

Newsletter: Ergonomics—Work Shouldn't Hurt!

June, 2016

By: Jessica Brown, Executive Assistant

What is ergonomics?

The term ergonomics is defined by the Center for Disease Control as “the scientific study of people at work.” More specifically, the goal of ergonomics is stress reduction, as well as the elimination of musculoskeletal disorders and injury associated with muscle overuse, poor posture, and repetitive tasks.

Ergonomics incorporates disciplines such as anatomy, physiology, psychology, engineering, and statistics. The process essentially involves making adjustments to an individual’s work environment in order to meet that person’s physical capabilities and limitations.

[CDC Ergonomics.org](http://www.cdc.gov/ergonomics)

What are Musculoskeletal Disorders, and how are they caused?

Musculoskeletal disorders refer to generally painful disorders that involve muscles, tendons, and/or nerves.

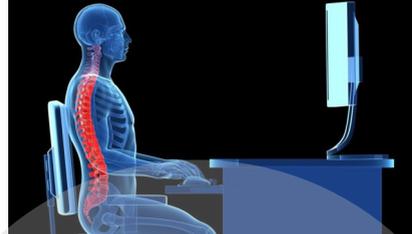
Examples of Musculoskeletal Disorders (MSDs) include the following:

- Carpal Tunnel Syndrome
- Tendinitis
- Injuries to the rotator cuff
- Epicondylitis
- Trigger finger
- Muscle strains
- Lower back injuries

Potential causes of MSDs are as follows:

- Heavy lifting
- Force on a specific area of the body, such as the hand or wrist
- Vibration—vibrations such as those experienced when working with power tools or by a professional driver can lead to numbness, pain, and a loss of dexterity
- Temperature—cold temperatures create a sense of numbness in the hands, which makes an individual more likely to use more force than necessary to complete tasks such as typing and even writing. In addition, temperature effects the body’s flexibility. In a cold environment, every movement and sedentary position requires more work. In contrast, too much heat can result in fatigue, which makes an injury more likely
- Bending
- Reaching overhead
- Pushing/pulling heavy loads
- Poor body posture
- Performing repetitive tasks
- Psychosocial factors (which relate generally to stress):
 - Lack of influence or control over an individual’s work
 - Communication issues (lack of or poor)
 - Stress related to increased pressure—too high pace of work causes not only stress, but does not allow ample recovery time between movements
 - Perception of low support

[OSHA](http://www.osha-slc.gov)
[Canadian Centre for Occupational Health & Safety](http://www.ccohs.ca)



Newsletter Spotlight

- **What is ergonomics?**
- **What are Musculoskeletal Disorders, and how are they caused?**
- **Injury Prevention— writing, computer station, and standing desk tips**
- **Did you know? Wyoming Quick Facts**



Sounds serious! How can I prevent an injury?

Writing

- Don't lean on your forearm!
- Your elbow should be positioned at an angle of 90 degrees or more
- Relax your fingers—no white knuckles here!
- Use your wrist and forearm to move your writing utensil instead of your fingers
- Change the orientation of your paper if you find that your wrist is not relaxed. You can also use an inclined surface to achieve this
- If you feel pain in your thumb, place your writing utensil in the web space between your index and middle fingers
- Consider rubber grips to reduce gripping force
- Use easy flow ink pens such as gel, rollerball, or fountain
- Write at a reasonable pace and take breaks!

[UCLA](http://www.ucla.edu)

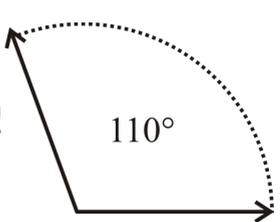
Computer Workstations

- Support yourself with the back of your chair while sitting
- Do not twist or bend your neck or trunk
- Relax shoulders and keep arms close to your sides
- Ensure your elbows are at an 100 to 110 degree angle when using the keyboard or mouse
- Keep wrists straight or neutral, and fingers relaxed when typing or using the mouse
- Ensure work materials are within close reach
- Change positions and/or tasks frequently
- Type lightly—you do not need much force!
- Do not rest your elbows on sharp or hard surfaces
- Pay attention to the glare on your computer screen, and make adjustments to avoid it
- Rest eyes frequently by focusing on an object in the distance
- **RULE OF THUMB:** “20-20-20” —every 20 minutes look 20 feet away for 20 seconds
- Don't forget to blink! If it helps, post a note on your monitor to help you remember
- Don't forget your glasses or contacts to reduce eye strain

[UCLA](http://www.ucla.edu)

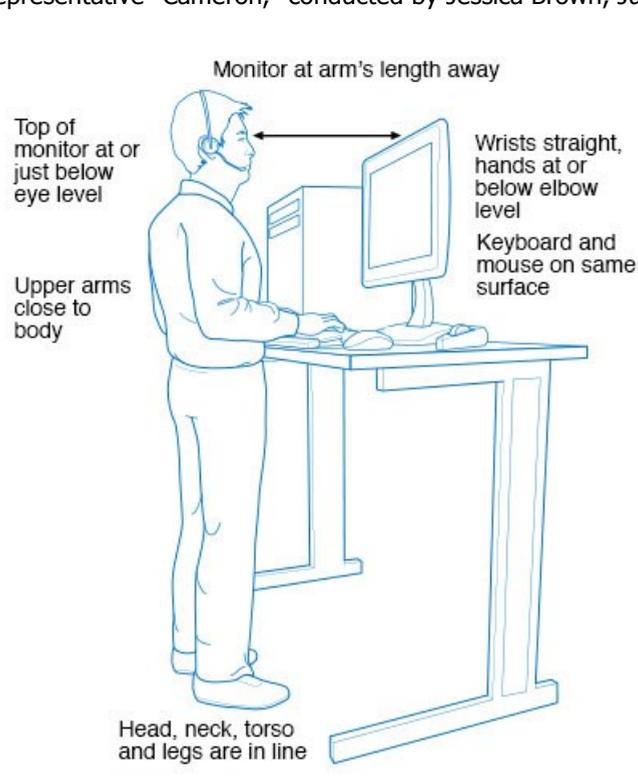
Standing Desks: What you need to know!

- Keep your legs, torso, neck, and head in line and vertical
- Keep your hands at or slightly below the level of your elbows
- Place the monitor an arms length away, directly in front of you
- **RULE OF THUMB:** The top of your monitor(s) should be at or slightly below your eye level
- The biggest light source in your workspace should not be in your direct line of sight
- While you type or use your mouse, keep your wrists straight and your arms close to your body
- Keep key objects close to prevent excessive stretching
- Be careful cradling your phone between your head and neck. This can cause nerve damage!
- Moderation is key! According to [Varidesk](http://www.varidesk.com), “Ultimately, the goal of active office tools like height-adjustable desks and anti-fatigue mats is not to encourage all-day standing, but to discourage any unmoving, static posture for too long.”
- When you take a break to sit, try to stand up or walk every 30 minutes, or sooner
- According to Cameron at Varidesk, the amount of standing per day “is up to your preference. As a VARIDESK user myself, I started out with 30 minutes of sitting and 30 minutes of standing. With time, I am now able to stand for an hour or two, and sit when needed.”



[Mayo Clinic](http://www.mayoclinic.org)

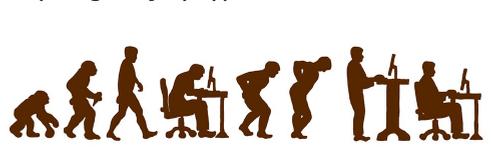
Varidesk chat with representative “Cameron,” conducted by Jessica Brown, June 15, 2016



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Did You Know? Wyoming Quick Facts

- In 2014, 1,426 workplace injury claims were filed in the Public Administration sector of Wyoming. This is 12.6% of the total claims filed in the state. The median cost of the claims in this section was \$499.
- 23.7% of all Wyoming work related injuries were caused by strain in 2014. This is the highest percentage of any single injury type recorded.



Reference:

<http://www.wyomingworkforce.org/docs/data/epidemiology/2014-annual-report-fatality.pdf>