Insulin pumps make life easier

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Olivia Rodríguez was skeptical.

The idea of having a machine attached to her 24/7 sounded a bit scary at first, and she thought it would be hard to learn how to use it. But several friends told her that getting on the insulin pump would be right for her.

“They said that it changed their lives,” says Rodríguez, 30, who was diagnosed with Type 1 diabetes seven years ago. “My doctor said that it was probably a good decision that would help me manage and make my life easier.”

“You don’t realize you have it on. You know is there but it doesn’t bother you, you can do anything,” Rodríguez says.

And that’s the general consensus about the insulin pump: it makes your life easier. It simplifies the way people manage their diabetes while improving their glucose levels and lifestyle.

People with Type 1 diabetes are unable to produce or make enough insulin, the pancreatic hormone necessary to convert glucose into energy and control sugar levels in the blood. They have to be on insulin therapy —often using injections— to compensate for this insufficiency, which involves using specific formulas that help determine the amount of insulin they need on a daily basis. These doses would increase or decrease depending on what they do, whether they are going to dine on pasta marinara or hit the gym.

With the pump, people can plug in the numbers and the device would determine the exact dose.

“It’s less thought to it,” Rodríguez says. “It was more convoluted before. I had to have a calculator, a little book, info about the foods. The machine houses all that information.

“It’s like having your own personal computer attached to you,” she says.

Nobody is more aware of the advantages of using an insulin pump than Della Matheson, a registered nurse and certified diabetes educator with the University of Miami’s Diabetes Research Institute. As a Type 1 diabetic, she’s been using the device for more than two decades.

 “[The pumps] take all the things we teach people about how to manage their insulin levels and put them in an easy tool for them,” she says.
Type 1 diabetics have a pancreas that doesn’t really do its job, so the pump tries to mimic the role of the pancreas, Matheson explains.

The device, which resembles a small digital camera, is connected to the body around the pelvic area — or on the buttocks or anywhere there’s fatty tissue — through a small needle. A long, thin tube carries the insulin into the body and you can clip the pump on your waistband or put it in your pocket.

The pump provides a small, steady flow of insulin to keep normal sugar levels. This is known as background insulin, a specific amount that varies from person to person and is calculated with the help of a doctor, Matheson says.

But you can also tell the pump to release a larger dose, or bolus of insulin, before you eat so you can help your body process the carbohydrates that are entering your system, she says. People with diabetes have to count carbs and need to figure out — also with the help of a physician — an insulin-to-carbs ratio formula.

For Matheson, who is 59, this ratio is 1 unit of insulin per 10 grams of carbs. She knows a sandwich has 30 grams of carbs and an apple 15. So when she is going to eat them, she’ll need 4.5 units of insulin to process these 45 grams of carbs. She doesn’t have to carry a calculator anymore because the pump does the math for her.

“It’s extremely convenient,” Rodríguez says about the pump, which she started using last Christmas. “I’ve actually seen my glucose levels get better because it’s more precise. It’s constantly feeding me insulin. It’s a better treatment, more accurate.”

Matheson, who helped many people get comfortable with the pump, points out that having diabetes is a major responsibility and people are still the driving force behind their health. So keeping a close eye on your glucose levels and eating the right diet without overindulging are fundamental.

“The injections are the least of our concerns,” she says. It’s calculating the number, monitoring the glucose levels. The burden of responsibility can be frustrating, she explains.

“When you have diabetes, you always have to be thinking about it. It’s an extra layer added to your life, something people without diabetes aren’t aware of,” Matheson says.

The experienced diabetes educator, who has witnessed the evolution of the pump since she started using one 22 years ago, wants people to know that the insulin pump is a wonderful tool.

They are reliable and pose almost no problems, Matheson says. People are trained on how to use them, and if something is not working properly, they know how to handle it and they always have injections available.

“There are no real worries. The devices are reliable, they are very solid pumps. People who don’t like them is because they don’t want to carry the device.”

That was the case for Matt Lane.
The 32-year-old English teacher at Sunrise Middle School in Fort Lauderdale was 24 when he got the pump. But it sat in his room for six months before he decided to use it. He admits it was a vanity issue.

“Before, I could be a diabetic and you didn’t know it based on what you saw. There was nothing attached to me,” Lane says. “It was at a time when I was thinking a little bit more about the way I look instead of the way I feel.”

But the positive aspects of the pump dissolved any concerns he had, says Lane, who was diagnosed with Type 1 when he was 5.

The device made everything easier for him. He didn’t have to prepare a syringe for his insulin doses anymore. And he had better control over his glucose levels.

The pump also was a perfect fit for Lane, an avid tennis player who works out at the gym. He was exercising a lot, which caused him to constantly check his glucose levels and eat more. He decided to try the pump after his doctor told him it would help with his active lifestyle.

Exercising became less of a hassle. With the pump and the help of his endocrinologist, he knows how to adjust his insulin rates when he works out so he doesn’t go into hypoglycemia (low blood sugar).

“It was a much more simple transition than what I ever thought,” Lane says. “I was overwhelmed by the results I got.”

For Rodríguez, a wedding project coordinator with Sandals Resorts, getting the insulin pump was a natural progression.

She was hospitalized for migraines in August 2004, and after a series of tests it was determined that the headaches were caused by school-and work-related stress. But an unexpected result came out: her sugar levels were very high — she had Type 1 diabetes.

Rodríguez started taking pills, then moved to syringes and eventually the insulin pen. She was taking five to eight injections a day.

“I found it very cumbersome to do the injections because it was so many. Every time I ate, every time I needed to correct my sugar levels,” she recalls.

Encouraged by her doctor and friends, Rodríguez decided to use the pump. A one-day training session made her feel comfortable with the device.

The pump is an example of how technology has improved the lifestyle of people with diabetes and Rodríguez is well aware of it.

Her dad, who has Type 2 diabetes, used to tell stories about how her diabetic grandfather had to boil syringes before getting an insulin shot.

“We’ve come a long way,” she says. “It’s so different. It’s easier to manage because of the tools, the technology and the advances we’ve had.”
And the insulin pump has played a major role in this evolution.

"I am extremely happy with it. If I would have known, I would have done it earlier," she says.