

Regular moist snuff dipping does not affect endurance exercise performance.

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Introduction

The physiological and medical effects of snuff cessation after several years of daily use on individual level are unknown. The aim of this study was to evaluate the effects of prolonged snuff use by studying long-established snuff dippers before and after a >6 weeks period of cessation of any tobacco use..

Materials & Methods

24 participants with >2 years of daily snuff-use were tested before and after >6 weeks snuff cessation (snuff cessation group: SCG), together with a control group (CO) of 11 snuff users who kept their normal habits.

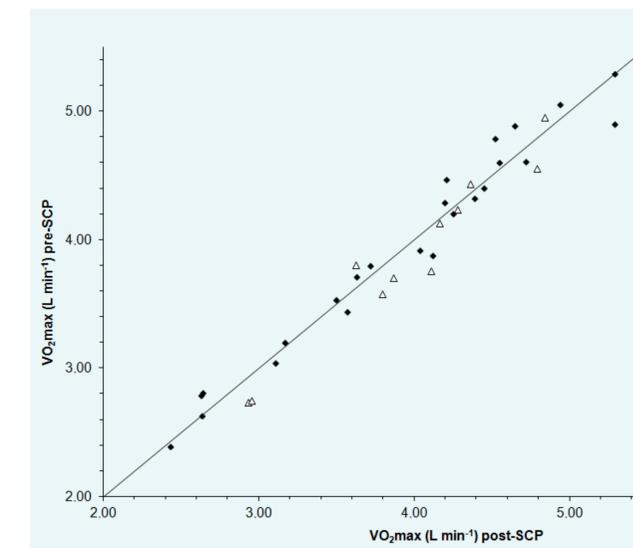
Results & Discussion

Resting heart rate (HR) was significantly lower in SCG after SC. Body mass in SCG increased by 1.4 ± 1.7 kg and blood pressure (BP) were reduced, but without significant differences between groups. Total cholesterol increased from 4.12 ± 0.54 (95% CI 3.89–4.35) to 4.46 ± 0.70 (95% CI 4.16–4.75) mM/L in SCG, due to increased LDL, and this change was significantly different from CO. Resting values of HDL, C-reactive protein, and free fatty acids (FFA) remained unchanged in both groups.

During an incremental (from 50 to 80% of $VO_2\max$) and a prolonged (60 min at 50% of $VO_2\max$) cycling test HR and BP were reduced in SCG, while oxygen uptake (VO_2), respiratory exchange ratio, blood lactate (bLa) and blood glucose concentration, and rate of perceived exertion were unchanged. All measurements were unchanged in CO.



There was a trend towards reduced FFA during the prolonged exercise after SC, but with no significant difference between groups. All results and measurements in the maximal treadmill running test were unchanged in both groups.



Individual $VO_2\max$ pre- and post the snuff cessation (SC) or for the control situation. Solid symbols represent snuff cessation group and open triangles are the control group.

Conclusions

In conclusion, endurance exercise performance ($VO_2\max$ and maximal endurance time) does not seem to be affected by prolonged snuff use, while effects on cardiovascular risk factors are contradictory.

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