Objectives: The first objective of this study was to analyze the metabolic profile of the population to be studied. The second one was to ascertain whether there was a significant association between the nutritional status of the subjects and the serum level of C-reactive protein. Finally, the third objective was to discover whether there was a correlation between C-reactive protein serum levels and waist to hip ratio values. Sample and methodology: The sample was composed of 1001 adolescents, 9-17 years of age, from 18 schools in the provinces of Granada and Almeria. Their nutritional status was determined by means of anthropometric evaluation. For the metabolic study, a blood sample was collected from each subject by venipuncture. An analysis was performed of C-reactive protein, basal glycemia, ceruloplasmin, glycated hemoglobin (HBA1c), basal insulin, serum levels of lipoprotein (a), and non-esterified fatty acids (NEFA). Results: The biochemical study reflected a normal metabolic profile with serum levels of C-reactive protein, basal glycemia, ceruloplasmin, glycated hemoglobin, basal insulin, lipoprotein (a) and non-esterified fatty acids slightly higher in the male subjects. The results of our studied showed that there was a statistically significant association (p < 0.05; F = 3.701) between the nutritional status of the subjects and serum levels of C-reactive protein. A statistically significant association (F = 9.008; p < 0.005) was also found between serum levels of C-reactive protein and waist to hip ratio values. Conclusions: The C-reactive protein associated either with nutritional status or the waist to hip ratio is an effective biochemical marker of cardiovascular risk among the population of adolescents in our study.

Keywords
Nutritional status, C-reactive protein, Cardiovascular risk, Adolescents.