



# Response to Comment on: Wolpert et al. Dietary Fat Acutely Increases Glucose Concentrations and Insulin Requirements in Patients With Type 1 Diabetes: Implications for Carbohydrate-Based Bolus Dose Calculation and Intensive Diabetes Management. *Diabetes Care* 2013;36:810–816

The Harvard community has made this article openly available. [Please share](#) how this access benefits you. Your story matters

Citation	Wolpert, Howard A. 2013. "Response to Comment on: Wolpert et al. Dietary Fat Acutely Increases Glucose Concentrations and Insulin Requirements in Patients With Type 1 Diabetes: Implications for Carbohydrate-Based Bolus Dose Calculation and Intensive Diabetes Management. <i>Diabetes Care</i> 2013;36:810–816." <i>Diabetes Care</i> 36 (12): e212. doi:10.2337/dc13-1464. <a href="http://dx.doi.org/10.2337/dc13-1464">http://dx.doi.org/10.2337/dc13-1464</a> .
Published Version	<a href="https://doi.org/10.2337/dc13-1464">doi:10.2337/dc13-1464</a>
Citable link	<a href="http://nrs.harvard.edu/urn-3:HUL.InstRepos:13581127">http://nrs.harvard.edu/urn-3:HUL.InstRepos:13581127</a>

Terms of Use

This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA>

---

 COMMENTS AND  
 RESPONSES
 

---

**Response to  
 Comment on:  
 Wolpert et al. Dietary  
 Fat Acutely Increases  
 Glucose  
 Concentrations and  
 Insulin Requirements  
 in Patients With  
 Type 1 Diabetes:  
 Implications for  
 Carbohydrate-Based  
 Bolus Dose  
 Calculation and  
 Intensive Diabetes  
 Management.  
 Diabetes Care  
 2013;36:810–816**

**W**e appreciate the comment of Wolever (1) regarding our study (2) and that we performed a much more detailed, well-controlled, and sophisticated study. We also appreciate the comment regarding the details about

the composition of the test meals in the study. Thus, to allow comparison of our results with others in the literature, we provide the following clarifications. The mean weights of carbohydrates, protein, and dietary fiber in the dinner test meals were as follows: low-fat dinner, 96.9 g, 41.3 g, and 10.9 g, respectively; high-fat dinner, 96.4 g, 41.3 g, and 10.4 g, respectively. Breakdown of the fatty acid content in the high-fat dinner was as follows: 28.9 g saturated, 17.6 g monounsaturated, and 8.4 g polyunsaturated. Mean weights of the various foods were as follows: low-fat dinner, chicken 98 g, rice 160 g, broccoli 96 g, grapes 127 g; high-fat dinner, cheese 74 g, chicken 39 g, white bread 63 g, croutons 32 g, oranges 216 g. It is noteworthy that a recent study (3) demonstrated that higher-fat meals containing 35 g of fat (a quantity intermediate between that given in Wolever and Mullan [4] and our [2] study) cause late postprandial hyperglycemia in children with type 1 diabetes. This increase in the glucose excursions occurs approximately 3–5 h postmeal, also highlighting that meal-challenge tests need to be of sufficient duration to uncover the glycemic effect of dietary fat.

HOWARD A. WOLPERT, MD

From the Joslin Diabetes Center and Harvard Medical School, Boston, Massachusetts.  
 Corresponding author: Howard A. Wolpert,  
 howard.wolpert@joslin.harvard.edu.

DOI: 10.2337/dc13-1464

© 2013 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. See <http://creativecommons.org/licenses/by-nc-nd/3.0/> for details.

**Acknowledgments**—No potential conflicts of interest relevant to this article were reported.

.....

**References**

1. Wolever TMS. Comment on: Wolpert et al. Dietary fat acutely increases glucose concentrations and insulin requirements in patients with type 1 diabetes: implications for carbohydrate-based bolus dose calculation and intensive diabetes management. *Diabetes Care* 2013;36:810–816 (Letter). *Diabetes Care* 2013;36:e211. DOI: 10.2337/dc13-1173
2. Wolpert HA, Atakov-Castillo A, Smith SA, Steil GM. Dietary fat acutely increases glucose concentrations and insulin requirements in patients with type 1 diabetes: implications for carbohydrate-based bolus dose calculation and intensive diabetes management. *Diabetes Care* 2013;36:810–816
3. Smart CE, Davis E, King BR, et al. Both protein and fat increase postprandial glucose excursions in children with type 1 diabetes and the effect is additive. *Diabetes* 2013; 62(Suppl. 1):A41
4. Wolever TMS, Mullan YM. Sugars and fat have different effects on postprandial glucose responses in normal and type 1 diabetic subjects. *Nutr Metab Cardiovasc Dis* 2011;21:719–725