

Low-carb diet cuts tx effect of glucagon in hypoglycemia

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(HealthDay)—For patients with type 1 diabetes, a low-carbohydrate diet

(LCD) results in lower incremental rises in plasma glucose (PG) after mild hypoglycemia compared with an isocaloric high-carbohydrate diet (HCD), according to a study published online Oct. 21 in *Diabetes Care*.

Ajenthen Ranjan, M.D., from the Copenhagen University Hospital Hvidovre in Denmark, and colleagues enrolled 10 patients with insulin pump-treated type 1 diabetes who randomly completed one week of the HCD and one week of the LCD. Mild hypoglycemia was induced after each week by a subcutaneous insulin bolus; 100 µg glucagon was given subcutaneously when PG reached 3.9 mmol/L, followed by 500 µg glucagon two hours later.

The researchers found that the LCD resulted in lower incremental rises in PG after the first and second glucagon bolus compared with the HCD (both $P = 0.002$). There were no differences between the diets in insulin, glucagon, and triglyceride concentrations.

"The LCD reduces the treatment effect of glucagon on mild hypoglycemia," the authors write. "Carbohydrate intake should be considered when low-dose glucagon is used to correct hypoglycemia."

Several authors disclosed financial ties to pharmaceutical companies, including Novo Nordisk, which funded the study.

More information: [Full Text \(subscription or payment may be required\)](#)

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