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Effects of an Acute Bout of Moderate and Vigorous Exercise in College Students with Anxiety

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Aerobic exercise and anxiety has been researched extensively and studies suggest that aerobic exercise can be beneficial in decreasing anxiety. However, what is still not known is the intensity, duration and type of exercise that produces the greatest decrease in anxiety. **PURPOSE:** The purpose of this study was to examine the effects of moderate and vigorous acute exercise on the perception of anxiety in college aged females. **METHODS:** Nine female college students between the ages of 18 and 25 volunteered to participate in four sessions to examine their perception of anxiety before and after exercise over a 24-hour period. This project has been approved by the Indiana University of Pennsylvania institutional review board for the protection of human subjects. The first session was a pre-screening session where demographic information and eligibility for the study was obtained. The remaining three sessions were exercise sessions which included a maximal exercise test, 50% of age-predicted max heart rate (APMHR) and 80% of APMHR exercise session. It was hypothesized that a participant's perception of anxiety would decrease significantly following any intensity of exercise. Additionally, there would be a greater decrease in the perception of anxiety following the vigorous bout of aerobic exercise in comparison to the moderate bout of aerobic exercise. **RESULTS:** The results indicated that the decrease in anxiety between intensities did not differ ($F = .313, p > 0.05$). There was a significant decrease between pretest and posttest anxiety scores ($J = 9.222, p = .019$) that returned to baseline within 24 hours showing that the effects did not last longer than 24 hours. **CONCLUSIONS:** These results suggest that any intensity of exercise for 20 minutes decreases anxiety in this population. There does not appear to be an effect based upon the percent intensity or an effect that is maintained over time. Clinicians can use this information to prescribe exercise as an intervention for female college-aged students diagnosed with an anxiety disorder.