

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

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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)

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