



## Tips for Snow Shoveling: How to Avoid Back Pain

### Digging Your Way Through Winter

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Depending on where you live, the first few snowflakes may have started to fall early in November. Many people look forward to the first snow that often drapes the trees so elegantly.

However, after weeks or months of snow, heavy snow, blowing snow, snow blizzards, snowdrifts ... your eager attitude may have changed to—*Enough snow already!*

Did you know in some parts of the United States the average snowfall approaches 10 feet? That is a lot of snow to shovel. It is not surprising to learn that many people suffer from muscle fatigue, [low back strain](#), [vertebral disc](#) damage, and even [spinal fractures](#) during the winter season. Some of these injuries result from excessive stress to spinal structures and others by slip and fall accidents.

A study published by Brad Coffiner at Cornell University's ergonomic department indicated "...when handling heavy snow with a shovel, the L5/S1 disc has been identified as the weakest link in the body segment chain. The most severe injuries and pain are likely to occur in the back region." Recognizing the low back is especially susceptible to strain or injury, it would be prudent to review steps to prevent injury.

#### The Basics

Snow shoveling can be compared to weight lifting, and in some cases, the aerobic aspect of this activity is similar to a workout on a treadmill! So ... to help your body function on demand consider the following tips:

- **Be heart smart!** Don't eat or smoke before shoveling snow. Avoid caffeinated beverages. These are stimulants and may increase heart rate and cause blood vessels to constrict.
- **If you experience pain of any kind, stop immediately and seek assistance.**
- **Pace yourself during shoveling activities.** Take frequent breaks and drink plenty of water. Snow shoveling is strenuous work, and it is important to re-hydrate your body often.
- **If the ground is icy or slick, spread sand or salt over the area to help create foot traction.** Be aware that some areas may be uneven and could cause you to slip, trip, or fall.

#### Dress for Success!

- **Consider the weather when choosing outerwear.** Dress in layers. Wear clothing that is easy to move in.
- **Wear a hat**—a great deal of body heat is lost through the head.
- If it's icy cold, consider breathing through a scarf, but don't let it obstruct your view.
- **Proper boots are essential for keeping feet warm and dry while appropriate soles provide traction.** Good boots can help you maintain your balance!
- **Choose gloves that will keep your hands warm, dry, and blister free**—consider thicker gloves, which allow for a good grip on the shovel's handle.

#### Select a Shovel That's Right for You

Shovels are made from different materials and come in many shapes and sizes.

- **Choose a shovel that is ergonomically correct**—a shovel with a curved handle. Many hardware stores and home centers stock ergonomically designed snow shovels. These shovels help you to keep your back straighter reducing spinal stress.
- **Consider a shovel with a plastic blade instead of metal**—plastic is lightweight—isn't the snow heavy enough?
- **Sometimes a smaller blade is better.** You will not be able to shovel as much snow per shovel load, but the load will weigh less, which puts less strain on the spine.
- **Get a shovel made to push snow.** It is far easier to push snow than to lift it. There are shovels made expressly for pushing snow. See what is available at your hardware or home center store.

Once you have your shovel, you might want to consider spraying a bit of silicon lubricant on the blade. This can help keep the snow from sticking to the shovel. The snow will slide off the shovel blade.

#### Technique. Technique. Technique

- **Warm muscles work better.** So take some time to stretch to prepare your body for activity.
- **Just like with a golf club, hand placement on the shovel handle is very important!** Don't put your hands (grip) close to one another. Create some distance between the hands. This will give you more leverage and make it easier to lift snow.
- **Think about good posture and maintaining the natural curve of your spine.**
- **Address your task directly.** Stand with your feet about shoulder width apart to maintain balance. Try to keep the shovel close to your body. Bend at the knees—not the waist or back. Tighten your stomach muscles as you lift the snow. Lift with your legs—not your back. Do not twist your body. Dump the snow in front of you. If you need to move the snow to the side, move your feet—do not twist!

According to the American Academy of Orthopaedic Surgeons, "If you must lift the snow, lift it 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 shovelful of snow with your arms outstretched puts too much weight on your spine. Never remove deep snow all at once; do it piecemeal. Shovel and inch or two; then take another inch off. Rest and repeat if necessary."

- **Don't throw snow over your shoulder!** Go forward with the snow.
- **Fresh snow is lighter in weight—so clear snow as soon as it has fallen.** Snow becomes dense as it compacts on the ground. Wet snow is very heavy. One shovelful can weigh 20 pounds or more!
- **Pace yourself.** Take frequent breaks to stretch your back and extremities.

#### Snowblowers

A snowblower is a terrific piece of machinery, but if it's not used correctly, you can strain or injure your back. Snowblowers are designed to remove snow at a particular rate of speed. Pushing or forcing the equipment to go faster is defeating its purpose—to do the work for you!

#### Community Involvement

Not everyone is able to shovel snow or operate a snowblower. Consider the disabled and some in our senior populations. Fortunately, many communities across the United States have organized volunteers to help people who need assistance during the winter season.

If you want to learn more healthy living tips, you can visit the [Healthy Living Center at Everyday Health](#), a SpineUniverse partner.

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#### Peer Review by Leading Specialists

##### Jean-Jacques Abitbol, MD, FRCSC



Shoveling snow remains a frequent cause of back injuries. This article provides an excellent overview of ways to avoid back injuries during shoveling. Injuries are not only limited to the musculoskeletal system but excessive shoveling may also place undue stress on the cardiovascular system. At any hint of shortness of breath or chest pain, shoveling should cease immediately and, if symptoms persist, medical attention sought.

#### Related Articles

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