

High-intensity interval and moderate-intensity continuous training for coronary artery disease: a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - No financial support.

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 May 2025 and was last updated on 27 May 2025.

INTRODUCTION

Review question / Objective To compare the benefits of high-intensity interval and moderate-intensity continuous training in patients with coronary artery disease.

Condition being studied Although exercise-based cardiac rehabilitation is recommended for coronary artery disease, the optimal exercise strategy is still uncertain.

METHODS

Participant or population Patients with coronary artery disease.

Intervention The guidelines define high-intensity interval training.

Comparator The guidelines define moderate-intensity continuous training.

Study designs to be included Randomized control trials.

Eligibility criteria Adults who were undergoing percutaneous coronary intervention or coronary artery bypass grafting, or who had angiographically proven CAD.

Information sources PubMed, Embase, Cochrane Central Register of Controlled Trials, and ClinicalTrials.gov were systematically searched for eligibility criteria.

Main outcome(s) Physical fitness indices (Peak oxygen uptake and 6-minute walk test) and the quality of life (MacNew questionnaire).

Quality assessment / Risk of bias analysis The Cochrane risk of bias tool for randomized trials (ROB 2 tool) is used for the risk of bias, as well as the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework is used for quality assessment.

Strategy of data synthesis Stata v 17.0 (StataCorp, TX, USA) was used to conduct these analyses. Standard mean difference (SMD) and 95% confidence intervals (CIs) were used to compare the difference between high-intensity interval and moderate-intensity continuous training.

Subgroup analysis Subgroup analyses are conducted based on the CAD type, follow-up duration, mean age, and follow-up after the end of the intervention.

Sensitivity analysis Sensitivity analysis is conducted by including studies with left ventricular ejection fraction restrictions.

Country(ies) involved China.

Keywords high-intensity interval training; moderate-intensity continuous training; coronary artery disease; cardiac rehabilitation.

Contributions of each author

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