Shoveling Safe Work Procedure



WHAT'S AT STAKE?

Shoveling is quite a simple task, but it is important to realize that it places a great deal of stress on the back and shoulders. If done incorrectly, or too much weight is lifted, it can cause a chronic (over use) or acute (immediate) injury.

WHAT'S THE DANGER?

SNOWBOARDERS, SKIING OR SHOVELING

When you picture dangerous winter activities, do you think of skiing or maybe snowboarding? You may be surprised that, on average, only 38 Americans are killed each year in skiing and snowboarding accidents combined, compared to 100 deaths in the U.S. related to shoveling snow.

There are probably a lot more shovelers than skiers, but consider this other statistic for just one metro area: During the winter of 2014-15, CBS News reported that 18 people died in incidents related to shoveling snow in the Chicago area, and that was only through Feb. 15. Ages of the victims ranged from the 40s to 75.

How can shoveling be so dangerous? Think of a primarily sedentary 50-year-old man gulping down his coffee so he can go out on a cold morning to move hundreds of pounds of snow before he has to leave for work. He's putting a lot of strain on his upper body in particular, in an aerobic activity that's more strenuous than many sports. And he's doing this while inhaling cold air.

The combination of an intense, unfamiliar exertion and cold air taxes the heart because it boosts blood pressure and heart rate, as well as the demand for oxygen. The cold also can make blood vessels constrict. People should avoid shoveling if they have heart disease or a high risk for it.

The Canadian research in question looked at more than 128,000 hospital admissions and more than 68,000 deaths due to heart attack. The focus was on the day after snowfalls in Quebec between 1981 and 2014. They found that the deeper the snow, the more men died of heart attacks. If the snowfall was about eight inches, they saw a 34 percent increase in deaths.

RISK ANALYSIS OF SHOVELING

Encourage workers to take the hazards of heavy work in cold weather seriously:

- Snow shoveling causes an average of nearly 100 deaths and 11,500 emergency department visits each year in the United States.
- The most frequently injured area of the body is the lower back (34%).
- Heart problems make up 7% of the injuries—but 100% of the deaths.
- The most common cause of injuries was acute musculoskeletal exertion (54%).
- Slips or falls (20%) are the second most common cause of injuries.

Study Takeaway

A 17-year study on the health effects of snow shoveling discovered that from 1990 to 2006 approximately 195,000 people visited the hospital because of injuries caused by clearing snow. Unsurprisingly, 54% of the visits were for musculoskeletal exertion. (Heart attacks and slips, trips and falls were two other major contributors to shoveling-related hospital visits.) And with so much additional effort required of workers' backs off the job, there's bound to be an impact on the job.

Back pain can be caused by regular physical stress. So if you strain your back by lifting too much at home then you're more likely to hurt your back at work.

HOW TO PROTECT YOURSELF

GENERAL SAFETY PRECAUTIONS

- Make sure a good quality shovel is used.
- The shovel used should be designed for the material it is used on. e.g. a snow shovel for shoveling snow.
- Do not shovel more than you feel comfortable, e.g. the shovel does not have to be full if the material is heavy.
- If the material is wet, e.g. wet snow or soil after rainfall, it will be considerably heavier.
- Use a shovel with a small scoop.
- Do not shovel after a heavy meal.
- Take the weather into consideration: If it's hot take breaks and drink plenty of water. If it's cold dress in layers and go slow.
- If you are cold warm up first. Stressing muscles while the body is cold is a sure way to cause strains and sprains.
- Take regular breaks, pace yourself.
- If you are not fit, or not used to shoveling, or you have a heart condition, strongly considering asking someone else to shovel, or go extremely slow. It is not unheard of for people to have heart attacks while shoveling.

REDUCE THE RISK

Here is how you reduce your risk.

Shoveling Snow

- Avoid shoveling in the early morning when heart attacks most often occur.
- Warm up your muscles before shoveling.

- Don’t shovel soon after eating a heavy meal, drinking caffeinated beverages or smoking.
- Pace yourself, taking breaks every 15 minutes.
- When possible, push the snow, rather than lift it. When you do lift, pick up only a small amount at a time.
- Cover your head, and wear layers and skid-resistant footwear.
- Shovel the snow when it’s still fresh and powdery.
- Check with your doctor before shoveling if you’re sedentary and over 40, especially if you have risk factors or a history of heart disease.
- If you do experience chest pain, dizziness or other symptoms of a heart attack, chew an aspirin and call 911.

SHOVELING WET/HEAVY SNOW

- Use ice melt, salt, or sand to decrease the hazard of icy surfaces—and the stress of clearing them.
- Snow shoveling may cause a quick increase in heart rate and blood pressure.
- Cold air makes it harder to work and breathe, which adds extra strain on the body.
- Check with your doctor to see if you should be able to do at least moderate shoveling.
- Pick the right shovel for you. A smaller blade will require you to lift less snow, putting less strain on your body.
- Plastic shovels weigh less than metal shovels, and snow is not as likely to stick to them. These factors add less weight to your load. Spray the blade with a lubricant to keep snow from sticking.
- Pick up smaller loads of snow. It’s best to shovel by sections. If you are experiencing snowfall levels of 12-inches or higher, take it easy and shovel 2 inches off at a time.
- Try to clear snow early and often—take frequent breaks. Begin shoveling/blowing when a light covering of snow is on the ground.
- Push snow rather than lift it when possible, especially when the snow is heavy

FINAL WORD

Snow shoveling is a strenuous activity comparable to weight lifting while walking on uneven and unstable ground and wearing heavy-duty clothing. Shoveling, although considered a “straight forward” task, has led to worker injuries due to improper technique. In order to avoid injury, proper techniques must be applied in our workplaces and homes.