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Role of BDNF Val66met Polymorphism in Modulating Exercised-Induced Emotional Memories

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Running head: EXERCISE AND MEMORIES

Highlights

- Acute bouts of exercise proximal to learning enhance subsequent memory
- BDNF may underpin the impact of exercise on learning
- Interaction of BNDF Val allele and cortisol increase predicted emotional memories
- Provides evidence of a genetic association of exercise-induced learning enhancement

Abstract

Brief physical exercise enhances memories for neutral events, and modulates fear learning in animals. Exercise-induced arousal induces the release of brain-derived neurotrophic factor (BDNF), which may moderate memory-enhancing effects. This study investigated the effect of exercise, and the extent to which the BDNF val66met polymorphism (which limits BDNF