

Common diabetes treatment could extend hypoglycaemia

April 8 2014, by David Ellis

(Medical Xpress)—Researchers at the University of Adelaide have discovered that a common treatment for people with type 2 diabetes could cause longer-than-normal periods of the low blood sugar reaction hypoglycaemia, which may result in increased health risks to people with diabetes.

The treatment is the use of the peptide GLP-1 (glucagon-like peptide 1) in combination with insulin, which is now used throughout the world as a standard therapy for patients with [type 2 diabetes](#).

A team of researchers at the University of Adelaide's School of Medicine has investigated the impact of this [combination therapy](#) on how quickly the stomach empties after eating food.

The results, now published online in the journal *Diabetes Care*, show that the combination of GLP-1 and insulin slows down the rate of food being emptied from the stomach.

"Low [blood sugar levels](#) usually cause the stomach to empty rapidly, however in the group studied on GLP-1 therapy it emptied no more quickly than at normal blood glucose levels," says lead author and University of Adelaide PhD student Dr Mark Plummer.

"This is a concern because it means that a significant amount of food, and therefore glucose being consumed by a diabetic patient to prevent or treat [hypoglycaemia](#), is being retained in the stomach. This would have

the effect of extending hypoglycaemia and potentially putting the patient at risk."

Dr Plummer says the sample group of 10 people was relatively small, "but statistically the results were significant".

"A diabetic patient really doesn't want their blood sugars to go too low because the brain requires glucose for normal functioning and you run the risk of loss of consciousness, seizures and even death in extreme cases," he says.

"There were no life-threatening effects on the patients we studied, but their symptoms included sweating, palpitations and visual disturbance."

Dr Plummer says the study highlights the potential safety implications for the combination of GLP-1 with other therapies known to induce hypoglycaemia. "Further research is needed in this area. We believe there should be ongoing evaluation of this combination therapy for patients with type 2 diabetes, to better understand the risks associated with it."

More information: "Glucagon-Like Peptide 1 Attenuates the Acceleration of Gastric Emptying Induced by Hypoglycemia in Healthy Subjects." Mark P. Plummer, et al. *Diabetes Care* March 5, 2014, [DOI: 10.2337/dc13-1813](https://doi.org/10.2337/dc13-1813)

Provided by University of Adelaide

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