

Exercise Training versus Drug Interventions on Mortality Outcomes: The Research Evidence

Leonardo Roever*

Department of Clinical Research, Federal University of Uberlândia, Brazil

*Corresponding author: Leonardo Roever, Department of Clinical Research, Av. Pará, 1720 - Bairro Umarama, Uberlândia - MG - CEP 38400-902, Brazil, Tel: +553488039878; E-mail: leonardoroever@hotmail.com

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Introduction

Population study has shown that people who exercise have a higher quality of life and better health compared to sedentary, with reductions of hospital admissions. Favorable results have been seen in patients with arthritis, cancer, diabetes, heart disease and respiratory [1-9].

Naci et al. combined study level death outcomes from exercise and drug trials using random effects network meta-analysis. The authors included 16 (4 exercise and 12 drugs) meta-analyses. Incorporating an additional three recent exercise trials, our review collectively included 305 randomized controlled trials with 339,274 participants. Across all four conditions with evidence on the effectiveness of exercise on mortality outcomes (secondary prevention of coronary heart disease, treatment of heart failure, prevention of diabetes, rehabilitation of stroke), 14,716 participants were randomized to physical activity interventions in 57 trials. There was no statistically significance between exercise and drug interventions in secondary prevention of coronary heart disease and pre-diabetes. Exercise interventions were more effective than drug treatment among patients with stroke (odds ratios, exercise versus anticoagulants 0.09, 95% credible intervals, 0.01 to 0.70 and exercise versus antiplatelet 0.10, 0.01 to 0.62). Diuretics were more effective than exercise in heart failure (exercise v diuretics 4.11, 1.17 to 24.76) [10].

Exercise and drug interventions are similar in terms of their mortality benefits in the secondary prevention of coronary heart disease, treatment of heart failure, and prevention of diabetes, rehabilitation after stroke. ET program should be implemented in this population towards a lower morbidity and mortality.

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