Adherence to the mediterranean diet and its association with body composition and physical fitness in Spanish university students

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The aims of this study were to assess the association of adherence to the Mediterranean diet (MD) with physical fitness and body composition in Spanish university students and to determine the ability to predict the MD adherence of each Mediterranean Diet Adherence Screener (MEDAS) item. A cross-sectional study was performed involving 310 first-year university students. Adherence to the MD was evaluated with MEDAS-14 items. Anthropometric variables, body composition, and physical fitness were assessed. Muscle strength was determined based on handgrip strength and the standing long jump test. Cardiorespiratory fitness (CRF) was measured using the Course?Navette test. Only 24% of the university students had good adherence to the MD. The ANCOVA models showed a significant difference between participants with high adherence to the MD and those with medium and low adherence in CRF ($p = 0.017$) and dynamometry ($p = 0.005$). Logistic binary regression showed that consuming >2 vegetables/day (OR = 20.1; CI: 10.1?30.1; $p < 0.001$), using olive oil (OR = 10.6; CI: 1.4?19.8; $p = 0.021$), consuming <3 commercial sweets/week (OR = 10.1; IC: 5.1?19.7; $p < 0.001$), and consuming ?3 fruits/day (OR = 8.8; CI: 4.9?15.7; $p < 0.001$) were the items most associated with high adherence to the MD. In conclusion, a high level of adherence to the MD is associated with high-level muscular fitness and CRF in Spanish university students.

Body composition

Cardiovascular fitness

Mediterranean diet

Physical fitness

adult

anthropometric parameters

Article

body composition

body height

body mass

body weight

caloric intake

carbohydrate intake

cardiorespiratory fitness

cross-sectional study

dual energy X ray absorptiometry

dynamometry

fat intake

female

fitness

food frequency questionnaire

grip strength

human

lifestyle modification

Likert scale

male

Mediterranean diet

muscle strength

observational study

physical activity

protein intake

questionnaire

Spain

waist circumference

adolescent

attitude to health

cardiorespiratory fitness

dietary reference intake

feeding behavior

health behavior

nutritional status

nutritional value

psychology

student

university

young adult

Adolescent

Adult

Body Composition

Cardiorespiratory Fitness

Cross-Sectional Studies

Diet, Healthy

Diet, Mediterranean

Feeding Behavior

Female

Health Behavior

Health Knowledge, Attitudes, Practice

Humans

Male

Nutritional Status

Nutritive Value

Recommended Dietary Allowances

Spain

Students

Universities

Young Adult