

THE EFFECTS OF NANDROLONE AND EXERCISE ON PHYSICAL AND BEHAVIOR PERFORMANCE IN RATS NANDROLONE ATTENUATES BENEFICIAL EFFECTS OF EXERCISE

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Nandrolone is one the most frequently used anabolic-androgenic steroids (AAS) in the world of sport. The abuse of this steroid is widely spread among the athletes. It is commonly used in various doses and in the combination with different training protocols, but still there are controversial data about the nandrolone influence on physical abilities. At the same time, there are numerous reports considering behavioral effects of AAS use. The aim of this study was to examine the effects of supraphysiological dose of nandrolone itself on physical and behavior performance of rats, and in combination with the exercise. For this purpose following battery of test was performed: open field test, beam-walking test, linear locomotor test, grip test and rotarod test. Four groups of male Wistar albino rats were treated as follows for four weeks: nandrolone deconate (ND) – 20 mg/kg/week; exercise – swimming for 1h, every day; ND + exercise - 20 mg/kg/week + swimming for 1h, every day; and control (sedentary) group. There were six animals in each group. Evaluation of tests results shows that nandrolone deconate group had no significant changes in physical performance (comparing to the control group). Also, ND group showed marked evidence of anxiety-like behavior during testing. Exercise group of animals had significantly increased physical performance in the tests. Furthermore, the results for this group show significant anxiolytic effects of exercise in the testing. In combined group (ND + exercise) of animals there were no significant changes in physical and behavior performance (comparing to the control group). In conclusion, exercise has beneficial effects on both physical and behavior performance, while nandrolone did not improve physical performance and caused anxiety-like behavior rats. Moreover, nandrolone attenuated beneficial effects of exercise in rats.