

## Ergonomic Strategies: Notebook Users

### Monitors

- Position your computer monitor in front of you with an eye gaze 6-9° below the horizontal. This will help to decrease visual discomfort which will decrease worker fatigue and increase productivity.
- Position the notebook monitor perpendicular to the window, if there is one. This will help to avoid glare on the screen and as a result reduce visual discomfort.

### Keyboards

- Use a separate keyboard, and make sure the keys do not stick or need excessive force to operate.
- Don't use a wrist rest!
  - Research suggests that using a wrist rest doubles the pressure inside the carpal tunnel because the floor of the carpal tunnel is a more flexible ligament that transmits external pressures directly into the carpal tunnel.
- Place your arms and elbows close to your body when typing and maintain your wrists in a neutral position.
- Position the keyboard an arms length away because longer distances between the keyboard and the edge of the desk keep the wrist in a more neutral position and reduce chronic injury.
- If possible, use a downward tilting keyboard tray (with no more than a 15° tilt) as this significantly reduces wrist extension and improves both low back pain and shoulder pain.

### Mouse

- Use an external mouse instead of the touchpad.
- Make sure the mouse is at the same level as the keyboard (elbow height) and kept close to the keyboard.

*Created by Rachel Neuman and Karen Jacobs: [kjacobs@bu.edu](mailto: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.