

## **Keyboard**

## Overview

There are a number of ailments that can come from using your keyboard incorrectly-from short-term issues like sore wrists to long-term problems like Carpal Tunnel Syndrome. These ailments can take years to develop, and once present, can be difficult or even impossible to reverse. That's why it's so important - even if you're not currently feeling pain-to position and use your keyboard properly to avoid future problems.

## **Set-up & Positioning**

1. If you don't currently use an adjustable keyboard/mouse tray, consider attaching one to your surface.

This allows a much wider range of adjustment, and helps you maintain a proper ergonomic setup. Choose a system that is height adjustable, lets you tilt the keyboard away from you slightly for better posture (negative tilt), and allows you to use the mouse with your upper arms relaxed and as close to the body as possible.

2. Make sure the height of your keyboard allows you to keep an "open angle" with your arms.

In the proper position, the keyboard should be placed just above the level of your lap. This is lower than most people normally place their keyboard, but lets your arms tilt downward while using the keyboard, leaving your elbows at a comfortable "open" angle. (If you don't have an adjustable keyboard tray, you may need to accomplish this by adjusting your chair height).

3. If your keyboard is lower than the desk surface, tilt the back edge of the keyboard slightly down (known as "negative keyboard tilt").

Using a slightly negative keyboard tilt will help you keep your wrists in the proper (neutral) position. Try to avoid positive keyboard tilt (i.e., where the top row of keys is noticeably higher than the bottom row of keys). Also, make sure that if there are "legs" attached to the bottom front of your keyboard, they are left un-extended.

4. If you use a keyboard tray, make sure there's enough room for your mouse.

Your mouse should be close to your keyboard so that you don't have to reach far to grasp it.



5. If you have a broad chest, consider a "split" keyboard.

Split keyboards divide the keyboard into two halves, each of which points slightly outwards. The outward angle lets your wrists and forearms point inward without requiring your elbows to come in as far, better conforming to the contours of your body. Conversely, thinner people may find a traditional "straight" keyboard more comfortable.

## Tips for Healthy Keyboard Usage

1. Use a light touch when typing (don't bang on the keyboard!).

Try to use the minimum amount of force necessary to depress the keys. The tendons from your fingers connect near your elbow, so striking the keys too hard can lead to problems you might not associate with your keyboard-for example, pain and inflammation in your elbows (Epicondylitis or tennis elbow).

2. Keep your wrists in a neutral (straight) position—not bent up or down.

Repeatedly bending your wrists up and down (extension and flexion) compresses structures inside the carpal tunnel in the wrist. This can cause pain and lead to injuries like carpal tunnel syndrome. When you're typing, your forearms tend to sag as the arms tire, putting the wrists into even greater wrist extension-another good reason to take frequent stretch or rest breaks!

3. Keep sure your elbows at a slightly open angle-90° or greater.

Keeping your elbows bent less than  $90^{\circ}$  can cause nerve compression, leading to sore wrists and arms. Adjust the height of your chair or your keyboard tray to achieve a comfortable position.

4. Keep your shoulders relaxed, and your elbows at your side.

You shouldn't have to raise your shoulders to get your hands to reach the keyboard-try raising your chair instead. Your forearms should be roughly parallel to the floor. If your chair has armrests, the armrests should comfortably support your elbows during rest breaks.

5. Don't use wrist rests or armrests while typing-only while resting.

If your workstation has wrist rests or armrests, be sure to use them only while taking breaks. Never use wrist rests or armrests while typing. A wrist rest should be used to rest the heel of your palm, not your wrist itself.



6. Stay centered on the lettered part of the keyboard.

Keyboards aren't symmetrical. Letter keys are on the left and the numeric keypad is on the right, but most people center themselves with the entire keyboard or keyboard tray-not the letters! This puts the keyboard a little too far to the left. If you use the letters most, it makes sense to align yourself with that section—the "B" key should be about in line with your belly button.

7. Consider using a voice recognition software program.

Voice recognition programs allow you to dictate to your computer and free yourself from the keyboard. There are a number of commercially available programs. Be aware, however, that this can lead to new problems such as voice loss!

8. Consider using keyboard shortcuts or macros to repeat common tasks.

Many of the commands available through menu choices can also be accomplished by using the keyboard. (For example, Ctrl-C can be used to copy text.). Some programs also allow you to automate common tasks (such as formatting a document or inserting your address) with scripts called macros. You can even buy software programs that allow you to easily record macros for any software and assign complex key sequences. These can significantly reduce the amount of typing you need to do.