Vo2max as a cardiovascular risk factor in the students of the University of Leon

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The cardiorespiratory fitness (CRF) associated with maximum oxygen consumption (VO2max) is an important predictor of morbidity and mortality due to cardiovascular diseases. Many studies have analyzed CRF in children and adolescents, however there are few studies performed in the university population. The goal was to determine to what extent the physical and/or sports activity of the university students, allows having a CRF that distances them from the cut-off points of possible cardiovascular risk. There is observational and cross-sectional study of 522 young adults (371 men and 151 women). The International Physical Activity Questionnaire (IPAQ) was administered, classifying the sample into: sedentary (<150 min AF/week), active (>150 min AF/week), athletes (>150 min AF/week and in addition they had official federative license to compete in some sport modality). The evaluation of the CRF (VO2max) was estimated through the "20 m shuttle-run test" (20MSR test). The areas of cardiovascular risk were those described by the FITNESSGRAM battery. Differences of means, and ANOVA were analyzed to find differences between gender and between the 3 levels of physical activity. 13% of the sample was considered sedentary (IPAQ). The estimated VO2max values were 51 ml/kg/min in men and 41.6 ml/kg/min in women (p<0.001). 14% of men and 29.1% of women would need to improve their CRF. There are a significant percentage of students at risk of cardiovascular risk, especially among active women. Their low physical condition leads them to have a cardiovascular profile similar to sedentary people.

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