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SEROTONIN AND MOOD STATE CHANGES IN RESPONSE TO A PERIOD OF YOGA TRAINING IN WELL-TRAINED WRESTLERS

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Introduction: Overtraining Syndrome (OTS) is accompanied by changes of some neurotransmitters, immune suppression and increase mood disturbances. Yoga may be a perfect strategy to prevention of OTS.
Objective: The purpose of this study was to describe changes of plasma levels of serotonin and mood state, after a period of yoga training in well-trained wrestlers.
Methods: Twenty four volunteered well-trained wrestlers (age 21.7±2.3; weight 69.2±6.8 and fat% 11.3±1.4) participated in the present study and were divided randomly into two equal groups; control (regular training) and experimental (yoga training concomitant with regular training). The subjects completed eight weeks of yoga training concurrent with wrestling training, three sessions per week, 60-75 min each session. Blood samples were collected from all participants, before and after yoga training. Plasma levels of serotonin and mood state were evaluated using standard commercial ELISA kits and the Brunel questionnaire (BRUMS) respectively. Statistical comparisons were made using Covariance analysis (ANCOVA). The level of significance was set at $P<0.05$.
Results: The results show that there is significant difference between groups in serotonin levels ($P=0.0001$) and mood disturbance scores ($P=0.0001$); although there is no significant relationship between serotonin levels and mood disturbance scores ($r=0.19$; $P=0.54$)
Conclusions: In conclusion it seems that doing yoga training concurrent with heavy wrestling training in pre-competition phase of competition season may be affected some psychological indices contributed with OTS.
Applications: Overtraining is the result of heavy training with insufficient recovery and consists of some physiological and psychological changes that lead to performance decline. Yoga as a safe intervention during heavy wrestling training may lead to prevention of OTS.
Keywords: Overtraining, Yoga, Serotonin, Mood State

VALIDITY OF A SPECIAL JUDO FITNESS TEST IN IRANIAN MALE WRESTLERS

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Introduction: Many measurement techniques have been used to quantify anaerobic power. In the assessment of high intensity exercise performance, strong linear relationships have been recorded between laboratory and field measures of anaerobic ability. The use of field tests for anaerobic power assessment has more application as a sport-specific test than cycle or treadmill tests. Wrestling as a high physiological demanding sport has few physical fitness specific tests, but there are standard tests in other sports, which can be used in wrestling. The Special Judo Fitness Test (SJFT) was first described by S. Sterkowicz (Test specjalnej sprawności ruchowej w judo. Antropomotoryka, 1995; 12: 29–44 [in Polish]).
Objective: The aim of the present study was to determine validity of the special judo fitness test (SJFT) in Iranian male wrestlers.
Methods: Thirty trained male wrestlers (age 24.93±3.41 yr, body mass 24.91±6.19 kg, height 176.86±4.71 cm, and body fat percent 13.21±2.31) performed the SJFT in 3 series of 15, 30 and 30 seconds with 10 seconds rest interval between trials. During these series, the athlete performs the '*Ippon seoi nage*' technique (arm throw) with two other judo fighters (6 meters apart from each other) as many times as possible. Also, a 30 seconds Wingate test on a cycle ergometer was used to measure anaerobic power under laboratory conditions. Heart rate and blood lactate concentrations were measured at baseline, immediately and one minute after trials. A Fatigue index was also calculated. Data were analyzed using Pearson correlation test ($p<0.05$).
Results: The results show that heart rate changes from rest to immediately after trials were significantly correlated between two tests ($r=0.88$, $p<0.01$). Also, a significant relationship was observed between changes of two tests in blood lactate concentration from rest to 3 minutes after trials ($r = 0.89$, $p \leq 0.01$). However, there was not a significant relationship between the fatigue index of the two tests ($r = -0.13$, $p > 0.05$).
Conclusions: The finding of the present study showed that the SJFT is a valid field test to assess anaerobic power of male wrestlers.
Applications: Evaluating wrestler's fitness is a main challenge for coaches. SJFT may be a valid and simple test to evaluate anaerobic power in wrestling.
Keywords: anaerobic power, wrestling, test