

Why Winter Can Become a Pain in the Back – and Neck

Endoscopic Spine Surgeon Dr. Kaixuan Liu with Atlantic Spine Center Offers Tips to Reduce Risk of Wintertime Injury to Spine

WEST ORANGE, NJ, UNITED STATES, December 9, 2022 /EINPresswire.com/ -- “Oh, the weather outside is frightful,” but your back – and neck -- may not be feeling so delightful unless you took the necessary precautions to protect the spine from winter’s cold and activity perils, warns [Dr. Kaixuan Liu](#), MD, PhD, founder of [Atlantic Spine Center](#).

Falls on ice, especially while carrying grocery bags and packages, and improper snow-shoveling techniques – putting stress on the back and neck rather than on the legs -- remain among the more obvious sources of spinal stress, injury, and pain, says Dr. Liu, a world-renowned endoscopic spine surgeon.



Dr. Kaixuan Liu

“In fact, a 17-year study published in the American Journal of Emergency Medicine (<https://www.sciencedirect.com/science/article/abs/pii/S0735675709003714?via%3Dihub>),

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estimates 11,500 snow-shoveling-related injuries are treated in United States hospitals annually, with more than 50 percent of them caused by ‘acute musculoskeletal exertion’ and another 20 percent, slips or falls,” Dr. Liu recalls. Adding to spinal dangers are those occasions when pushing a car out of a snow rut or climbing a ladder and reaching up precariously to hang December holiday lights.

“Many people also are unaware that the very coldness of winter temperatures takes a toll on the spine when outdoors. Muscles tend to tighten in the frosty weather

and symptoms of chronic conditions – like sciatica, which is a painful compression of nerve roots

in the lower back, and degenerative arthritis of the spine – can become a bit more acute,” Dr. Liu notes.

He cites a study appearing in the European Journal of Pain (<https://pubmed.ncbi.nlm.nih.gov/23881586/>). In it, authors report surveying nearly 6,600 people in Finland and finding that 50 percent of respondents experienced some form of musculoskeletal pain at temperatures of about 7 degrees Fahrenheit. Another study, published in the International Archives of Occupational and Environmental Health and focused on Swedish construction workers, indicates that those working regularly outdoors in winter temperatures are at increased risk for developing neck and lower back pain (<https://pubmed.ncbi.nlm.nih.gov/23001633/>).

The spine is a complex, columnar structure, whose myelin sheath, secured by bony vertebrae, protects the central nerve bundle linking communication between the brain and the rest of the body. Injury at any point along the length of this structure can have serious, life-changing consequences, including chronic, debilitating pain; loss of sensation; compromised physical or mental functions; decreased quality of life; and even death. Experts say the lumbar region – lower back – is the most frequently traumatized area of the spine. Spinal injuries can include stretched or damaged muscles and ligaments supporting the spine, rupture of one or more spinal discs, spinal and cervical fractures, and, in the most serious cases, paralysis.

Dr. Liu refers to research published in a 2022 edition of Spinal Cord (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8990493/>). There authors write, “Worldwide, traumatic spinal cord injuries have a considerable impact in terms of mortality and morbidity and represent a relevant burden for health care systems due to the expensive and complex medical support required by patients with spinal cord injury, in addition to [the] economic consequences deriving from loss in productivity. This condition is a leading cause of disability especially among younger people, with a high impact on years lived with disability.”

Of particular concern to Dr. Liu are winter activities – like sledding – that many people consider “innocuous” and often engage in without protective gear, such as helmets. A 2018 University of Wisconsin study in the Journal of Neurosurgery debunked theories that the “weight and bulk” of helmets make the wearers’ necks more prone to cervical fractures. The scientists, instead, determined that helmets significantly reduce instances of cervical fractures in crashes.

Although the Wisconsin study focused on motorcyclists, the American Academy of Orthopaedic Surgeons has recommended fitted helmets – at least for children under age 12 -- in its guidelines for sledding safety (<https://thejns.org/spine/view/journals/j-neurosurg-spine/28/6/article-p607.xml#:~:text=My%20Stuff,some%20protective%20advantage>). The organization also suggests sliding down snow hills, whether by sled, inner tube, or other method, be done in a sitting position facing forward, and in an area free of hazards like trees, streets, parking lots, or ponds.

Meanwhile, a much earlier study in the Journal of Trauma and Acute Care Surgery (<https://pubmed.ncbi.nlm.nih.gov/731742/>) suggests even the sitting position predisposes tobogganers to spinal injury if they are thrown off the board or hit a hard bump on the way down, Dr. Liu says.

And experts dismiss skiers' claims that helmets obstruct the field of vision as simply an "excuse."

Of course, people cannot expect to eliminate all winter hazards from their lives, but Dr. Liu offers these tips to minimize risks and help keep wintertime as safe as possible:

- Stretch and do some warm-up exercises before engaging in strenuous outdoor activities like clearing snow from the porch or driveway.
- Follow all guidelines for shoveling snow. That means putting all the lifting stress on the back, pushing rather than lifting snow whenever possible, avoiding throwing snow up and over the head and back, and taking frequent breaks.
- Use protective gear, including a helmet, when enjoying winter activities and sports like tobogganing, sledding, skiing, and ice skating.
- Wear warm clothing and dress in layers during cold temperatures outdoors. Make sure the lower back is covered. Tuck shirt into your pants. Footwear should be conducive to safe walking on snow and ice.

Stay active in the winter, despite the temptation to cocoon on the couch. Walking or swimming at a local indoor pool are great ways to maintain the strength of one's core and back muscles. "But should you experience any type of back pain or suspected cervical or spinal injury following activity, contact an orthopedic specialist as soon as possible to minimize the risk of developing a more serious or chronic condition," Dr. Liu advises.

Atlantic Spine Center is a nationally recognized leader for endoscopic spine surgery with several locations in NJ and NYC. www.atlanticspinecenter.com

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