

## **Age-Related Weight Gain is Lower in Persons who Consume Olive Oil**

Gemma Rojo-Martínez, M.Cruz Almaraz, M.Soledad Ruiz de Adana, Isabel Esteva, Eva

García Escobar, Sonsoles Morcillo, Dolores Alcazar, Gabriel Oliveira-Fuster, Federico

Soriguer, Servicio de Endocrinología y Nutrición, Hospital Universitario Carlos Haya

(Fundación IMABIS)

Málaga, Spain

**Background:** the role of fats in the genesis of the epidemic of obesity is controversial.

**Objective:** To test the hypothesis that the increase in weight is associated with the type of fatty acids in the diet.

**Design:** A cohort, population based study was undertaken in Pizarra (Spain). Weight and height were collected for 538 persons who were given a nutritional questionnaire. Body mass index (BMI) and the relative increase in weight from the age of 25 years were calculated. Each person received an oral glucose tolerance test. The type of fat used in the preparation of food was determined by direct measurement of the fatty acids contained in cooking oil taken from the subjects' kitchens. The fatty acid composition of the serum phospholipids was used as an endogenous biological marker of the type of fat consumed.

**Results:** In baseline study, the BMI was greater in those who consumed sunflower oil while the MUFA in the serum phospholipids were associated negatively with weight. ANOVA showed significant differences in the values of the relative increase in weight depending on the type of oil consumed. In cohort study, the incidence of obesity in persons who were not obese at baseline was significantly greater in those who consumed sunflower oil (22.9%) than those who consumed olive oil (9.4%) or a mixture (4.8%).

**Conclusions:** the increase in weight in a population from southern Spain with a very high consumption of MUFA is associated with the type of oil used.