



## Pain-Free Studying

University students commonly experience pain associated with studying. This problem can follow you throughout your lifetime, so understanding how studying is connected to pain and how you can prevent pain is important.

### Common Pain and Discomfort Associated with Studying

- Neck pain
- Headaches
- Shoulder pain
- Back pain
- Hand pain and numbness

### Common Causes of Pain When Studying

- Staying in one position for long periods of time
- Poor posture
- Doing the same action repetitively (e.g. typing)
- Setting up your study space incorrectly
- Carrying too much weight in your backpack

### Tips for Managing Your Pain

- ***Pay attention to your body:*** When you feel your body getting sore or uncomfortable, take action to prevent pain and injuries from occurring.
- ***Use proper posture:*** Proper posture is important for preventing musculoskeletal strain and repetitive strain injuries while studying. Here are some tips for maintaining proper posture, particularly while using a device.
  - When viewing a screen, your neck should be straight.
  - When typing, elbows should be close to your sides and at the same height as the keyboard.
  - Forearms, wrists, hands, and shoulders should be kept as relaxed as possible; avoid typing with too much force.
  - Wrists should be kept straight or slightly pointed downward when typing; wrists should be elevated when typing, not resting on an armrest or table.
  - Knees should be bent at 90 degrees with a 2 to 4-inch gap between the back of the knees and the front edge of the chair.
  - Feet should be placed flat on the floor or on a footrest.

- **Exercise:** Moving your body frequently and stretching daily can reduce bodily pains when studying. Be sure to incorporate some form of movement into your schedule, especially around exam time.
- **Set up your study space:** Setting up your study space properly will prevent unnecessary strain on your body that leads to pain.
  - Do not study in bed or on the couch; instead, sit in a well-supported chair.
  - Your chair should be adjustable with padded armrests, have an adjustable height option, and provide lower back support so can have the proper posture outlined above.
  - If your chair does not have lower back support, you can purchase one or use a pillow or rolled up towel behind your lower back.
  - Frequently used desk items should be placed within reach.
  - Position your screen at eye level.
  - Your keyboard should be flat or sloped slightly downward (i.e. highest end closest to you).
  - If using a mouse, position it close to the keyboard.
- **Use backpack ergonomics:** Using a backpack properly can reduce pain and tension.
  - Limit your backpack weight to no more than 10-15% of your body weight.
  - Carry your backpack on both shoulders with the straps tightened.
  - Backpack straps should be adjustable and padded.
  - The backpack should not hang more than 4 inches below the waistline.
  - When picking up the backpack, bend at the knees rather than the waist.
  - Remove any items that you do not need on a daily basis.
  - If you need a lot of items for classes, get a locker to store heavier items.

Created for the Academic Learning Centre by Occupational Therapy students Sara DePottie, Dèe-Ana Marion, Anna Moscinski and Shiva Zadeh, 2018.

*Disclaimer: This document was developed by one or more students from the University of Manitoba. The information provided in this document is meant to provide helpful information. It does not replace the advice of a health care professional. There are no guarantees of completeness or accuracy with regard to the information contained in this document. This document is provided without warranty of any kind.*

## Sources

- Barredo, R. D. V., & Mahon, K. (2007). The effects of exercise and rest breaks on musculoskeletal discomfort during computer tasks: An evidence-based perspective. *Journal of Physical Therapy Science*, 19(2), 151-163.
- Bauer, D. H., & Freivalds, A. (2009). Backpack load limit recommendation for middle school students based on physiological and psychophysical measurements. *Work*, 32(3), 339-350.
- Boocock, M. G., McNair, P. J., Larmer, P. J., Armstrong, B., Collier, J., Simmonds, M., & Garrett, N. (2007). Interventions for the prevention and management of neck/upper extremity musculoskeletal conditions: A systematic review. *Occupational and Environmental Medicine*, 64(5), 291-303.
- Canadian Chiropractic Association [CCA]. (2015). How to ensure backpacks are safe for your child's back. *Back Care Tips Blog*. <https://www.chiropractic.ca/blog/back-to-school-2015-how-to-ensure-backpacks-are-safe-for-your-childs-back/>
- Devroey, C., Jonkers, I., De Becker, A., Lenaerts, G., & Spaepen, A. (2007). Evaluation of the effect of backpack load and position during standing and walking using biomechanical, physiological and subjective measures. *Ergonomics*, 50(5), 728-742.
- Mayo Clinic. (2017). *Easy desk stretches for your workday*. [https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/office-stretches/art-20046041?pg=2&\\_ga=2.12365564.936977630.1517345615-2111952803.1517345615](https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/office-stretches/art-20046041?pg=2&_ga=2.12365564.936977630.1517345615-2111952803.1517345615)
- Khan, R., Surti, A., Rehman, R., & Ali, U. (2012). Knowledge and practices of ergonomics in computer users. *Journal of the Pakistan Medical Association*, 62(3), 213-217.
- McLean, L., Tingley, M., Scott, N., & Rickards, J. (2001). Computer terminal work and the benefit of microbreaks. *Applied Ergonomics*, 32(3), 225-237.
- Rempel, D., Keir, P., & Bach, J. (2008). Effect of wrist posture on carpal tunnel pressure while typing. *Journal of Orthopaedic Research*, 26(9), 1269-1273.
- Smith, B., Ashton, K. M., Bohl, D., Clark, R. C., Metheny, J. B., & Klassen, S. (2005). Influence of carrying a backpack on pelvic tilt, rotation, and obliquity in female college students. *Gait & Posture*, 23, 263-267.
- University Health Service. (n.d.). *University of Michigan*. <https://www.uhs.umich.edu/computerergonomics>