



ERGONOMIC STRATEGIES-COMPUTER MONITORS

How can a Computer Monitor become Problematic?

- If a computer monitor is not positioned properly, it can lead to numerous types of chronic injury, especially of the neck, eyes, and back.
- Computer monitors are often positioned too low for its user, which may bring about a downward eye glaze, an increased neck angle, and forward bending of the upper back.
 - With the neck and upper back in this position, stress on the spine significantly increases.
 - This position also brings about fatigue much earlier throughout the workday.
 - Vertical gaze direction, ocular surface area, and viewing angle are all affected as well.
- Computer monitors that are positioned too high (i.e.: above the horizontal of eye gaze) lead to shortening of the neck and upper back muscles beyond their optimum lengths and lengthening of the muscles in the front of the neck.

How should I Properly Position my Computer Monitor, and why is this Important?

- The monitor should be positioned directly in front of you at an arms length away. Make sure it is perpendicular to the window, if you have one in your office, in order to avoid glare on the screen.
- In order to minimize the load on the musculoskeletal system, the eye gaze inclination to a visual target, in this case the computer monitor, should be approximately 6-9° below the horizontal (about 10 cm below eye height).
- Large-sized monitors for convenient use of larger icons and symbols will likely necessitate a gaze at the proper angle and a more erect body posture.
- Working within proper viewing angles will minimize the surface of the eyeball, which, in turn, will help the eye to retain its moisture and be better equipped to perform computer work.

QUESTIONS? Contact Rachel Neuman: raneuman@bu.edu or Karen Jacobs: kjacobs@bu.edu

Delleman, NJ, and Berndsen, MB. (2002). Touch-typing VDU operation: Workstation adjustment, working posture and workers' perceptions. *Ergonomics*, 45(7): 514-535.

Pentikis, J, Lopez, MS, et al. (2002). Ergonomics evaluation of a government office building. *Work*, 18(2): 123-131.



Villanueva, MBG, Sotoyama, M, et al. (1996). Adjustments of posture and viewing parameters of the eye to changes in the screen height of the visual display terminal. *Ergonomics*, 39(7): 933-945.