

## Insulin Independent for a Decade

Published on June 2nd, 2015 | by *Craig Idlebrook*



When Jill Eastman was a child, she once told her doctor she needed to switch from injections to pills. She had been dealing with Type 1 diabetes since she was 18 months old, and she was just tired of the injections. The doctor told her she would never be able to stop injecting insulin.

He was wrong. This June marks a decade since Eastman, [a California realtor](#), regularly injected herself with insulin, thanks to a pair of islet cell transplants conducted by the Diabetes Research Institute. It's been so long since she had to take insulin that she sometimes forgets about it.

"It's to a point in my life now that I don't think about it much anymore," Eastman says. "But when I do stop and think about it....this has been life-changing. I do get very emotional talking about it."

There is no such thing as an easy case of Type 1 diabetes, but researchers determined Eastman's was among the worst, at least when it came to hypoglycemia unawareness. Feeling miserable was a normal state of being for her, and she never could feel if she was having even a severe low. It got so bad that twice she drove home in a fugue state, completely unaware of her surroundings; she was surprised she made it home alive. She started testing herself every 30 minutes when she needed to drive somewhere, for the safety of others.

“I felt so bad physically so much of the time (that) I didn’t care if anything happened (to me),” she says. “But somebody else might want to live and I needed to do those blood tests to make sure I was okay.”

A boyfriend convinced her to apply for the Diabetes Research Institute’s trial study on islet replacement therapy. In the therapy, patients receive transplants of insulin-producing islet cells, and then take immunosuppressive drugs to stop their bodies from killing the new cells. Eastman didn’t hear back from researchers for over a year after she applied.

When she did, she felt as if she had won the lottery. She was just one of a dozen patients chosen from some 128,000 applicants. She began to make plans of the first meal she would eat after the transplant procedure, and how she would celebrate with friends.

“I look back and I laugh now,” she says.



The celebration would have to wait, as she had to endure eight years of testing and waiting. Eastman was about to ask out of the trial when researchers called to say it was time for the procedure. The first procedure reduced her need for insulin by 95%. Then, by sheer coincidence, another eligible donor was found less than a month later, and she had the second procedure, which made her insulin independent.

Eastman’s luck has continued. The downside to this therapy is that transplant recipients must take immunosuppressive drugs for the rest of their lives, and many experience harsh side effects, says Dr. Rodolfo Alejandro, director of the institute’s islet transplant program. Researchers are trying to create a shelter in the body for the transplanted cells in an effort to do away with the drugs, but there is still some work that needs to be done before that option is viable.

Eastman had few side effects to the immunosuppressive drugs. That’s just the luck of the draw, he says.

“Everyone is different and everyone reacts differently to these drugs,” he says.

The Diabetes Research Institute has been fine-tuning islet transplant therapy for a couple of decades, and hopes to get it through the FDA process within the next five years, Dr. Alejandro says. The transplant procedure is already approved and covered by insurance in Canada, Australia, and much of Europe.

He argues that islet transplantation has real advantages over pancreatic transplants for people with severe hypoglycemia and hypoglycemia unawareness. Both have about the same rates of

insulin independence for patients after five years. However, islet transplant therapy achieves a much higher success rate in reducing insulin needs for insulin-dependent patients.

“With pancreatic transplant, it’s really an all-or-none phenomenon,” Dr. Alejandro says.

Since the two procedures, Eastman has taken just half a unit of insulin, and even that was enough to send her into a low. She sheepishly admits that she now doesn’t test her blood sugar as often as the doctors at the institute would want. Her diabetes has receded into the background, and she only really thinks it when she’s taking immunosuppressive drugs in the morning and at night. Occasionally, she grows frustrated when she gets mouth ulcers from the drugs.

“Then I think about the alternative, and I deal with the mouth ulcers,” she says.

The Diabetes Research Institute hopes to have islet cell transplant therapy approved by the FDA in the next five years, says Dr. Alejandro. To learn more about the program, you can go to <http://www.diabetesresearch.org/>.

## About the Author



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