

規律運動對於健康青年身體狀態的影響

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摘要

本研究目的在探討不同時間的規律運動訓練是否可以改善健康青年人的身體狀態，以及規律運動前、後引起之生理狀態變化產生的差異性。所有受試者均分成四組，一組不接受任何額外的運動訓練(控制組)，另外三組分別接受為期 12 週不同時間的運動訓練(控制組、10 分鐘組、20 分鐘組與 30 分鐘)。訓練前、後均測量受試者之體脂肪、皮膚電流反應、心率變異、唾液分析，以及 2400 公尺跑步評估心肺功能。研究所得數據以混合設計二因子變異數分析比較組別與時間二個因子間的差異。結果顯示：12 週規律運動每次 30 分鐘組之最大攝氧量優於控制組($p < .05$)；體脂肪經 12 週規律運動後 30 分鐘組低於控制組之體脂肪($p < .05$)；皮膚電流反應分析比較後顯著優於訓練前($p < .05$)。；腰臀圍比指數顯著優於訓練前($p < .05$)。本研究結論：規律運動並達到每次 30 分鐘之運動時間，不但可以降低體脂肪、腰臀圍比及皮膚電流反應，同時可以提升最大攝氧量的預估值，增強運動的能力。

關鍵詞：心率變異、運動強度、皮膚電流反應

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The Influence of Regular Exercise Training on the Physical Status of Health Young People

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Abstract

The purposes of the study were to investigate the different times of regular exercise training on physical status of healthy young people in 12 weeks of training period. All subjects were divided into four groups; one group did not receive any additional training (control group), the other had three training with different time periods, 10 min group(Group A), 20 min group(Group B) and 30 min group(Group C) for three months. Before and after training, the subjects, body fat, galvanic skin response (GSR), heart rate variability (HRV), analysis of saliva, and the 2400-m running as an assessment of cardiopulmonary functions were tested. Two-way mixed design ANOVA was used to test the data. The findings are as follows: Group C had significant greater the maximal oxygen uptake had significant greater and lower body fat than in the control group($p < .05$). ; Group A, B, and C had significant better the galvanic skin response (GSR), and the Waist-Hip ratio(WHR)($p < .05$) after 12 weeks of training than pre-training. It is concluded regular exercise for 30 min each time can not only improve the body fat, WHR and GSR but also has better O_2 max.

Keywords : heart rate variability, exercise intensity, galvanic skin response