

Protein preload boosts vildagliptin's effects in diabetes

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(HealthDay)—A protein preload enhances the glucose-lowering efficacy

of vildagliptin in type 2 diabetes, according to a study published online Jan. 19 in *Diabetes Care*.

Tongzhi Wu, M.D., Ph.D., from the University of Adelaide in Australia, and colleagues evaluated whether a [protein](#) preload could improve the efficacy of the dipeptidyl peptidase-4 inhibitor vildagliptin in 22 patients with type 2 [diabetes](#) treated with metformin. Patients were treated with 50 milligrams of vildagliptin (VILD) or placebo (PLBO) on both the evening before and the morning of each study day. A preload drink containing either 25 grams of [whey protein](#) (WHEY) or control flavoring (CTRL) was given 60 minutes after the latter dose. Then, after another 30 minutes, patients received a ¹³C-octanoate-labeled mashed potato meal.

The researchers found that PLBO/WHEY reduced postprandial peak glycemia; increased plasma insulin, glucagon, and incretin hormones (total and intact); and slowed gastric emptying compared with PLBO/CTRL. In contrast, VILD/CTRL reduced both the peak and area under the curve for glucose, increased plasma intact incretins, and slowed gastric emptying but suppressed plasma glucagon and total incretins. VILD/WHEY was associated with higher plasma intact glucagon-like peptide-1 and glucose-dependent insulinotropic polypeptide, slower gastric emptying, and lower postprandial glycemia compared with both PLBO/WHEY and VILD/CTRL.

"In metformin-treated type 2 diabetes, a protein preload has the capacity to enhance the efficacy of vildagliptin to slow gastric emptying, increase plasma intact incretins, and reduce postprandial glycemia," the authors write.

Several authors report financial ties to pharmaceutical companies, including Novartis, which funded the study.

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