

Artificial pancreas can prevent dangerously low blood sugar in people with T1D

August 27 2020



Credit: CC0 Public Domain

A new artificial pancreas system can prevent hypoglycemia—episodes of dangerously low blood sugar—during and after heavy exercise in people with type 1 diabetes, according to a small study published in the

Endocrine Society's *Journal of Clinical Endocrinology & Metabolism*.

Despite advances in treatment, blood sugar control in type 1 diabetes remains challenging. The artificial pancreas has the potential to automate much of the continuous work people with type 1 diabetes do to control their blood glucose levels, but exercise-related hypoglycemia is a major obstacle.

"Our new artificial pancreas system with a coordinated eating carbohydrate recommendation is both safe and effective in avoiding hypoglycemia and maintaining blood sugar control during and after heavy physical exercise in people with type 1 diabetes," said the study's corresponding author, Marga Giménez, M.D., Ph.D. of the Hospital Clínic de Barcelona in Barcelona, Spain. "Although exercise provides many [health benefits](#), it has unpredictable effects on [blood sugar control](#), making it difficult for people with type 1 diabetes to exercise daily. The artificial pancreas is emerging as the most promising treatment for managing type 1 diabetes, but exercise-related hypoglycemia remains a challenge."

The researchers tested their new artificial pancreas system on 10 adults with type 1 diabetes during an in-hospital clinical trial, measuring their blood sugar during and three hours after exercise. They found that the [artificial pancreas](#) system performed well and was safe during and after heavy exercise in people with type 1 diabetes in comparison with standard therapy.

More information: Clara Viñals et al, Artificial pancreas with carbohydrate suggestion performance for unannounced and announced exercise in Type 1 Diabetes, *The Journal of Clinical Endocrinology & Metabolism* (2020). [DOI: 10.1210/clinem/dgaa562](https://doi.org/10.1210/clinem/dgaa562)

Provided by The Endocrine Society

Citation: Artificial pancreas can prevent dangerously low blood sugar in people with T1D (2020, August 27) retrieved 28 December 2022 from <https://medicalxpress.com/news/2020-08-artificial-pancreas-dangerously-blood-sugar.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.