ACCUMULATING VERY SHORT BOUTS OF EXERCISE REDUCES RESTING BLOOD PRESSURE TO A SIMILAR EXTENT TO THAT OF A SINGLE BOUT OF EXERCISE IN YOUNG MEN
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Public health guidelines on physical activity recommend that adults accumulate 30 minutes of moderate intensity activity on most, preferably all, days of week (Department of Health UK, 2004; Pate et al., 1995). Moreover, a minimum duration of 10-minutes is recommended for any one bout of activity. The acute effect of a total of 30 minutes of accumulated exercise in bouts shorter than 10 minutes per session throughout the day on resting blood pressure has not been determined. Here we report the findings from two studies which compare the effects of accumulating ten, three-minute bouts of exercise versus one, 30-minute bout of exercise on resting blood pressure. Ten normotensive male subjects, aged 23±1 years (mean±SE) (running study) and 15 normotensive male subjects, aged 25±1 years (walking study) completed three, 2-day trials at least one week apart in a randomised, repeated measures design. On day 1, subjects rested (no exercise) or ran at 70% of maximum oxygen uptake (running study)/walked briskly at a self-selected pace (walking study) in either ten, three-minute bouts (i.e. 09:30 AM to 15:30 PM) with 30 minutes rest between each, or one continuous 30-minute bout (i.e. 15:00 to 15:30 PM). On day 2, subjects rested throughout the day. Blood pressure was measured at hourly intervals for seven hours on day 2. In both the running and the walking studies systolic blood pressure was significantly (two-way ANOVA, \(P<0.05\)) lower throughout day 2 on the accumulated and continuous exercise trials compared with the control trials: mean values 110±2 versus 110±3 versus 117±2 mm Hg respectively for the running study and 109±1 versus 110±1 versus 117±2 mm Hg respectively for the walking study. There were no significant differences between the accumulated and continuous exercise trials. These data demonstrate that: 1) accumulated physical activity is at least as effective as continuous physical activity in reducing systolic blood pressure in normotensive young men and 2) walking appears to be as effective as running for producing post exercise reductions in systolic blood pressure in normotensive young men.

References

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