

WARM UP TO WELLNESS

WINTERSAFE *The Ergonomic Approach*

While newly fallen snow may be a beautiful sight to see this winter, the snow piles that accumulate on sidewalks, driveways, and roadways are cause for many people to groan – and with good reason. Without proper precautions and good ergonomic techniques, snow shoveling and cold temperatures may be harmful. Having a general understanding of what good ergonomics is can help you protect your back, shoulders, hands, and feet, both outdoors and indoors this winter season.

Ergonomic improvements can be made almost everywhere in our daily lives and most improvements require more creativity than money! Here are some practical suggestions to help protect your muscles and joints from injury this winter season.

WHAT DOES “ERGONOMICS” REALLY MEAN?

Ergonomics is literally the study of work. To be truly ergonomic, you need to consider the “Big 3”. In the ergonomics world, the “Big 3” are Force, Frequency, and Posture.

Force – The amount of work that your muscles, tendons, and joints do to perform a task or action.

Frequency – The number of times that motions are performed by the same muscles and joints.

Posture – The position of your body or limbs. Neutral postures are preferred over awkward postures.

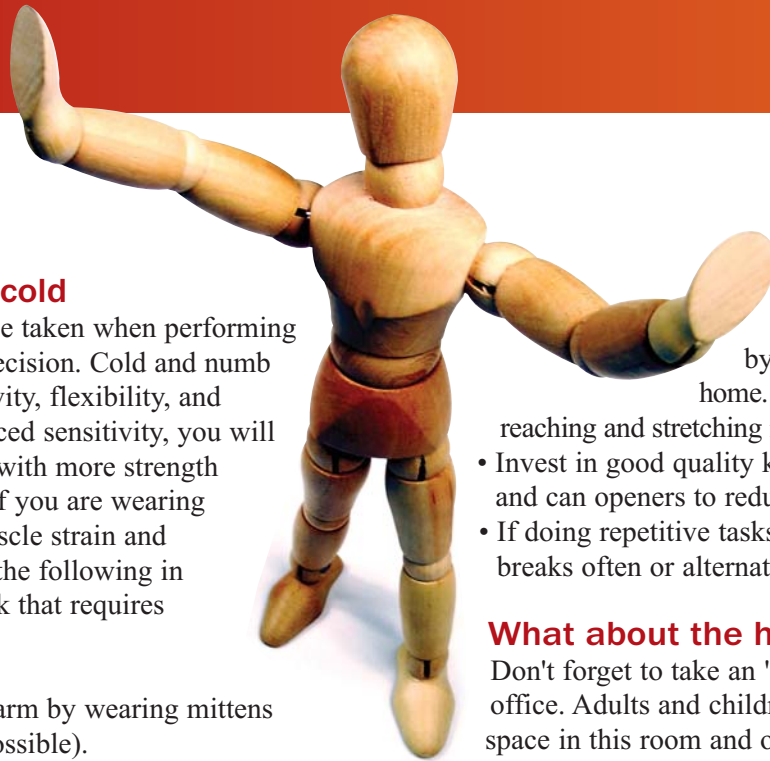
Shoveling Snow

Shoveling snow is a physically demanding activity for the body. Poor technique, coupled with cold temperatures and cold muscles, can be a winter recipe for disaster. The following ergonomic tips can help reduce your risk of injury:



- **Use proper technique.** Stay as upright as possible, lift with your legs and keep the load close to your body. Avoid twisting motions.
- **Lift smaller scoops.** Lifting smaller scoops of snow at a time will place less strain on your back than hauling huge scoops.
- **Avoid throwing snow.** Walk to where you want to put the snow, don't try to throw it into a distant pile or throw it over your shoulder.
- **Push the snow.** Whenever you can, push the snow, and space out your hands on the handle.
- **Use the right equipment.** Lightweight, “ergonomic” shovels can be a worthwhile investment as they force you into a more upright posture. This can help reduce strain on your back. However, a standard style shovel can get the job done if you keep the above suggestions in mind.
- **Pace yourself.** Don't try to move a mountain in record time. Warm-up and stretch before you begin, drink plenty of fluids, and take breaks often to give your body a chance to recover!

*Whoever coined the phrase
“pain-in-the-neck” was
probably doing something
very un-ergonomic!*



Being outside in the cold

Special precautions should be taken when performing outdoor tasks that require precision. Cold and numb fingers have reduced sensitivity, flexibility, and blood circulation. With reduced sensitivity, you will grip tools and small objects with more strength than is required (especially if you are wearing gloves). This can lead to muscle strain and discomfort over time. Keep the following in mind when performing a task that requires precision in cold weather:

- Keep hands and fingers warm by wearing mittens instead of gloves (when possible).
- Take indoor breaks frequently or when fingers start to go numb.
- Place “hot packs” in your mittens or pockets for those tasks that require more time.
- Use extra caution when handling parts and tools with sharp or pointed edges.

Everyday ergonomics in the house

Take some time this winter to evaluate the ergonomics of one of the most frequently used rooms in your home - the kitchen. Members of the family who use the kitchen often have different strengths and heights. Here are some tips on how to make your kitchen more ergonomic for every member of the family:

- Avoid long reaches with heavy objects. Place heavy pots, pans, canned goods, and small appliances as close as possible to waist height. Avoid placing these objects on the top shelves.

- Ensure a stable step stool (with a safety rail) is located close by for the smaller kitchen users in the home. This will reduce the amount of reaching and stretching needed to access the top shelves.

- Invest in good quality kitchen hand tools such as knives and can openers to reduce stress to your hands and wrists.
- If doing repetitive tasks, such as peeling potatoes, take breaks often or alternate with a different activity.

What about the home office?

Don't forget to take an "ergonomic" look at your home office. Adults and children often share the same working space in this room and one size does not fit all.

- Use a stable office chair that is adjustable in height, has lower back support, and cushioned arm rests.
- Place the monitor directly in front of you at about arm's length.
- Position the keyboard and mouse on a surface to which you will not have to extend your reach.
- Take active breaks frequently and limit the amount of time family members spend in front of the screen.

Websites

www.ergoweb.com

This site, about ergonomics, includes analytical tools, case studies, standards and guidelines, and background information.

www.spine-health.com/topics/conserv/posterg/posture01.html

This document discusses ways to improve posture and ergonomics in your daily life.

An ounce of prevention...

Regular physical activity such as walking, swimming, or bicycling will help the body stay conditioned, while strengthening exercises will help your muscles stay strong. These types of physical activity will promote good posture and strong muscles, which will help prevent injuries in everyday living.

References:

Kroemer, K. H. E., & Granjean, E. (1997). *Fitting the task to the human: A textbook of occupational ergonomics* (5th ed.). Philadelphia, PA: Taylor & Francis.

Workplace Health and Safety Agency (1992). *Musculoskeletal injuries prevention program: Participants manual*. Toronto, ON: Author.

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