DoD Ergonomics Working Group NEWS

Ergo On the Go:
Safety Tips for Laptop Computer Use

The ideal "ergonomic" computer workstation consists of an adjustable desk and chair with separate computer screen, keyboard, and mouse. Adjustable furniture and separate computer components can be made to "fit" the needs of the user, rather than the user trying to "fit" the constraints of the workstation.

The design of laptop computers defies these basic ergonomic guidelines. Laptop users set up shop on any available surface, often in cramped spaces—a conference table, airplane tray, hotel bed, their own laps. Chairs are anything available to sit on from a folding chair to a lobby couch to a park bench. The computer screen, keyboard, and mouse are all-in-one units creating a single, fixed design with typically smaller features than in a standard computer set-up.

Despite the poor ergonomic design of laptop computers and their "on the go" use, there are some safety guidelines you can follow to avoid musculoskeletal discomfort and injury:

> **IMPORTANT!**
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> Laptop computers are not covered by current ergonomic design requirements and are not recommended as your primary computer.
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> In the office or at home, use a docking station. This will allow you to enjoy the portability of your laptop when you travel, but you'll have a full-size monitor and keyboard and separate mouse for adjustability and comfort.

- Use a comfortable chair with no arm rests so you can easily move your arms.
- If you're using your lap for your work surface, raise the screen height by using a footrest or placing a pillow under your laptop.
- Keep your elbows level with or slightly higher than the keyboard with your wrists in a neutral position (not bent).
- Do not pound the keys on the keyboard—with laptops, the touch is often lighter and the keyboard bed is shallow.
- When looking down at the screen, do not bend your neck and head forward to see. Tuck in your chin to look down, keeping your head and neck "balanced" over your spine.
- Take frequent, short rest breaks from the cramped quarters and poor posture inherent with laptop use.

Finally, a laptop is often heavy so you should avoid carrying one with a handle. Use a bag with a padded shoulder strap, remove unnecessary accessories to lighten your load, and switch the laptop bag from shoulder to shoulder to relieve the weight. Better yet, use a laptop bag with wheels or a wheeled luggage cart and roll your computer with you!

Whenever possible, do your best to apply standard desktop computer guidelines
to your laptop use. To assist you, the Ergo Working Group published
Creating the Ideal Computer Workstation. A copy is available at
http://chppm-www.apgea.army.mil/ergowg/Workstation_Guide_Web.pdf