cost ask them to compare it to the cost of worker's compensation.
- Do not place the keyboard on top of the desk.
- Do not place the monitor above your head.
- Do not sit in a rigid and upright position.
- Do not lean forward.
- Do not work for long periods of time without moving. You need to take frequent breaks. They keep you awake, productive and healthy and keep you from developing Deep Vein Thrombosis.