

# Fat, carbohydrate quality impact postprandial blood glucose

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(HealthDay)—For patients with type 1 diabetes, fat quality influences

postprandial blood glucose (PPG) response in the context of meals with high-glycemic index (HGI), according to a study published online Feb. 9 in *Diabetes Care*.

Lutgarda Bozzetto, M.D., Ph.D., from Federico II University in Naples, Italy, and colleagues conducted a randomized crossover design study involving 13 patients with diabetes on insulin pump. Participants consumed two series of [meals](#) with the same carbohydrate quantity (HGI or [low glycemic index](#) [LGI]) and different quality fats: low in fat; high in saturated fat (butter); or high in monounsaturated fat (extra-virgin olive oil [EVOO]). Continuous glucose monitoring was performed and six-hour postprandial blood glucose was examined.

The researchers found that PPG differed significantly for HGI and LGI meals, and was significantly higher during the first three hours after the HGI meals, with a tendency toward the opposite pattern later. PPG was significantly lower after EVOO versus low-fat or butter in the context of HGI meals, with a marked difference seen in the zero- to three-hour glucose incremental area under the curve between EVOO and low-fat or butter (P

"An optimal prandial insulin administration would require considering, in addition to the quantity of carbohydrates, the quality of both carbohydrate and [fat](#)," the authors write.

**More information:** [Abstract](#)  
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