

# INJURY PREVENTION AT THE WORKPLACE

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Injuries at work happen more often than we think. Sometimes these injuries can be avoided and sometimes they cannot. Common workplace injuries for teachers include chronic muscle strain (neck, shoulder, and lower back), joint and soft tissue inflammation, excessive disc compression, and eye strain. Such injuries can be manifested as headaches, pain, muscle spasms, joint soreness, and numbness in the back, neck, shoulders, hands, wrists or fingers.

There are four basic principles of injury prevention which aim to optimize your environment and practices to minimize your risk for injury at work and at home. The following article outlines these principles and gives some suggestions on how to incorporate them into your practices.

**1. Optimize Your Posture** - Posture is how we hold our bodies. It is important to optimize our posture, as it minimizes the stress and tension on our soft tissues (muscles, tendons, ligaments and nerves) as well as our joints. So what are proper postures? See box.

### Proper Sitting Posture

- Head: directly over shoulders over hips
- Neck: relaxed
- Shoulders: down, back and relaxed
- Back: upright, supported lower back curve
- Elbows: relaxed and at 90°
- Knees: 90°, same level as hips
- Fingers: gently curved and relaxed
- Feet: firmly planted on ground or footrest



### Proper Standing Posture

- Keep your shoulders down and back
- Avoid slouching or rounding your shoulders
- Pull in your chin
- Tighten abdominal muscles
- Tuck in your buttocks
- Keep knees soft, avoid locking your joints
- Avoid standing in one spot
- Raise and rest one foot
- Avoid high heels or hard soles
- Alternate between sitting, standing and walking whenever possible



### What to look for in a chair

- Five castor base of support
- Waterfall front to decrease pressure on the back of the thighs
- Good supportive foam seat (dense foam works well)
- Breathable fabric
- Adjustability
- Adjustable height armrests and backrest
- Ensure chair is well maintained and in good working order

**2. Minimize Contact Stress** - Contact stress occurs when we come in constant contact with a surface. This usually occurs in three places: the elbows, wrists and backs of the knees. It is mainly a concern for those who work for any length of time in a seated posture.

To minimize contact stress at the elbow, rest the entire arm on your armrest, not just your elbow. This will help to evenly distribute the pressure minimizing the risk for a compression injury.

To minimize contact stress at the wrist, utilize wrist rests if the corner of your desk is sharp. The wrist rests should be positioned below the home row on the keyboard and they should be made of a soft material. Wrist rests should only be used occasionally to provide

rest to the wrists when typing.

To minimize contact stress at the back of the knees - make sure there is about a two-inch clearance between the front edge of the seat and the back of the knees. This allows for proper blood flow to and from the lower legs. Ensure that your feet are firmly placed flat on the floor or footrest. Make sure to adjust the seat depth on your chair and use the backrest for support.

**3. Minimize Repetition** - Repeated movement can result in repetitive strain injuries otherwise known as Cumulative Trauma Disorders (CTDs). Repetitive use causes inflammation or irritation of the soft tissues in the area and is often quite uncomfortable.

To minimize repetitive movements, store your frequently used materials close by and at your work level so you can minimize frequent extended reaching, bending, pushing and pulling. Put away the things that you don't use often.

If you are typing or reading from a document, use a document stand to prevent

repetitive motions of the neck. Try moving your entire arm when correcting or when writing on the board. Let the larger muscles do the work. Most importantly, alternate tasks so that the same muscle groups are not being used for long periods of time. This will allow your muscles (small and large) to relax and recuperate.

**4. Minimize Force** - Activities where excessive force (pushing, pulling, lifting, and carrying) is used may also cause injury. It is important to be aware of any tasks requiring force and reduce that force wherever possible.

For example, relax your grip when writing. If you find this difficult, try using a pen grip which will increase the diameter and loosen your handgrip.

To minimize the force you are exerting in lifting, carrying, pushing and pulling, try practicing the following techniques.

- 1. Assess the load** you are working with. Consider the weight and size, and break the load up or seek assistance if needed. If something is too heavy or seems too challenging, do not attempt to lift it. Get help from a colleague.
- 2. Clear the area** of potential hazards such as cords, garbage cans, wet floors or other obstacles that may be in your way.
- 3. Minimize the height of a lift.** Where possible, do the lift in segments. Try lifting from the floor to your waist level and then from your waist to shoulder level.
- 4. Place your feet in the direction of the move** and use a wide base of support (feet shoulder width apart).
- 5. Tighten your abdominal muscles** to flatten and stabilize your back.
- 6. Bend at the knees and hips** to lower the body. DO NOT bend at the waist.
- 7. Rotate through the legs** and not through the spine. DO NOT twist the trunk of your body. Keep both arms in front of your body at all times. Avoid transferring loads while sitting.

- 8. Keep the load as close to you as possible.** The horizontal distance between the object to be lifted and the feet should be minimized before commencing the lift. Use both hands!
- 9. Ensure the materials you are lifting are stable and balanced.** Try to make the load as compact as possible.
- 10. Utilize handles** whenever possible.
- 11. Minimize the carrying distance.** If possible plan rest points to allow you to rest the load before continuing with the carry.
- Avoid frequent lifting. **Safer lifting is less lifting.**

Some other tips for minimizing your overall risk for injury at home and at work include learning to pace yourself. Don't try to do everything all at once. Do things according to a timed schedule and make sure to take regular breaks to stretch your muscles and decrease tension build up. Stretching will also increase flexibility and improve your blood circulation. Most importantly, do not ignore symptoms of injury if they occur. Seek the opinion of your doctor if you think you may have an injury. The sooner you make changes to minimize your risk, the better your prognosis will be!

## did you KNOW?

The Early Intervention Program (EIP) invites NSTU members to sign up for our Wellness email list at **Be\_Well@nstu.ca**.

Please contact Erin at ekeefe@nstu.ca to provide her with your NSTU email address. The **Be\_Well@nstu.ca** list will provide information about the EIP and other wellness topics.



[From The Teacher, March 2009, Volume 47 Number 7, page 6 © NSTU 2009]