

西安体育学院学报

2009年 第1期

运动心理与健康

文章编号: 10012747 X(2009) 0120121204 文献标识码: A 中图分类号: G804185

有氧运动对抑郁女大学生抑郁状态、单胺递质的影响

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摘要: 目的 探讨有氧运动对于抑郁女大学生抑郁状态、单胺递质和体质状况的影响。方法 将30名轻度到中度抑郁的女大学生分为两组: 抑郁运动组15名(进行8周, 每周5次, 每次50 Min, 强度为70% - 80%最大心率的健身跑)和抑郁对照组15名。另外选取15名正常无抑郁的女大学生为正常对照组。分别于实验前后测量受试者的抑郁状态, 5-HT、NE、皮质醇水平, 体成分和最大摄氧量。结果 8周有氧运动后, 抑郁运动组的CES-D量表评分下降, 抑郁症状减轻。抑郁患者血浆5-HT、NE水平下降, 皮质醇水平升高。经过8周有氧运动后, 抑郁患者血浆5-HT、NE水平上升, 皮质醇水平下降; 体重、体脂百分比、心率下降, 瘦体重、最大摄氧量升高。结论 抑郁可能与5-HT、NE的下降, 皮质醇的升高有关。8周的有氧运动可以有效地增进抑郁患者的身体机能和心理健康。

关键词: 有氧运动; 抑郁; 单胺递质; 体成分; 最大摄氧量

Effect of Aerobic Exercise on Depression and Monoamine Transmitters in Female College Students with Depression Symptoms

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Abstract: Objective: To investigate the effect of aerobic exercise on depressive state, the levels of monoamine transmitters and physiological fitness variables in female college students with depression symptoms. Methods: Thirty female volunteers with mild to moderate depressive symptoms were assigned to an exercise group of depression and control group of depression. Fifteen healthy female volunteers were assigned to a normal control group. The exercise group must do the aerobic exercise regimen for 8 weeks, which consisted of five 50-min sessions per week of a group jogging training at 70% - 80% HRmax intensity. The variables measured were CES-D rating scale, 5-HT, NE and cortisol levels, body composition and peak oxygen uptake before and after the test. Result: After 8 weeks exercise the CES-D total depressive score showed a significant decrease in the exercise group. The training group had a significantly reduced cortisol level, weight, body fat percentage, resting heart rate and increased 5-HT level, NE level, lean body mass and peak oxygen uptake. Conclusion: Depression may be related to the decrease of the content of monoamine transmitters and the increase of cortisol. 8 weeks aerobic exercise can improve physiological fitness and mental health in female college students with depression symptoms.

Key Words: Aerobic Exercise; Depression; Monoamine Transmitters; Body Composition; Peak Oxygen Uptake

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收稿日期: 2008-08-24 修回日期: 2009年

基金项目:

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