



Higher Protein Breakfasts Have Minimal Effect on Glycemic Responses of Breakfast Skippers

An individual's diet can contribute to the development of type 2 diabetes, especially foods containing carbohydrates that lead to increases in blood glucose levels. Consumption of higher protein meals, has been proposed to reduce postprandial glucose concentrations, as protein consumption is known to stimulate insulin secretion. Researchers at the University of Missouri conducted a semi-randomized, crossover-design breakfast study to examine the effects of consuming a normal-protein (NP) vs higher-protein (HP) breakfast meal on daily glucose and insulin responses in 35 overweight/obese adolescents who habitually skip breakfast (BS). The participants were grouped according to habitual breakfast frequency.

Habitual breakfast skippers either continued to skip breakfast, consumed a NP (12 g protein) or HP (32 g protein) breakfast for 3 days, whereas habitual breakfast consumers consumed either a NP (12 g protein) or HP (32 g protein) breakfast for 3 days. On day 4 of each pattern, the respective breakfast and a standard lunch meal were provided and blood samples and assessments of perceived appetite and satiety were completed.

In the habitual breakfast skippers, the addition of a protein containing breakfast significantly increased total glucose compared to no breakfast (0 g protein), whereas NP breakfast increased total insulin compared to skipping breakfast. In habitual breakfast consumers (no breakfast skipping option), the HP breakfast reduced morning, afternoon and total glucose compared to the NP breakfast. No differences in insulin were detected. When compared with the breakfast consumers, breakfast skippers experienced greater afternoon and total glucose responses following the HP breakfast than the NP breakfast. Again, no differences in insulin were detected.

These data suggest that the addition of breakfast, regardless of macronutrient content, has minimal effects on the daily glycemic responses in individuals who habitually skip breakfast. However, novel differences in the glycemic response to HP vs NP breakfasts were observed and appear to be influenced by habitual breakfast consumption in overweight adolescents.

Source: Alwattar AY, Thyfault JP, Leidy HJ. The effect of breakfast type and frequency of consumption on glycemic response in overweight/obese late adolescent girls. *Eur J Clin Nutr* 2015;69(8):885-90.

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