Medical Xpress

Automatic suspension of insulin delivery via insulin pumps reduces hypoglycemia

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An automated on/off feature built into insulin pump systems can suspend insulin delivery when it detects low blood glucose levels (via continuous glucose monitoring), significantly reducing the severity and duration of hypoglycemia in individuals with type 1 diabetes, according to a study published in *Diabetes Technology & Therapeutics*.

In the study, Satish Garg, MD, Editor-in-Chief of *Diabetes Technology & Therapeutics* and Professor of Medicine and Pediatrics at the University of Colorado Denver, and colleagues from the Barbara Davis Center for Childhood Diabetes (Aurora, CO), Rainier Clinical Research Center (Renten, WA), AMCR Institute, Inc. (Escondido, CA), Stanford University Medical Center (CA), Mills-Peninsula Health Services (San Mateo, CA), and Medtronic Inc. (Northridge, CA) used a regimen of fasting and exercise to induce hypoglycemia in a group of subjects with type 1 diabetes who use insulin pump delivery devices along with continuous glucose monitoring.

They compared the severity and duration of hypoglycemia and the risk of rebound hyperglycemia when the automated "low glucose suspend" feature of the pump was turned on or off. They report their findings in the article "Reduction in Duration of Hypoglycemia by Automatic Suspension of Insulin Delivery: The In-Clinic ASPIRE Study."

"This is the first randomized cross-over trial with an attempt to develop an artificial pancreas," says Dr. Garg.

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Provided by Mary Ann Liebert, Inc.

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