Over-consumption of calories and macronutrient contribution to energy is associated with elevated CRP among type 2 diabetes patients with poor glycemic control

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Chronic inflammation is a hallmark of obesity and diabetes. Excessive feeding induces accumulation of adipose tissue and increased oxidative stress which lead to a state of low grade inflammation. The aim of this study was to investigate energy balance and macronutrient contribution to energy levels of CRP among patients with type 2 diabetes. The study included 198 participants from both genders diagnosed with type 2 diabetes. Anthropometric measurements of the patients (height, weight, waist circumference, body fat and truncal fat percent) were measured. Patients’ energy intake and percentages of macronutrient contribution to energy were estimated based on a validated FFQ. Levels of HbA1c and CRP were also measured. Results showed that over-consumption of calories indicated by positive energy balance was associated with increased waist circumference and truncal fat percent (p<0.05). Total energy intake, percent energy from fat (p=0.044), percent energy from proteins (p=0.03), but not percent energy from carbohydrates (p=0.12) were also correlated with higher hs-CRP levels among poorly controlled patients. In conclusion, over-consumption of calories is associated with elevations in hs-CRP. Increased energy intake and increased percentages of energy from fat and protein are associated with elevated hs-CRP among patients with poor glycemic control.

Biography

Hiba Bawadi has a PhD in Nutrition with 2 minors in Experimental Statistics and Epidemiology from Louisiana State University. She is an expert in Nutritional Epidemiology of Diabetes and Obesity and Dietary Anti-angiogenic compounds. She has published 40+ refereed papers, presented 29 papers in international meetings, and held 17 workshops on clinical nutrition of diabetes and obesity for professional nutritionists.

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