

Ergonomics

Strategies to Reduce Back, Neck and Shoulder Pain

Ergonomics is the process of designing and arranging everyday things that people use, so that people can interact with them most effectively and safely. The term ergonomics comes from the Greek words *ergos*, meaning “work”, and *nomos*, meaning “study of” or “natural laws of”.

So, how applicable is ergonomics to the typical University of Chicago student? Over a period of 12 months, **31% of U of C students reported experiencing back pain.**

—2004 University of Chicago Student Health Assessment Survey, undergraduate & graduate data.

Much of this **back pain** can be traced to ergonomic problems from –

- using **computer workstations**
- **study/reading postures**
- carrying **backpacks/bags**
- wearing non-supportive **shoes**
- carrying/moving **boxes**
- **exercise/leisure activities**



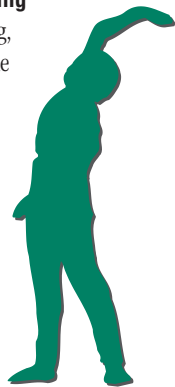
The “Life of the Mind” is a Life with ERGONOMICS!

Here are a few strategies (front & back of card) on how to incorporate and improve ergonomics into each day:



Studying Positions & Posture: Make an effort to **move** your spine and stretch your muscles **every 20-30 minutes**. **Vary your posture each hour**— sit up straight, curl over your books in a “C”, lay down, etc. Reduce neck and shoulder pain by **propping your books at eye level**. When standing, good posture is a relaxed appearance of the spine as the ears, shoulders, hips, knees, and ankles align in one straight line.

Movement: Motion is very important for ergonomic health, since it distributes stress placed on joints and muscles, and replenishes nutrients in your spine. **Most students spend at least half of the day sitting** in class or the lab, at computer workstations, during meals, or while reading. So take a break every **20-30 minutes** to move – stretch your back & neck, take a walk, shift your study position, be active, exercise – and **put that sedentary spine in motion!**



Backpacks: A backpack is our keeper of all things and if worn correctly (not overloaded), the body’s strongest muscles in the back and abdomen can support it, thus reducing back and neck pain. **Proper backpack use involves wearing the backpack flush against your middle back** (above your beltline). For 2-strap packs use both straps with the straps tightened around your shoulders. For 1-strap bags wear the strap diagonal across your body with the strap tightened to allow the pack to rest on your upper back.

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Computer Workstations and Study Postures: Ergonomics involves safety in the workplace, and for students, your workplace is the library, classroom or lab, and anywhere else you sit and work! More than ever students are exposed to long-hours of sedentary positions and daily use of laptops/computer workstations that lead to repetitive stress injuries of the wrists, neck, shoulders, eyes, and back. It's very important then to regularly practice ergonomic safety when using these products in order to reduce life-long strains and injuries. Here are a few simple tips:

Chair

A proper chair supports the natural curves of your upper and lower back, and has adjustable armrests and chair height. When you are sitting (1) your back touches and is supported by the back of the chair, (2) your knees are at a 90° angle against the seat of the chair, (3) your feet touch the floor easily, and (4) the arm rests support the height of your arms when they are at a 90° angle to your body.

Computer Monitor

The monitor should be 18-24 inches away from your face and the screen level with your eyes. **For laptop users**, position the laptop on your lap or desk and angle the screen so that you can keep your back, neck, and shoulders upright and use your eyes to look downward at the screen. You may also want set-up your laptop as a desktop monitor by adding a separate keyboard and mouse device.

Keyboard & Mouse

The keyboard should be flat or slightly tilted, so that the wrists are straight (like going to give a handshake), not bent, which will cause wrist injury. A wrist rest might be needed if the keyboard is too thick or to hold the weight of the wrist so that the wrist remains horizontal. A rolled up towel or stack of magazines may also work as an economical wrist rest.

As with the keyboard, when using a mouse device the wrist should be straight (not bent) and supported by a wrist rest or other supportive material. If using the mouse for prolonged periods, remember to take regular breaks to stretch your wrists and fingers to avoid repetitive injuries.

Workstation/Desk

Your work surface/desk should be slightly below your elbows when sitting. This means that you may need to raise or lower your desk in order to have enough space under the desk for your legs when sitting properly in your chair. Also, keep frequently used items close by – within 14-18 inches – to avoid awkward reaching positions.



Questions? Need more information?

U.S. Department of Labor Occupational Safety & Health Administration (OSHA): <http://www.osha.gov/SLTC/etools/computerworkstations/index.html>



Student Care Center Office of Health Education Services: (773) 834-5143 or see tips on-line at: <http://scc.uchicago.edu/Ergonomics16.pdf>

1 in 5 UofC students reported **reduced academic performance** due to their **Internet/computer game overuse**.

— 2005 Student Health Assessment Survey, undergraduate & graduate data.

Computer/internet use that becomes compulsive and interferes with daily life (e.g. missing meals, sleep, or class) can lead to personal problems, loneliness, withdrawal symptoms, and substance use. Help is available. Call for an appointment at SCRS (773) 702-9800 or learn more at <http://www.swedish.org/17000.cfm>