Dose Safety Algorithm the First Fully Automated Artificial Pancreas?

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The Dose Safety Controller is the first fully automated artificial pancreas dosing algorithm that maintains safe blood glucose levels at all times, and automatically compensates for meals without the need for patient intervention.

Seattle, June 4, 2015 (Newswire) - People with Type 1 Diabetes (T1D) are unable to produce insulin, a hormone that is required to control blood sugar levels. They must test their blood sugars and either inject insulin several times daily or use an insulin pump to deliver insulin. Blood sugar levels of people with diabetes can vary dramatically, causing both short term and long term complications of high and low blood sugars.

It is perhaps not surprising that most artificial pancreas system clinical studies ask users to do as they normally do before meals: use a glucometer to check their current blood sugar level, estimate the carbs in the meal and then administer the required insulin dose. A 'dosing wizard' built into the pump relieves some of the mathematical burden, but users must keep their insulin to carb ratio (ICR), correction factor (CF), insulin action time and other parameters up to date. Controlling post meal blood sugars is more of an art than a science.

The fuzzy logic dosing module within the Dose Safety Controller (DSC), unlike the other closed loop dosing algorithms, does not require the users to calculate and manually dose insulin before meals. Dose Safety CEO Richard Mauseth, MD says, "You turn our system on and forget about it. It's the only hands free artificial pancreas dosing algorithm, and the software runs on any smartphone or programmable chip in an insulin pump."

According to Carla Greenbaum, MD at Benaroya Research Institute (BRI) in Seattle, "An artificial pancreas that automatically compensates for meals while maintaining safe blood glucose levels, without the need for patient intervention, would greatly change the treatment of diabetes." Dr. Greenbaum, director of the Diabetes Program at BRI, has collaborated with Dose Safety on clinical trials of its APS. Dose Safety was recently approved to present a late-breaking abstract at the American Diabetes Association conference in Boston this month. The abstract addresses their most recent clinical results of fully automated dosing for meals.

About Dose Safety

Dose Safety is dedicated to improving the lives of people with Type 1 diabetes. The company was formed in 2003 to develop and commercialize the first fully automated artificial pancreas dosing algorithm that maintains safe blood glucose levels at all times, and automatically compensates for meals without the need for patient intervention. The Dose Safety team is comprised of leading endocrinologists and engineers who are devoted to developing and clinically testing new software solutions for diabetes treatment and management. Visit http://www.dosesafety.com to learn more.

About BRI

Benaroya Research Institute at Virginia Mason (BRI) is committed to finding causes and cures for autoimmune diseases such as type 1 diabetes, rheumatoid arthritis, inflammatory bowel disease and multiple sclerosis, and immune system diseases such as allergies and asthma. An internationally-recognized medical research institute, BRI accelerates discovery through laboratory breakthroughs in immunology that are then translated to clinical therapies. BRI is a leader of collaborative initiatives through the Immune Tolerance Network and other major cooperative research programs. Visit http://www.BenaroyaResearch.org or follow Benaroya Research Institute on Facebook to learn more.