ERGONOMIC TIPS FOR LAPTOP USERS

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Hopefully, you don't look like the young lady in this picture when you are working on your laptop!

If you are using a laptop computer, most likely the reason is that your job requires their portability and convenience. Unfortunately, their compact design, with an attached keyboard and screen, forces users into awkward positions. When the screen is at the right height, the keyboard height is excessive and vice versa. Furthermore, the reduced keyboard size can result in poor wrist and arm positioning, such as outwardly bent wrists and extreme pronation (e.g., palm down position) of the forearms.

Laptops are excluded from current ergonomic design requirements because none of their designs can satisfy the basic need to have the keyboard and screen at the correct height. This means that you need to pay special attention to how you use your laptop, because it can result in musculoskeletal issues if you do not. If you are an occasional laptop user (e.g. less than one hour per day), you will be at less risk for problems than a full time user. Still, all computer and/or laptop users should pay attention to their workstation set up.

An ergonomically arranged workstation for desktop or laptop users promotes neutral postures. That is,

- the neck should be aligned with the spine or, in other words, the ears should be positioned over the shoulders;
- the back should be supported by a chair to maintain the spine's natural curves--particularly the inward bending of the low back;
- the shoulders should be relaxed (not elevated or hunched);
- elbows should be close to the sides of the body and the angle of bending should be no greater than 90 degrees, and preferably less; and
- the wrists should be in a straight alignment with the forearms.

Setting Up Your Laptop for Frequent Use

➢ Use an appropriate office task chair that fits you properly. Position the chair height as high as you can but, with your feet still firmly positioned on the floor.

➢ Install a separate keyboard and mouse (for right handed users, preferably a Microsoft Intellimouse Explorer) for your laptop.

➢ Position the keyboard and mouse at a height that allows the shoulders to be relaxed, elbows at the sides, and the wrists in straight alignment with the forearms. For most individuals, this will be at a lower height than the traditional desk height. Thus, there are two options to facilitate the correct height relationship between the user's arms and the keyboard/mouse. The first option is to install a keyboard tray and articulating arm that will allow the keyboard and mouse to be positioned at a lower height, as well as, tilted to further facilitate "neutral wrist" positions. The second option is to increase the chair height so that the neutral body positions noted above are created—visually, it is easiest to see this when the wrists are in straight alignment with the keyboard. With the chair height raised, a footrest is usually needed.

➢ Position the laptop so that it will function as your monitor; the laptop should be placed in a straight alignment with the user. Typically, for most users the laptop will need to be raised anywhere from 5 to 10 inches in order to provide the proper height. Plastic risers, paper reams, and laptop risers are all viable options to provide the correct monitor/laptop height. (Note: If you wear bifocals, the height that the laptop is raised is usually much less.) For all users, the goal is a neutral neck position—that is, the neck should not be bent or the chin protruded up in the air.)

➢ Reduce glare on the screen by positioning the screen at a right angle to windows. Subdued overhead lighting is best for computer work with task light for desk work.

➢ Use a document holder to angle source documents vertically so that neck bending and twisting is minimized.
See http://ergo.human.cornell.edu/AHTutorials/tutorialimages/idealtyping.jpeg