

# Fat, protein impact postprandial glucose excursion in T1DM

19 December 2013



Image courtesy of Blausen Medical

"In conclusion, this is the first study to demonstrate that the addition of protein and fat to [meals](#) containing the same carbohydrate amount results in prolonged postprandial hyperglycemia in children using IIT," the authors write.

The project was supported by a grant from Pfizer Australia Pediatric Endocrine Care Research.

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

Copyright © 2013 [HealthDay](#). All rights reserved.

(HealthDay)—For children with type 1 diabetes using intensive insulin therapy (IIT), high-fat (HF) and high-protein (HP) meals increase glucose excursions, with an additive effect observed, according to a study published in the December issue of *Diabetes Care*.

Carmel E.M. Smart, R.D., Ph.D., from the John Hunter Children's Hospital in Newcastle, Australia, and colleagues examined the separate and combined effects of HP and HF meals on postprandial glycemia in 33 children, aged 8 to 17 years, using IIT. Participants were given four test breakfasts that had the same carbohydrate content but differed with respect to quantities of protein (low, 5 g or high, 40 g) and fat (low, 4 g or high, 35 g): low fat (LF)/low protein (LP), LF/HP, HF/LP, and HF/HP. For each meal, an individually standardized insulin dose was given. Five-hour continuous [glucose monitoring](#) was used to assess postprandial glucose.

The researchers found that the mean glucose excursions were greater from 180 minutes after the LF/HP meal and from 210 minutes after the HF/LP meal, compared with the LF/LP meal ( $P = 0.02$  and  $0.01$ , respectively). Compared with all other meals, glucose excursions were higher from 180 to 300 minutes after the HF/HP meal ( $P$

APA citation: Fat, protein impact postprandial glucose excursion in T1DM (2013, December 19) retrieved 28 July 2022 from <https://medicalxpress.com/news/2013-12-fat-protein-impact-postprandial-glucose.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*