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**題目 (Title):**

高強度間歇訓練對年輕失能者的體適能及健康之影響

Effects of High-Intensity Interval Training on Fitness and Health in Youth With Physical Disabilities.

**摘要中文翻譯****目的：**

探討高強度間歇訓練對年輕失能者的身體適能及心臟代謝健康的影響

**方法：**

本準實驗研究自特殊教育學校徵召了70名受試者，分成跑步組及輪椅使用組。進行高強度間歇訓練，每次30秒盡全力的運動，一周兩次，為期8周。

**結果：**

運動參與堅持度為84.5%。高強度間歇訓練後，無氧表現、敏捷度、有氧表現、收縮壓及舒張壓都有改善。尖峰攝氧量(O<sub>2</sub>peak(方程式敘述於內文))、動脈硬度、身體組成、血脂以及空腹血糖則無改變。

**結論：**

在高強度間歇訓練後，無氧及有氧表現都有進步，但尖峰攝氧量(方程式敘述於內文)並無變化。除了血壓下降外，對於心臟代謝健康並無效果。

## **Original Abstract**

### **PURPOSE:**

To investigate the effects of high-intensity interval training (HIT) on physical fitness and cardiometabolic health in youth with physical disabilities.

### **METHODS:**

For this quasi-experimental study 70 participants were recruited from schools for special education and divided into runners and users of wheelchairs. HIT was performed for 8 weeks, twice a week, containing 30 seconds all-out exercises.

### **RESULTS:**

Exercise adherence was 84.5%. Following HIT, there were improvements in anaerobic performance, agility, aerobic performance, and systolic and diastolic blood pressure. There were no changes in peak oxygen uptake ((Equation is included in full-text article.) $\dot{V}O_{2peak}$ ), arterial stiffness, body composition, lipid profile, and fasting glucose.

### **CONCLUSIONS:**

Both anaerobic and aerobic performance improved after HIT, with no changes in (Equation is included in full-text article.) $\dot{V}O_{2peak}$ . There were no effects on cardiometabolic health, except for a decrease in blood pressure.

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