Abstract

Background: Diabetes mellitus is a global epidemic affecting 346 million people in the world. The glycemic control is the key for diabetes prevention and management. Some proteins can stimulate insulin release and modulate glycemic response. Objectives: To assess the effect of the consumption of different types of protein (whey protein, soy protein and egg white) on a second meal postprandial glycaemia in normal weight and normoglycemic subjects. Methodology: Randomized crossover clinical trial. After an overnight fast of 12-hours, ten subjects attended the laboratory to drink one of the protein shakes (whey, soy or egg white) or the control drink. Thirty minutes later, the subjects consumed a glucose solution (25 g glucose). Glycemic response was monitored at times 0 (before glucose solution) and 15, 30, 45, 60, 90 and 120 min (after glucose solution consumption). Incremental area under the glycemic curve (iAUC) was calculated by the trapezoidal method. Furthermore, glycemic response was assessed by a new method using iG equation. Results: Compared with control, whey and soy protein drinks reduced postprandial iAUC in 56.5% (p = 0.004) and 44.4% (p = 0.029), respectively. Whey protein was the only protein capable of avoiding great fluctuations and a peak in postprandial glycemia. The assessment of glycemic response by iG equation showed positive correlation with iAUC (Pearson 0.985, p < 0.05). Conclusion: The consumption of whey and soy protein 30 minutes before a glucose load resulted in lower iAUC compared with control drink. Whey protein maintained postprandial glycaemia more stable. (Nutr Hosp. 2014;29:553-558)

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Keywords