Comparison of walking energy expenditure on field tracks with and without poles

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**Purpose**

The purpose of this study was to determine the effects of poles on the walking energy expenditure. The metabolic responses were examined for two walking condition: poles (WWP) and non-poles (WNP).

**Methods**

Twenty healthy males volunteers walked at a self-selected pace in a 821 m pedestrian level ground field track (age 22,70 ± 2,89 years; body weight 77,90 ± 11,19 Kg; height 176,55 ± 5,90 cm; body fat percentage 14,59 ± 5,99%). The subjects completed each trail in a randomized order. Return to metabolic rest values was respected between trails. The heart rate (HR), oxygen consumption (VO2) and energy expenditure (EE) were continuously recorded by a portable telemetric system. Rating of perceived exertion (RPE) was measured at the end of each trial by the modified Borg scale (1-10). The telemetric poles were adjusted individually to each subject.

**Results**

Significant differences were found (*P*≤ 0,05) in the comparisons WNP *vs* WWP for HR and walking speed. Mean walking speed was lower in the WWP.

**Conclusions**

The results indicate that the use of walking poles does not increase the metabolic and perceptive demands (VO2, EE and RPE) but do increase HR response. The use of poles does not seem to be an optimal strategy to influence the improvement of the physical fitness when walking on field level ground.