

Walking and Cardiovascular Risk: A Meta-Analysis of Randomised, Controlled Trials 2361 Board #93

8:30 AM – 9:30 AM

Murphy, Marie H.; Nevill, Alan M.; Murtagh, Elaine M.; Boreham, Colin

Walking is the most popular physical activity among the EU population, and has become an important cornerstone in many physical activity promotion campaigns. Despite this, interventions that have considered the effects of a programme of brisk walking on a range of cardiovascular risk factors have yielded surprisingly equivocal results

Purpose: The purpose of this review is to perform a meta-analysis on walking intervention studies in order to quantify the magnitude and direction of walking induced changes that may alter cardiovascular risk.

Methods: Twenty-five randomised controlled trials of walking, retrieved by computerised literature searches, were assessed for quality on a three point scale. Data from these studies were pooled and treatment effects were calculated for 10 traditional cardiovascular risk variables; body mass, percentage body fat, aerobic fitness, systolic and diastolic blood pressure, total (TC), high density lipoprotein (HDL) and low density lipoprotein (LDL) cholesterol, TC:HDL ratio and fasting triglyceride (TG) levels. Treatment effects (TE) were analysed using one sample t-tests. One-way ANOVAs were used to investigate the influence of both study quality and exercise volume (<150 vs. \geq 150 min.week⁻¹) on TE.

Results: With the exception of fasting TG levels, walking intervention with previously sedentary individuals ameliorates most traditional cardiovascular risk factors and thereby

reduces cardiovascular risk. There were no differences in TE for any variable according to study quality (B vs C) or total walking time per week (<150 min v >150 min).

Conclusions: The results provide evidence that healthy but sedentary individuals who take up a programme of regular brisk walking will reduce aspects of cardiovascular risk. The study underlines the efficacy of this type of physical activity for enhancing health among the sedentary majority