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OUR NEWS

GROUNDBREAKING CLINICAL TRIAL STUDIES ARTIFICIAL PANCREAS -- SEE TV STORY ON NEW DAY NW

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Annie Shultz is determined that history won't repeat itself. Her father, Richard Shultz, was diagnosed at age 19 with type 1 diabetes. Annie watched her father struggle with complications her entire life. He suffered from eye, kidney, heart and nerve diseases, all complications attributed to type 1 diabetes. Annie knew she was at higher risk for developing type 1 diabetes but was still shocked when at age 21 she found out she had the disease. Although diagnosed at a similar age as her father, Annie's journey with type 1 diabetes has been vastly different. She manages her disease vigilantly and participates in research to improve diabetes management. Annie, now 34, is participating in a groundbreaking clinical research trial at BRI. Annie will be free of managing her type 1 diabetes for a day while she is connected to an experimental artificial pancreas.

In these exciting new studies, BRI is testing an artificial pancreas system that automatically dispenses insulin based on real-time changes in blood glucose levels. The device is comprised of existing technologies used to manage type 1 diabetes — an insulin pump and a continuous glucose monitor — in conjunction with a unique software program. The

hope is that this would someday relieve adults, children and their families from the arduous 24/7 manual maintenance of their diabetes.

This past year, BRI tests of the artificial pancreas showed that blood glucose levels under highly controlled conditions could be managed through a personalized automated artificial pancreas in several participants with diabetes. Most patients with diabetes cannot achieve tight glucose control with traditional diabetes tools and spend less than half of their days at healthy glucose levels. Studies show that tight control of levels significantly reduces or delays the development of complications.

Hometown Technology

While other systems are being tested at selected locations worldwide, BRI is the only center nationally testing this unique software program for the artificial pancreas. The program was developed by Richard Mauseth, MD, a long-time Pacific Northwest pediatric endocrinologist, and Boeing software engineers Robert Kircher and Don Matheson. This BRI artificial pancreas study is funded by JDRF, who has designated 15 centers internationally to test various approaches to these devices. JDRF is aiming to develop a first-generation artificial pancreas with the hope of helping millions of people with type 1 diabetes. This is the first phase of development.

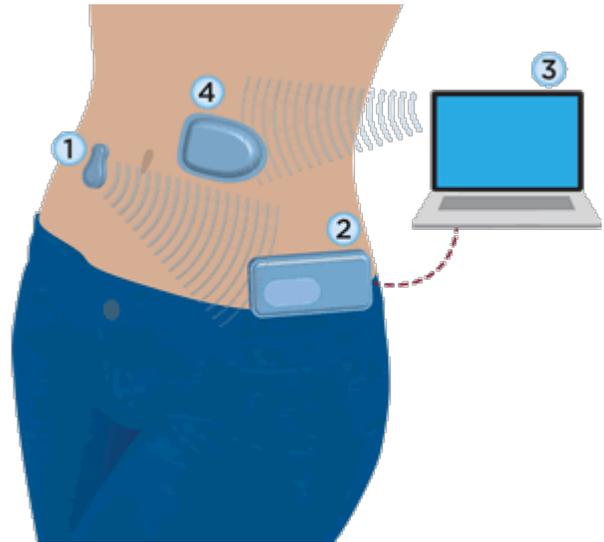
"I count on JDRF and BRI to support research to find new treatments and cures for this disease," says Annie. "It would make such a difference in so many people's lives."

For more information, visit BenaroyaResearch.org or call 1-800-888-4187.

How The Artificial Pancreas Works

1. The glucose sensor/transmitter, which goes through the skin,

- wirelessly transmits glucose readings to the receiver.
- 2. The receiver is an external device that can be clipped to a person's pants. The glucose readings from the receiver are then transmitted to the laptop.
- 3. The laptop contains an algorithm that determines an insulin dose based off the glucose reading and sends the suggested dose to the insulin pump wirelessly.
- 4. The pump then delivers the dose. This process repeats itself every five minutes.



FOR FAMILIES OF PEOPLE WITH TYPE 1 DIABETES

BRI offers a free screening test to determine if you're at high risk for type 1 diabetes. If so, you may be eligible to join one of three important prevention trials. Contact 1-800-888-4187 or diabetes@BenaroyaResearch.org. For more information on [screening](#).

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FAMILY WITH T1 DIABETES?



Get a free screening to see if you're at a high risk of T1 Diabetes.

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BRING IT ON.

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