

# Levels and patterns of objectively assessed physical activity and compliance with different public health guidelines in university students

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**Background:** Physical activity (PA) is associated with health enhancement. The aim of this study was to assess: 1) levels and patterns of PA in university students by using accelerometers; and 2) the percentage of fulfilment of PA recommendations for adults, according to different public health guidelines. **Methods:** Observational cross-sectional study (Cuenca's Adults Study) involving 296 (206 women) healthy Spanish university students aged 18-25 years old. Participants wore the ActiGraph GT1M accelerometer for seven consecutive days. Total PA, steps and time spent in sedentary time, light, moderate, vigorous, and moderate to vigorous PA (MVPA) was assessed, and the prevalence of sufficient PA was calculated according to various public health guidelines. **Results:** No sex differences in total PA were found. University students were more sedentary during weekend days than weekdays ( $p < 0.05$ ). Only 30.3% of participants accumulated 30 min/day at least five days a week of MVPA. A total of 5.4% of students met the recommendation of 150 min/week of MVPA or 75 min/week of vigorous PA, in PA bouts of at least 10 min. using the same definition, but on five or more days a week, only 0.5% students were found to meet the recommendation. In addition, only 0.5% of students met the recommendation of 30 min/day of MVPA, at least five days a week and in bouts of at least 10 min. Finally, 28.1% of the students met the recommendation of 10,000 steps/day. **Conclusions:** Our study shows a high incidence of sedentary time in university students. The number of students meeting PA recommendations significantly differed depending on the

recommendation proposed. Specific strategies to promote PA in this population are necessary as well as an agreement as to which PA guidelines should be used. © 2015 Arias-Palencia et al This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.