

## **The Science and Application of HIIT Training 3705**

Bryce Hastings, MPhil

Head of Research

Les Mills International

A. Global health is suffering due to lack of activity and optimal exercise prescriptions.

B. Physical activity and physical fitness can reduce the risk of disease as well as improve satisfaction with daily life.

C. ACSM Physical Activity Guidelines

A. Get Fit with HIIT study

1. Protocol
2. Results
3. Adherence
4. Injury

B. NCAA women's soccer HIIT study

1. Protocol
2. Results

C. Indoor Cycling HIIT study

1. Protocol
2. Results

A. Overtraining and overreaching

B. Cortisol basics

C. How Much HIIT is Too Much study

1. Hypotheses
2. Methods
3. Results
4. Conclusion

D. Practical Applications

1. Exercise Prescriptions

A. Typically, the main focus of physical activity research has been on strategies and guidelines to assist individuals in attaining the minimum training time and intensity to enhance health and diminish disease risk. But with the popularity of HIIT programs that promote results in the smallest number of minutes, it is also necessary to provide recommendations at the extreme intensity spectrum.

B. High intensity training that elicits an acute increase in cortisol can be protective against injury and beneficial for fitness but there is clearly a limit to the total percentage of this training when it becomes detrimental.

C. For individuals who regularly exercise around 8 hours per week, 30-40 minutes above 90% HRmax is potentially the ideal duration to maximize fitness and minimize symptoms related to overreaching.

### **Selected References**

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