

## Safety Watch: Farming with diabetes requires balancing act



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For many, the increased workload that comes with the harvest season is something to take in stride. The fatigue at the end of the day is just a reminder of hours well spent and a job well done.

But if you're a diabetic, those long work hours can upset a delicate balance and put you at risk.

A friend of mine who raises cattle and grows grains in Eastern Iowa, had a frightening first-hand experience on his farm during the "polar vortex" in January 2014. He asked that I not use his name in this article.

He was checking cattle early one morning, scooping corn into feed bunks, when the temperatures were reading well below zero.

"That day it was cold and I wanted to get things done, I was working harder than usual, hurrying, and my output got ahead of my digestion."

His blood sugar was too low and he collapsed, unconscious.

Managing diabetes requires a balance between food intake and diabetes medication (either pills or insulin injections). The goal is to maintain a normal blood sugar (glucose) level.

During digestion of food, carbohydrates are broken down into various types of sugars; one of these is glucose, a primary energy source for the body. Insulin, produced by the pancreas, "unlocks" your body's cells so that glucose can be used for energy.

A person who is diabetic either does not produce enough insulin (Type 1) or has body tissues that are less responsive to it (Type 2). Without insulin to make glucose available to the body's cells, the sugar will remain in the blood, causing blood sugar levels to spike dangerously high.

When insulin medication is taken but a person doesn't consume food with enough calories, blood sugar levels can also become too low, causing dizziness, fainting or seizures, especially during physical activity. Careful attention to food intake is critical to

avoid a sudden drop in blood sugar.

My friend recalls, “I went out early, right after I ate,” before his breakfast was digested. While he was unconscious, his body continued to break down the toast he had consumed earlier, and he regained consciousness long enough to get to his parents’ house across the road and ask them to call 911.

He adds, “I don’t remember much of this.”

Even after many years of managing diabetes, things can change.

My friend reports, “All the other times, for 12 years, I always could tell if I needed to eat something.”

He had usually relied more on how he felt than his electronic blood sugar monitor, but admitted, “I guess I trust my meter more than I used to.”

He remains in close contact with his doctor to manage his insulin dosage and diet.

In addition to careful monitoring, he notes, “I don’t go out for like an hour after I eat, just to make sure it’s all into me.”

And his wife no longer leaves for work until he’s tested his sugar and eaten breakfast, to make sure he’s feeling well and ready to go out. When he leaves for the field, he keeps his cell phone handy and always takes extra food with him.

Spikes and drops in blood sugar can present the most immediate risks while farming. But other common complications from diabetes can affect daily life on the farm as well.

Individuals with diabetes are at higher risk of infection and may have impaired circulation. It’s important to keep even small cuts and scrapes clean and to wear gloves and shoes that fit properly.

Diabetes can cause decreased physical endurance and cause a person to quickly become fatigued. This can be especially challenging during a busy harvest season.

A regular work routine, where meals and heavy work periods are planned for, can help with diabetes management. This may be difficult on a farm when the work has to be done when the weather allows or within a time constraint.

Harvest time can be especially busy, and individuals with diabetes should be especially vigilant about the timing and amount of medication, food and workload.

When working, keep your cell phone charged and ready and ensure that family members know where you are and when you are expected to be home.

As with any chronic illness, be sure to communicate regularly with your healthcare provider. Your doctor may recommend a continuous glucose monitor (CGM), which checks

glucose levels regularly and sounds an alarm if it detects a significant change. An insulin pump, which delivers insulin continuously, may also be recommended by your doctor.

My friend was lucky, especially given the frigid temperatures on the day he collapsed.

“I was just frozen,” he recalls, “I was numb and frostbitten on one finger,” he said.

It could have been much worse if he had not regained consciousness or had been operating machinery during the incident. Thinking about those other possible outcomes, he said, “that scares me more than anything else.”

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