



Clear Snow off Concrete was Aunt Pat's Advice!

Six inches of snow arrived soon after we moved into our Bettendorf, Iowa home. My kids and I were sledding in the front yard when a neighbor approached. As she walked up the incline of my snow-covered driveway, I said a prayer she would not fall. She introduced herself as Aunt Pat and we chatted about how my three kids were enjoying the snow. The new snow shovel she carried turned out to be a house warming present. She asked if I would be open to some ideas about dealing with snow. I invited her in for coffee and listened to her fascinating story.

"Before our move to Iowa," said Aunt Pat, as she lifted a cup of coffee from our serving tray, "we lived in Wisconsin, Ohio and Kentucky. My snow clearing strategy is the same wherever I live. It is my job alone now, as my husband is deceased and my five kids moved away."

I nodded my head sympathetically and hoisted my coffee mug as a silent salute.

"I learned my shoveling strategies by watching how people deal with snow Up North, where it snows a lot, said Aunt Pat. "I assume snow will not melt away by itself. The worst storm I remember started with winter rain and was followed by ten inches of snow. We did not promptly clear the initial slush from our pavements, so when temperatures dropped below freezing, the slush transformed into thick ice that was too difficult to remove. It seemed like a glacier and the ice stayed around for a month. My family and I pledged to be prepared and motivated to promptly clear snow in the future, to minimize the chance of any future ice-flow formations."

Aunt Pat asked me to pass the coffee creamer and continued.

"So old widows like me do not fall and get hurt, please clear snow from your driveway and sidewalks. For your spouse and family, express your love through the courtesy of prompt snow removal. To paraphrase the lyrics of my favorite Bing Crosby song, "As long as you love me so, clear the snow, clear the snow, clear the snow."

The image of Bing Crosby dancing along Hollywood Boulevard and across his three stars on the Walk of Fame while singing about snow shoveling brought a smile to my face, which seemed to inspire Aunt Pat's next statement.

"Every season offers outdoor yard jobs that are enjoyable," she said, "if we have a positive attitude. For example, I tell myself I want to clear snow off my driveway, just as I want to plant flowers in spring. I want to mow grass in summer, just as I want to rake leaves in autumn. Someone in your family probably uses positive affirmations to reprogram thought patterns and change the way they feel about things. When my children were young, I helped them affirm: 'I enjoy removing my shoes when I enter my home.' This sure made housework easier."

Aunt Pat's affirmations put snow shoveling in a whole new perspective for me. "I guess," I ventured, "snow shoveling is a lot like raking leaves or mowing the lawn."



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– Aunt Pat

“A positive attitude goes a long way to making each activity enjoyable,” said Aunt Pat. “But snow is unique because it requires Prompt Action. If you remove snow before vehicle tires pack it down, you avoid the effort of scraping up the iced tire tracks. On snowy mornings, I get up early and clear my driveway before I move my car. When I return home, I park on the street until I remove accumulated snow.”

I passed a plate of Archway Windmill cookies to Aunt Pat and she took one. But she was much too wound up to eat. While I dipped the blade of my own windmill cookie into my coffee, she continued.

“If you start clearing snow during the storm, you won’t have so much to remove all at once. You will often hear my snow blower after dark. I feel exhilarated to see snowflakes swirling in the glow of streetlights. I have accumulated many snow removal tools, just like I accumulated many kitchen utensils and yard tools.”

Then she shared some scientific advantages for clearing snow off concrete. “By clearing away most of the snow, you enable concrete to soak up sun rays. This tiny heat gain helps the concrete clear itself. Low humidity conditions also help evaporate snow residue. Even when it only snows an inch, I am out there with my snow-pusher shovel or my leaf blower. You will be amazed how this – such a small effort – results in a clean and dry driveway.”

My mention that a couple of bags of rock salt had made the move with us sparked this response from Aunt Pat.

“I do not need to use deicer products. If you use them, read the labels. Labels have explicit warnings about the potential for winter damage to concrete surfaces less than one year old. And the warnings advise users to remove deicer slush promptly.”

She continued: “Deicer warnings remind me of the prescription drug commercials that warn us of negative side effects that are serious! So carefully read all labels on deicer products, and then make your risk-benefit decision.”

I motioned to refresh her coffee, but she hadn’t really had much. She smiled and completed her thoughts about deicer products.

“Quickly remove snow deposited by snowplows. It may be laden with deicers / anti-icers such as magnesium chloride. Some cities use this chemical to prevent icing and accidents in areas where injuries are most likely to occur, such as at intersections and on bridges. The chemical-laden slush sticks to your vehicle and you bring it to your driveway. So clear away the slush chunks that fall from wheel wells and your vehicle undercarriage, because this chemical slush has been reported as harmful to the portland cement in concrete.”

I refreshed my coffee and took a long sip. “Sounds like good advice,” I said. Jokingly I added, “and like a lot of work.”

Aunt Pat didn’t laugh.

“I take care of my car and my concrete driveway because I want them to last,” she said. “When the outside temperature is close to 40 degrees, I wash my car and



“The beautiful driveway my concrete craftsman installed welcomes guests to my home in all seasons and has provided years of durable, worry-free service.”

– Aunt Pat

hose off my driveway. I flush away salt, deicer and anti-icer residue. I taught my kids to help and eventually they earned money by washing our cars and rinsing our driveway.”

She took a sip of her coffee. The silence was uncomfortable.

“If you worry about the onset of a backache,” she said, gathering steam again, “consider investing in a snow blower. They are easy to start and easy to use. For clearing fluffy snow off your car or sidewalk, try using a leaf blower. Use a spade or square shovel to remove deicer slush that accumulates where your garage door meets the front end of your garage floor slab. Throw this nasty slush away from the driveway.

“Of course,” she went on, “wet and heavy snow creates the most work. Give heed to those cautions broadcast on the news about clearing snow at an easy pace, because I do not want my new neighbor to faint or have my well-meaning advice bring on a heart attack. When my kids were young, they were happy to help clear snow with little shovels. As they got older, they went door to door and offered to clear snow for cash.”

“I did, too,” I shared, hoping to get back into Aunt Pat’s good graces.

“When our current house was constructed,” she said, “the target completion date was October, although as often happens in construction, the date slipped to late November. We were reluctant to have our driveway installed so late in the season because of the risk of winter damage to newly-placed concrete. We knew fresh concrete takes time to achieve adequate strength in order to defend itself against freezing and thawing.

“We also knew it is best when concrete has a period of air-drying before exposure to freeze–thaw cycles. We asked our builder to postpone our driveway installation until spring. He understood our concern and said he would escrow money for our driveway, along with the money already in escrow for landscaping. He asked us to write a letter stating we would be willing to live with a temporary stone driveway until spring of the next year.

“When Jerry, our concrete contractor, prepared to install our driveway in spring, he assured us he would follow the recommendations from the ready-mixed concrete association for the concrete mix, and to follow best practices for concrete placement and installation. He felt a non-slip, high-traction, medium broom finish was best.

“He also explained about the importance of ‘curing,’ which is maintaining favorable moisture and temperature conditions, so the cement will properly hydrate and gain strength. Jerry shared how between mid-April and mid-October he applies a spray-on membrane cure after the newly placed concrete surface has been broom finished. When required to install outside concrete in cooler months, Jerry explained the need to utilize insulated curing blankets.”

Aunt Pat took another sip of coffee and continued the story about the construction of her concrete driveway.



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“Jerry recommended we purchase a value-added service he provides, called ‘concrete sealing,’ which we did. He returned to our house about a month after installing the driveway, allowing our concrete a period of about 30 days to air-dry. He applied a quality concrete sealer to the surface of our concrete driveway, designed to repel water and minimize future moisture saturation. Jerry prefers penetrating concrete sealers, which are available through him and other concrete craftsmen, concrete supply houses, or from many local ready-mixed concrete plants. If you want to study the topic yourself,” she added, “consider entering the phrase ‘concrete sealers’ into your search engine. Popular technology trends include silane-, siloxane- and silicate-based sealing compounds.”

I considered challenging her to say the name of those chemical compounds three times fast, but wisely remained silent, allowing Aunt Pat to finish her construction narrative.

“After our driveway was sealed, Jerry gave us a complimentary snow shovel and asked us to do our best to clear snow off concrete during the first year,” she said. “The beautiful driveway he installed welcomes guests to my home in all seasons and has provided years of worry-free service.”

Aunt Pat thanked me for the coffee and said she looked forward to becoming good friends. As she walked down my driveway, I thought about what a great ambassador she was – for the neighborhood, and for ready-mixed concrete.

Every winter newspapers and news shows remind us how to prepare vehicles for winter, how to drive safely in snow, and how to prepare a blizzard survival kit. It occurred to me how nice it would be if news media reminded homeowners about the importance of prompt snow clearing from sidewalks and driveways.

Following Aunt Pat’s suggestion, I did study the topic further. The concrete industry has published excellent brochures on this topic such as, “Care of Concrete - Technical Tip #2” from the Ohio Ready Mixed Concrete Association. You can get a copy of the tip by calling 614-891-0210.

I also found a project report online, **Deleterious Chemical Effects of Concentrated Deicing Solutions on Portland Cement Concrete**. This project was conducted as Pooled Fund Study TPF-5 (042) through the cooperation of the Federal Highway Administration and financial support from nine states. This is the link to the summary of the report discussing magnesium chloride:

www.misti.mtu.edu/pdf/projects/SDDOT-Sutter.pdf

I also took Aunt Pat’s advice to heart and promptly clear snow off my concrete. You should, too.