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Long-Term Effects of Aerobic Exercise on Psychological Outcomes

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Abstract

Background. Although the literature on increased physical fitness and psychological outcomes has grown large, a number of methodological limitations remain unaddressed. The present study was designed to address a number of these limitations while examining the short- and long-term psychological effects following completion of a 12-week aerobic fitness program using bicycle ergometry (and confirmed increases in fitness).

Method. Following completion of a 12-week aerobic fitness program (and through 12 months of follow-up), 82 adult participants completed the Beck Depression Inventory, Profile of Mood States, State-Trait Anxiety Inventory, and the Tennessee Self-Concept Scale. Physiological measures used to assess changes in aerobic fitness were maximal workload, submaximal heart rate at a standard workload, mediated maximum oxygen

work load, submaximal heart rate at a standard work load, predicted maximum oxygen uptake, and resting heart rate.

Results. Exercise participants experienced a positive fitness change and psychological improvement over the initial 12-week program compared to a control group. At 1 year follow-up, physiological and psychological benefits remained significantly improved from baseline.

Conclusions. Overall, results indicate that exercise-induced increases in aerobic fitness have beneficial short-term and long-term effects on psychological outcomes. We postulate that participants in the exercise group did not increase the amount of weekly exercise they performed over the 12-month follow-up period and thus the maintenance of the psychological improvements occurred concurrent with equal or lesser amounts of exercise.



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Keywords

exercise; fitness; psychological benefits; mood.

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