BU College of Health & Rehabilitation Sciences: Sargent College

ERGONOMIC STRATEGIES
COMPUTER MICE

How Does Mouse Use Lead to Injury?

- When using a mouse, workers typically extend their arms, raise their shoulders, and/or position their elbows far away from their body for several minutes at a time without awareness of their position or breaks from mouse use.

- Mouse use has been associated with an increased risk for upper extremity musculoskeletal disorders, such as carpal tunnel syndrome, because carpal tunnel pressures during mouse use are typically greater than pressures known to alter nerve function and structure.
    - Elevated carpal tunnel pressure during mouse use is an effect of both wrist extension and excessive fingertip force applied to depress the button and grip the sides of the mouse.

- It has been estimated that workers use a mouse an average of 78 times per hour, accounting for about 23.7% of computer work time.

- The highest levels of EMG activity during computer work occur in the forearm during mouse activity compared with other computer tasks.

How Can I Prevent Symptoms and Chronic Injury?

- Use an external mouse, and make sure the mouse is at elbow height.

- Optimal positioning of the mouse is next to the keyboard on a sliding keyboard tray.

- Minimize prolonged dragging tasks and frequently perform other tasks with the hand used for the mouse.

- Consider placing the mouse on the left side of the keyboard as it reduces the postural constraints of the upper extremity using the mouse.

- A quick-fix solution is using a “mouse bridge,” which is a stand on which the mouse sits on top of the number keypad.

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

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