

## Sweet spot

By Alissa Curda

**B**efore I inserted the needle into my stomach, I took a deep breath and thought of all the children less than half my age who went through this ritual every few days. If they could do it, I could do it, I resolved. With that, I pushed the needle into my abdomen and took the first step to becoming a pseudodiabetic.

The idea had come from “Megan,” one of the campers last summer at Camp Carefree, a two-week overnight camp in New Hampshire for diabetic children ages 8 to 15 (I have changed Megan’s name to protect her privacy). As a fourth-year medical student, I was a member of the camp’s medical staff. My role was to manage the fine points related to treating the campers’ diabetes, such as controlling their blood sugar levels, as well as to respond to the other ailments common at any kids’ camp: ear infections, scraped knees, and upset stomachs, to name a few.

“I really wish I could wear a pump to understand what it feels like,” I said to Megan as we hiked along a local trail one day.

**Insulin pump:** “Well, why don’t you,” she responded. “I’m sure they have some extra pumps lying around, and you could use saline, like I did for the trial weeks before my doctor would allow me to have a real insulin pump.”

This seemed like a brilliant suggestion at the time, which is how I later found myself sticking a needle into my abdomen.

I felt a bit of pain, probably because I inserted the needle slowly, despite the clear instructions to do it quickly. More distracting than the pain was the odd sensation caused by executing this counterintuitive action. Once the needle was in, I attached a pump with a small tube that lies in the tissue under the skin.

The pump holds a vial of insulin (or, in my case, saline) that is released into the body through the tube. The amount of insulin released and the timing of the releases are controlled by a battery-operated device about the size of a pager that clips onto a belt buckle. The basal rate—the minimum amount of insulin needed—is programmed into the pump, causing it to give infusions of small doses of insulin 24 hours a day, replacing the function of a healthy pancreas. Often additional doses—or boluses—of insulin are needed to correct higher than normal blood sugar levels or to anticipate and correct for blood sugar increases that result from eating carbohydrates.

**Skin infection:** Diabetics usually switch the pump site to a new one every two to three days to decrease their risk of a skin infection.

I expected to be constantly aware of the foreign object in my bel-



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ly. But, after the initial sensation, I barely noticed it. I slept soundly that night, getting my scheduled doses of saline. When I woke up the next morning, I forgot the pump was even there—until I managed to hook the tubing on my dresser and found myself in need of untangling. Once untangled, I tested my blood sugar before heading out to check the levels of the campers in my cabin.

At breakfast, instead of dumping cereal into a bowl as I normally would, I carefully measured it out. “How many carbs are in cereal again?” I asked the teenage girl sitting next to me. She smiled and recited the answer. Like every other child at this camp, she was a carbohydrate-content expert. I gave myself the proper saline bolus to account for the cereal. I was still hungry after emptying my bowl, so I reached for the carton to pour myself some more. I quickly stopped—I hadn’t accounted for the extra carbohydrates that a second bowl would entail, and if I wanted more I would have to carefully add up the carbohydrates in a measured serving and “bolus” for it appropriately. I suddenly lost my appetite. There would be no such thing as grazing or impulse eating—I had to account for almost every morsel I put in my mouth. I learned to love the “free” items, such as cheese, ham, and sugar-free Jello.

I tested my blood sugar level three other times throughout that first day and set my pump on a temporarily decreased rate while hiking. By using the various features on the pump, I became much more familiar with navigating the menus and options on the small screen of what looks to non-diabetics like a sort of iPod with tubing.

**Onerous task:** I quickly grew to have new appreciation for the onerous task that diabetics have in managing their blood sugar, a perspective that is likely to be useful in my future work as a pediatrician. I can’t imagine how frustrating it must be to adhere to a testing and treatment regimen as closely as possible, day after day, and still not meet doctors’ expectations. Even at camp, these kids never really get a vacation from their diabetes. Just a few hours of not testing or administering proper boluses can be life threatening.

There is only so much that can be learned about an illness from a textbook or even a clinical encounter. As Atticus Finch says to his young daughter in Harper Lee’s novel *To Kill A Mockingbird*, “You never really understand a person until you consider things from his point of view—until you climb into his skin and walk around in it.”

All of us in medicine could benefit from, if you will, walking around in our patients’ skin—whether through the type of experiment that I took part in or simply by inquiring deeper into our patients’ struggles, frustrations, and fears as they leave the controlled settings of our clinics to go out and live with a chronic disease. ■

*The Student Notebook essay offers insight or opinion from a Dartmouth student or trainee. Alissa Curda is a fourth-year M.D. student at DMS. She hails from Seattle, Wash., and is returning there in July to begin her pediatric residency at Seattle Children’s Hospital.*