Objectives: Published data about the association between the consumption of sweetened soft-drinks (SSD) and obesity in childhood are controversial and still inconclusive. In addition, data are lacking in the Spanish population. The purpose of this study was therefore, to explore the cross-sectional association between body composition-related parameters and SSD consumption in Spanish adolescents.

Subjects and methods: A representative sample of 1,523 adolescents (768 boys and 755 girls), with complete dietary data as well as anthropometric measurements, were included in this study. Weight, height, waist circumferences, and 6 skinfolds were measured, and BMI and percentage body fat were calculated. From a 24h dietary recall the subjects were grouped in 3 groups according to their SSD consumption: 1) Non-consumers (0 g of SSD consumption); 2) Moderate consumption (< 336 g/day of SSD, equivalent to the average SSD portion size); and 3) High consumption (> 336 g/day of SSD). Results: 67% males and 75% females did not consume any SSD the day before the dietary recall interview. Males consumed more SSD than females. Regarding the association between SSD consumption and measures of obesity, no difference was observed between the three groups of SSD consumption in any of the anthropometric measurement, BMI or body fat. Conclusion: As no association was present between SSD consumption and obesity in our cross-sectional study we suggest that dietary patterns and habits as well as lifestyle factors such as physical activity should be present when examining cross-sectional or longitudinal relationships with obesity. Multidisciplinary intervention studies are crucial when trying to develop solutions against the increasing obesity epidemic.

Keywords
Soft-drink intake, Obesity, Adolescents.