

Beneficial Effects of Supra High-Intensity Interval Training in Police Officers

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ABSTRACT

The job environment of a police officer involves unusually high physical and mental stressors paired with hours of prolonged sedentary behavior. A variety of alarming health problems such as obesity, metabolic syndrome, cardiovascular disease, and mental health issues are highly prevalent among police officers and the availability of officers to engage in traditional regularly-scheduled exercises is generally restricted by irregular shift hours. Therefore, supra high-intensity interval training (supra HIIT) may be a viable training option as it elicits physical and mental health benefits and can be completed in less than five minutes. **PURPOSE:** To evaluate the effectiveness of a supra HIIT program on cardiovascular, metabolic, physical and mental health in police officers. **METHODS:** Twenty two apparently healthy police officers (37 ± 8 years) performed 4-minute supra-intensity workouts that did not require any equipment at least 3 times per week over 9 weeks. **RESULTS:** Subjects completed an average of 4 ± 1 supra HIIT workouts per week. Program assessment questions resulted in an overall program satisfaction level of 8.6 on a scale of 1-10 with very high enjoyment (94%) among the participants. Following the 9-week exercise intervention, body fat percentage and fat mass decreased ($p=0.003$ and 0.028) and muscle mass increased ($p=0.002$). Arterial stiffness decreased ($p=0.026$) and maximal oxygen consumption increased ($p=0.010$). Total cholesterol, as well as HDL cholesterol, decreased ($p=0.007$ and 0.014). Wingate anaerobic power values as well as mental and physical health questionnaire scores did not change significantly. **CONCLUSION:** A supra HIIT program was highly satisfactory and enjoyable to police officers and was accompanied by a number of favorable effects including body composition, aerobic fitness, and arterial stiffness.