

World Congress on

Nutrition and Obesity Prevention Source

November 16-18, 2017, Barcelona, Spain

The Effect of VLCD Diet on Body Composition

Christian Salom Vendrell¹, Iciar Castro de la Vega¹, Silvia Veses Martín¹, Celia Bañuls Morant¹, Rosa Simó Sánchez¹, Cristina Conejos Bono¹ and Antonio Hernández Mijares^{1,2}

¹*Servicio de Endocrinología y Nutrición, Hospital Universitario Dr. Peset-FISABIO, Valencia, Spain*

²*Departamento de Medicina-Universitat de València, Valencia, Spain*

Severe obesity and associated comorbidities are an increasingly prevalent problem. In the treatment of obesity, diet as well as physical exercise is the most common prescription given. Intensive treatments (i.e. VLCD diet or surgery) are effective. However, in addition to weight loss, it is crucial to monitor changes in body composition. In this study, it is observed the change in body composition after a very low calorie diet (VLCD) cycle. To this end, patients with class II-III obesity were selected. Over the last year, they followed a VLCD diet for 6 weeks (which provided them with 654 kcal, 75 g of carbohydrates, 13.5 g of fat, 52.8 g of protein and 11.4 g of fiber). In every patient, anthropometric measurements, ultrasounds (US) of the tricipital adipose tissue and bioimpedance vector analysis were carried out at baseline and after the diet. We selected 37 patients (10 males and 27 females) with an average age of 45.1 ± 10.4 years old. After 6 weeks of treatment, statistical differences ($p < 0.001$) were observed in weight, body mass index, arm circumference, arm area and arm fat area, hip and abdominal circumference, total fat mass, visceral fat and skeletal muscle mass. However, no statistically significant differences were observed in the US of tricipital adipose tissue, muscle strength, lean mass, or body water. Therefore, it can be concluded that the treatment with VLCD diet for 6 weeks is effective in patients with obesity. Depletion occurs in total fat mass, both visceral and subcutaneous adipose tissue. The significant loss of muscle mass is indicative of protein malnutrition. According to the results obtained, it may be useful to adjust the protein intake to meet the requirements of each patient in order to avoid muscular depletion.

Iciar Castro de la Vega

Nutritionist with a postgraduate in Nutrition and Health, Professional experience in Clinical Nutrition in a Public Hospital in Spain