

ATHLETE'S EDGE

SPORTS MEDICINE EDUCATION AND INFORMATION FOR WATERLOO REGION



THE SCOOP ON SNOW SHOVELLING SAFETY



Winter is upon us which means shovelling season is in full affect. Done with proper safety and technique, shovelling can be a great workout. Done the wrong way, and you could end up with back strain or aching muscles.

Did you know that the average snow shovel will hold approximately 7lbs of snow? If you do the math, taking a 2 lb shovel and lifting snow approximately 12 times in a minute means you will lift about 108 lbs per minute. Do that for about a half hour and we're talking a couple tonnes of snow!

Canadian physiotherapists say "Shovellers sustain injuries every year from repetitive twisting, improper lifting, over-exertion, or simply by trying to shovel too much snow. Many of these injuries can be prevented by taking the time to prepare and consciously thinking about how to move properly."

Ergonomic Snow Shovels

Ergonomic shovels with a bent shaft are very good and have been tested by the Liberty Mutual Research Centre for Safety and Health in Hopkinton, MA. Researchers found that when people use a bent shaft snow shovel they bend forward 16 percent less than they do with a straight shaft shovel, and your heart doesn't need to work as hard. When shopping for such ergonomic snow shovels, pick them up first and go through the motions of shoveling, to see if they're the right length for you.



If you choose to shovel, here are some things to consider:

Get an annual checkup- Before the first snow flurries begin to fall in your area, get a physical and ask your doctor if you can shovel snow during the upcoming winter.

Avoid caffeine and nicotine- Stimulants that place extra stress on the heart increase heart rate and cause blood vessels to constrict.

Drink plenty of water- Stay hydrated.

Warm up- Before beginning any snow shovelling, warm-up for five to ten minutes to get the joints moving and increase blood circulation. We suggest marching on the spot or a quick walk around the block.

The Canadian Physiotherapy Association offers the following 9 tips to help get a handle on safe shovelling:

1) Choose a shovel that's right for you –

A shovel with an appropriate length handle is correct when you can slightly bend your knees, bend forward 10 degrees or less, and hold the shovel comfortably in your hands at the start of the shovel stroke. A plastic shovel blade will be lighter than a metal one, putting less strain on your spine.

2) When you grip the shovel, make sure your hands are at least 12 inches apart-

This will increase your leverage and reduce strain on your body. Always keep one hand close to the base of the shovel to balance weight of the lift and lessen the lower back strain.

3) Lift the snow properly- Squat with your legs apart, knees bent and back straight. Lift with your legs. Do not bend at the waist. Scoop small amounts of snow into the shovel and walk to where you want to dump it. Holding a shovel of snow with your arms outstretched puts too much weight on your spine. Also, spray your shovel with a lubricant or silicon spray so the snow does not cling.

4) Step in the direction in which you are throwing the snow- This will help prevent the low back from twisting and "next-day back fatigue" experienced by many shovellers.

5) Tackle heavy snow in two stages- Begin by skimming off the snow from the top and then remove the bottom layer. Avoid overloading the shovel. You are working too hard if you cannot say a long sentence in one breath. If this is the case, take a short rest or decrease the intensity of effort slightly.

6) Take frequent breaks when shovelling- Stand up straight and walk around periodically to extend the low back. Do standing extension exercises by placing your hands on the back of your hips and bend backwards slightly for several seconds. Because you bend forward so much when shovelling, you need to reverse this by straightening up and bending backwards slightly.

7) Dress warmly to conserve your body temperature. For example, wear mittens (not gloves); wind-proof, water-resistant, many-layered clothing that will wick perspiration away from your body; two pairs of socks (cotton next to skin, then wool); and a scarf and a hat that cover the ears to avoid heat loss through the scalp.

8) Wear proper footwear with good tread to help avoid slipping or falling.

9) If you have a health problem, do not even consider snow shovelling. Just as with exercising, you should check with your doctor or physical therapist before shovelling snow.

“Spray your shovel with a lubricant or silicon spray so the snow does not cling.”



Safe Snow Shovelling Quiz

(Answers on back)

True or False? (circle)

- 1) To minimize exposure to cold do your shovelling all at once, after the snow has fallen.
True False
- 2) Shovelling is like a sport: e.g. you need to warm up, practice good techniques and drink lots of water.
True False
- 3) It's better to push the snow to the side rather than to lift and throw it.
True False
- 4) You should treat snow shovelling like picking up a heavy object.
True False
- 5) Feeling tired or short of breath means you are benefiting from the exercise. Keep shovelling.
True False

It's Winter! Dehydrated? How could I be?

Dehydration can cause physical symptoms such as tiredness, lethargy, aches and pains and an inability to function properly. That is why it is so important to make sure that your body is well hydrated throughout the year, including the winter when the body requires just as much care and attention as at other times throughout the year. The problem with winter dehydration is it is subtle and not easily recognized. We normally associate heat and sweating with dehydration and drink water or other liquids to replenish our fluids. In the winter, when it's cold outside, the desire to drink may not be there because we may not feel 'thirsty' or need to quench our thirst. Consequently our bodies dehydrate and we begin to develop the symptoms of dehydration.

**Remember, listen to your body-
Stop if you feel pain!**

Helpful Hint

Try and shovel the snow as soon as you see the snowplow pass by. The sooner you shovel the slush, snow and ice from the snowplow, the easier it is. If you wait, the pile of snow will turn to hard packed ice and will be harder to move. This snow is heavy, so lift half-filled shovels and walk to where you want to place it.

DID YOU KNOW???

*15 minutes of snow shovelling counts towards the suggested 30 minutes of moderate physical activity you should get daily.

*You burn approximately 5-10 calories for every minute you shovel!

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*Since 1986, over
50,000 active
athletes and
individuals have
relied on the
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If you sustain an injury after shovelling, here are a few tips:

As a general rule, any acute (less than two to three days old) soft tissue injury is best managed by applying ice to the area for a period of 12 to 15 minutes, repeating every one and a half to two hours. A number of things can be used to apply cold:

- Crushed ice in a plastic bag
- A cold pack
- A beanbag
- Frozen peas

It is important to choose something that will best conform to the injury site. To minimize the risk of frostbite place a wet towel between the ice pack and the skin.

WARNING SIGNS

Stop shovelling and call 911 if you experience:

- Discomfort or heaviness in chest, arms or neck.
- Unusual or prolonged shortness of breath.
- Dizzy or faint feeling, blurred vision.
- Excessive sweating, nausea or vomiting.

Answers to snow shovelling quiz:

1. **False.** Don't let the snow pile up. Shovel frequently, removing smaller amounts at a time to reduce the need for heavy lifting.
2. **True.** Do back and side bends before you go out, lift properly, and drink water before and after. If you're a bit out of shape, don't over-exert yourself.
3. **True.** Avoid lifting heavy shovel fulls of snow. By pushing, you also avoid twisting or turning movements that could injure your back. Use a lightweight, pusher-type shovel.
4. **True.** As with any heavy object, bend your knees when lifting, and keep the shovel as close to you as possible.
5. **False.** Rest if you feel tired. Stop shovelling immediately if you feel chest or back pain. The combination of lifting and cold weather can lead to a heart attack.

Shovelling snow can be both problematic and enjoyable. The risk of injury and illness can be prevented through proper equipment selection, taking proper precautions, and utilizing proper shovelling techniques.