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Does Quantity of Sleep Affect Cardiovascular Endurance in College Students?

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PURPOSE: To compare quantity of sleep and cardiovascular endurance in college students. **METHODS:** A convenience sample of 100 college students, (51% female and 49% male), participated in a free comprehensive physical fitness assessment. The assessment included tests to determine resting heart rate and blood pressure, body composition, cardiovascular endurance, muscular fitness, and flexibility. The Cooper 12 minute run/walk test was used to predict VO_{2max} and determine cardiovascular endurance. In addition to the assessment, participants completed an electronic health survey. The survey included demographic questions, as well as questions focused on overall health, and lifestyle habits including quantity of sleep and physical activity. Specific data regarding quantity of sleep for both weekdays and weekends was collected, analyzed and compared to predicted VO_{2max} for each participant. **RESULTS:** The mean age of participants in the physical fitness assessment was 21.5 years old (SD=2.12). The sample mean estimated VO_{2max} value was $31.47 \text{ mL O}_2 \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$ (SD=10.03). It was determined that participants in the study obtained an average of 6.76 hours of sleep during the weekdays (SD=1.21). Participants sleeping eight or more hours per weeknight had a mean estimated VO_{2max} of $31.2 \text{ mL O}_2 \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$ (SD=10.91). Participants sleeping seven hours or less per weeknight had a mean estimated VO_{2max} of $31.5 \text{ mL O}_2 \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$ (SD=9.89). **CONCLUSION:** The results showed that participants sleeping seven hours or less per weeknight had a slightly higher VO_{2max} than participants sleeping eight hours or more per weeknight. However, the results were not significant ($t=0.12$; $p > .05$).