Project Nº 51

Department/ Laboratory
Dpto. Ciencias de la Alimentación y Fisiología, Facultad de Farmacia Unidad de Endocrinología Pediátrica, Clinica Universidad de Navarra

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Summary

Objectives: 1) To implement a comprehensive therapeutic intervention program, based on Mediterranean Diet (MD) and increased physical activity, in children with central obesity, and 2) To measure the effectiveness of this program by assessing changes in lifestyle factors and evaluating biological and molecular parameters (genetic and epigenetic markers).

Methodology: Randomized, controlled, two-year intervention in a sample of 220 subjects (7 to 16 years) with central obesity, to evaluate the effect of two interventions: a) an intensive lifestyle based on DM, increased physical activity and behavioural therapy, b) non-intensive with healthy diet recommendations following standard paediatric advice. At 3, 10, 17 and 24 months after the intervention the following changes will be assessed: a) HOMA, body adiposity, and cardiovascular risk factors, b) diet, and physical activity, c) quality of life. Genetic and epigenetic markers will be evaluated by genotyping SNPs in RI related genes, and the analysis of: a) DNA methylation in genes related to RI; b) expression of microRNAs; c) telomere length.
References


- Moleres et al. Differential DNA methylation patterns between high and low responders to a weight loss intervention in overweight or obese adolescents: the EVASYON study. FASEB J. 2013; 27:2504-12

POSSIBILITY OF PhD

YES * (PhD grant required)