

Effectiveness of Yoga-Based Cardiac Rehabilitation for Patients Undergoing Elective CABG Surgery: A Systematic Review

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Abstract

CABG remains the standard revascularization procedure for advanced coronary artery disease; however, many patients continue to experience impaired functional capacity and reduced quality of life despite conventional rehabilitation. Yoga-based cardiac rehabilitation has emerged as a complementary intervention that may enhance postoperative recovery through integrated physical, respiratory, and mindfulness practices. This systematic review aimed to evaluate the effectiveness and safety of yoga-based cardiac rehabilitation in adults undergoing elective CABG surgery, focusing on cardiac function, functional capacity, autonomic regulation, cardiometabolic outcomes, quality of life, and long-term cardiovascular prognosis. A systematic review was conducted following the PRISMA 2020 guidelines. Literature searches were performed in PubMed, ScienceDirect, and the Cochrane Library to identify studies evaluating yoga-based rehabilitation in adults undergoing elective CABG surgery. Eligible studies were selected based on predefined PICOS criteria. Data regarding study characteristics, intervention protocols, and clinical outcomes were extracted and synthesized narratively. Seven studies met the eligibility criteria. The evidence indicated that yoga-based cardiac rehabilitation was associated with improvements in quality of life, functional capacity, autonomic regulation, psychological well-being, left ventricular ejection fraction, lipid profiles, glycemic control, inflammatory markers, and cortisol levels. Yoga Nidra demonstrated enhanced parasympathetic activity, while long-term follow-up suggested reduced all-cause mortality and a favorable trend toward fewer major adverse cardiovascular events. No serious adverse events were reported. Current evidence suggests that yoga-based cardiac rehabilitation is a safe and promising adjunct to conventional postoperative rehabilitation following elective CABG surgery, with potential benefits for physical, psychological, autonomic, and cardiometabolic outcomes. However, larger multicenter randomized controlled trials with standardized intervention protocols are required to strengthen the evidence base.

INTRODUCTION

Cardiovascular disease (CVD) remains the leading cause of mortality worldwide and continues to impose a substantial clinical and socioeconomic burden despite advances in preventive cardiology and coronary revascularization strategies. Among available revascularization approaches, coronary artery bypass grafting (CABG) remains the preferred treatment for patients with complex multivessel coronary artery disease due to its established long-term survival benefits (Virani et al., 2023).

Coronary artery bypass grafting (CABG) remains a key revascularization strategy for patients with complex multivessel coronary artery disease and plays a pivotal role in reducing cardiovascular morbidity and mortality (Beerkens et al., 2022; Besola et al., 2024; Krittanawong et al., 2024; Mokhtassi et al., 2025; Yu et al., 2022). Nevertheless, recovery following CABG is frequently associated with impaired functional capacity, autonomic imbalance, psychological distress, and reduced health-related quality of life (HRQoL), despite

continuous improvements in surgical techniques and conventional cardiac rehabilitation (CR). Exercise-based CR remains a cornerstone of secondary prevention and is strongly recommended by contemporary international guidelines because it improves functional capacity, quality of life, and long-term cardiovascular outcomes. However, participation in CR programs remains suboptimal due to limited accessibility, financial constraints, inadequate referral systems, transportation barriers, and poor long-term adherence, particularly in low- and middle-income countries (Prisacariu et al., 2026; Majumdar et al., 2025; Serag El-Dine et al., 2025; Costanzo & Januzzi, 2024; Dibben et al., 2021).

To address these limitations, complementary rehabilitation strategies have received increasing attention. Yoga-based cardiac rehabilitation (YCR), which integrates physical postures (asanas), breathing exercises (pranayama), meditation, relaxation techniques, and mindfulness practices, has emerged as a promising adjunct to conventional rehabilitation. Beyond improving physical performance, yoga may enhance autonomic regulation, reduce sympathetic activation, improve vagal tone, alleviate psychological stress, and promote overall well-being, making it a potentially suitable intervention for patients recovering from major cardiac surgery. Recent evidence also suggests that yoga-based interventions may improve adherence to rehabilitation programs by addressing physical, psychological, and behavioral aspects of recovery simultaneously (Choudhary et al., 2026; Raghuram et al., 2014; Kalra et al., 2022; Yadav et al., 2015; Kumar & Saxena, 2023; Fakharirad et al., 2020; Antony et al., 2025).

Evidence from randomized and prospective studies indicates that incorporating yoga into postoperative rehabilitation may improve multiple recovery outcomes after CABG. Reported benefits include improvements in left ventricular ejection fraction (LVEF), exercise capacity, lipid profiles, glycemic control, body mass index, autonomic function, and psychological outcomes, including anxiety, depression, perceived stress, and health-related quality of life. Additional studies have demonstrated favorable effects on inflammatory biomarkers, pulmonary function, and heart rate variability, suggesting enhanced parasympathetic activity during postoperative recovery. Furthermore, long-term follow-up studies have reported lower all-cause mortality and a favorable trend toward reduced major adverse cardiovascular events (MACE) among patients participating in yoga-based rehabilitation programs.

Although several systematic reviews and meta-analyses have evaluated yoga interventions in patients with cardiovascular disease, most have included heterogeneous populations comprising patients with hypertension, heart failure, myocardial infarction, and stable coronary artery disease. Consequently, evidence specifically evaluating yoga-based rehabilitation in adults undergoing elective CABG surgery remains limited and fragmented. Because postoperative recovery after CABG involves unique physiological, functional, and psychosocial challenges, a focused synthesis of available evidence is required to determine whether yoga-based cardiac rehabilitation provides clinically meaningful benefits in this specific population. Additionally, variations in study designs, intervention protocols, treatment durations, comparator groups, and reported outcome measures have limited direct comparisons among individual studies and hindered the translation of current evidence into clinical practice (Choudhary et al., 2026; Raghuram et al., 2014; Kalra et al., 2022; Yadav et al., 2015).

Therefore, this systematic review aimed to critically evaluate the effectiveness and safety of yoga-based cardiac rehabilitation in adults undergoing elective CABG surgery, with particular emphasis on cardiac function, functional capacity, autonomic regulation, cardiometabolic outcomes, health-related quality of life, and long-term cardiovascular prognosis. By providing a focused synthesis of available evidence, this review sought to support the evidence-based integration of yoga into contemporary postoperative cardiac rehabilitation programs. The findings are expected to benefit clinicians in developing comprehensive rehabilitation strategies, assist policymakers in formulating guidelines for complementary cardiac rehabilitation approaches, and serve as a reference for researchers designing future large-scale randomized controlled trials in this field.

METHOD

This review was based on Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (Page et al., 2021).

Study Design

This systematic review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 Statement. The review methodology was predefined before literature screening to ensure transparency and reproducibility. Although the review was not prospectively registered in PROSPERO, all review procedures followed PRISMA 2020 recommendations.

Eligibility Criteria

Eligibility criteria were established a priori according to the Population, Intervention, Comparator, Outcomes, and Study Design (PICOS) framework to minimize selection bias. Eligible studies enrolled adults aged 35–75 years with angiographically confirmed double- or triple-vessel coronary artery disease who had undergone or were scheduled to undergo elective CABG surgery. Participants were required to be hemodynamically stable, cognitively intact, and physically capable of participating in a rehabilitation program. Studies involving patients with a baseline left ventricular ejection fraction (LVEF) greater than 25–30% were considered eligible.

The intervention of interest included yoga-based cardiac rehabilitation delivered either as a standalone intervention or in combination with conventional cardiac rehabilitation. Eligible interventions comprised Yoga-CaRe, Yoga Nidra, Sudarshan Kriya, integrated yoga therapy, and structured yoga lifestyle modification programs incorporating physical postures, breathing exercises, meditation, or relaxation techniques.

Comparator groups included standard cardiac rehabilitation, conventional physiotherapy, usual postoperative care, or other non-yoga rehabilitation programs. The primary outcomes of interest included health-related quality of life, cardiac function (LVEF), functional capacity, autonomic function, cardiometabolic parameters, inflammatory biomarkers, and long-term cardiovascular outcomes, including major adverse cardiovascular events (MACE) and all-cause mortality.

Randomized controlled trials, prospective comparative studies, controlled clinical trials, and experimental studies were eligible for inclusion. Secondary evidence, including systematic reviews, narrative reviews, conference abstracts, case reports, study protocols, and studies involving emergency CABG, valve surgery, severe renal or hepatic failure, malignancy,

uncontrolled hypertension, uncontrolled diabetes mellitus, or previous professional yoga practice, was excluded.

Literature Search Strategy

A comprehensive literature search was independently conducted by two reviewers between 4 May and 28 May 2026 using PubMed, ScienceDirect, and the Cochrane Library. Controlled vocabulary (Medical Subject Headings [MeSH]) and free-text keywords were combined using Boolean operators to maximize search sensitivity. The search strategy combined terms related to coronary artery disease, coronary artery bypass grafting, yoga interventions, cardiac rehabilitation, and clinical outcomes. The complete search strategy included combinations of the following terms.

No restrictions were applied regarding publication year to maximize search sensitivity. Only studies published in English were considered eligible. In addition, the reference lists of all included studies and relevant review articles were manually screened to identify potentially eligible studies that were not retrieved through the electronic database search. The complete search strategy for each database is provided in Supplementary Table S1.

Table S1. Detailed electronic search strategy for each database.

Database	Search date	Search strategy
PubMed (MEDLINE)	4–28 May 2026	("Coronary Artery Disease"[MeSH] OR "Coronary Artery Disease" OR CAD OR "Ischemic Heart Disease") AND ("Coronary Artery Bypass"[MeSH] OR CABG OR "Coronary Artery Bypass Grafting") AND ("Yoga"[MeSH] OR Yoga OR "Yoga-CaRe" OR "Yoga Nidra" OR "Sudarshan Kriya" OR Pranayama OR Meditation) AND ("Cardiac Rehabilitation"[MeSH] OR "Cardiac Rehabilitation" OR Rehabilitation) AND ("Quality of Life"[MeSH] OR "Heart Rate Variability" OR HRV OR "Left Ventricular Ejection Fraction" OR LVEF OR "Exercise Capacity" OR MACE OR Mortality)
ScienceDirect	4–28 May 2026	TITLE-ABSTRACT-KEY ("coronary artery bypass" OR CABG) AND ("yoga" OR "yoga nidra" OR "yoga-care" OR pranayama OR meditation) AND ("cardiac rehabilitation") AND ("quality of life" OR LVEF OR HRV OR mortality OR MACE OR exercise capacity)
Cochrane Library (CENTRAL)	4–28 May 2026	("Coronary Artery Bypass" OR CABG) AND (Yoga OR "Yoga Nidra" OR "Yoga-CaRe" OR "Sudarshan Kriya") AND ("Cardiac Rehabilitation")

Source: Author's Literature Search (2026)

Study Selection

After duplicate records were removed, two reviewers independently screened titles and abstracts to identify potentially eligible studies. Full-text articles were subsequently assessed according to the predefined PICOS criteria. Disagreements between reviewers were resolved through discussion until consensus was achieved. The complete study selection process is presented in the PRISMA flow diagram. The study selection process was independently performed by two reviewers. Any disagreement was resolved through discussion, and a third reviewer would have been consulted if consensus could not be reached.

Data Extraction

Two reviewers independently extracted data using a standardized data collection form. Extracted information included study characteristics, participant demographics, intervention protocols, comparator interventions, duration of follow-up, outcome measures, adverse events, and principal findings. Any discrepancies were resolved through discussion among the investigators until agreement was reached. Extracted data were cross-checked for accuracy before narrative synthesis.

Risk of Bias Assessment

The methodological quality of randomized controlled trials was evaluated using the Cochrane Risk of Bias 2 (RoB 2) tool, whereas non-randomized studies were assessed using the Risk of Bias in Non-randomized Studies of Interventions (ROBINS-I) tool. The evaluated domains included the randomization process, deviations from intended interventions, missing outcome data, outcome measurement, and selective reporting. Overall risk of bias was categorized as low, moderate, or high according to the recommendations for each assessment tool.

Certainty of Evidence

The certainty of evidence was interpreted narratively based on study design, methodological quality, consistency of findings, and directness of the available evidence. Formal GRADE (Grading of Recommendations Assessment, Development and Evaluation) assessment was not performed because of substantial clinical and methodological heterogeneity across the included studies, including differences in study designs, yoga intervention protocols, comparator interventions, outcome measures, and follow-up duration. Therefore, a narrative assessment of the certainty of evidence was considered more appropriate than a formal GRADE evaluation.

RESULTS AND DISCUSSION

Study Selection

The literature search identified 25 records from the selected electronic databases. After removal of seven duplicate and administrative records, 18 unique articles remained for title and abstract screening. Following full-text assessment, 11 studies were excluded because they were systematic reviews or meta-analyses, study protocols, or did not specifically evaluate adults undergoing elective CABG surgery. Ultimately, seven studies met all eligibility criteria and were included in the qualitative synthesis. The study selection process is summarized in the PRISMA flow diagram (Figure 1).

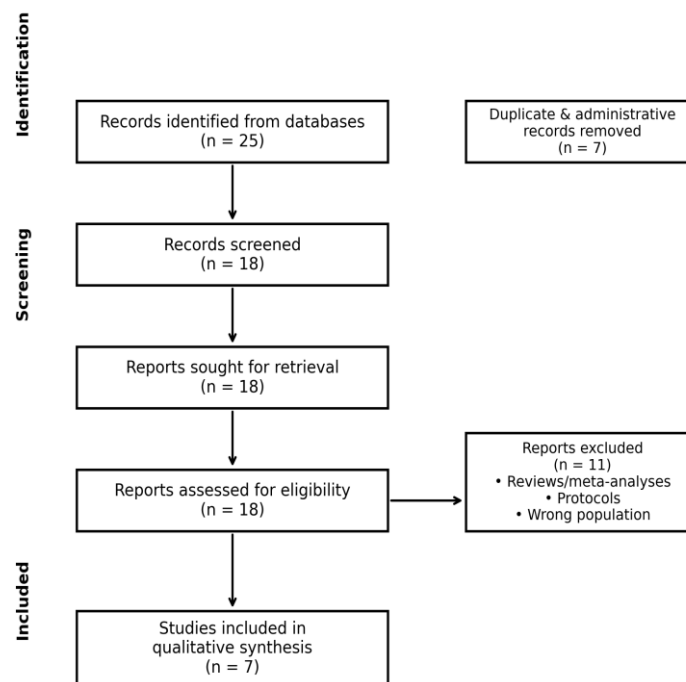


Figure 1. PRISMA 2020 Flow Diagram.

Source: Author's Literature Search and Study Selection Process (2026)

Risk of Bias Assessment

Among the seven included studies, three randomized controlled trials were judged to have a low overall risk of bias, whereas four studies demonstrated a moderate risk of bias. No study was judged to have a critical risk of bias. The methodological quality of the included studies varied. Among the seven studies, three randomized controlled trials were judged to have a low overall risk of bias owing to adequate randomization procedures, allocation concealment, and complete outcome reporting. In contrast, four studies were considered to have a moderate risk of bias because of methodological limitations, including insufficient information regarding the randomization process, incomplete outcome reporting, high attrition rates without intention-to-treat analysis, or the use of convenience sampling in non-randomized designs. Despite these limitations, the included studies consistently reported clinically relevant outcomes related to cardiac function, quality of life, autonomic regulation, and long-term cardiovascular prognosis. Overall, the quality of evidence was considered sufficient to support a qualitative synthesis. Figure 2 summarizes the results of the risk-of-bias assessment.

Characteristics of Included Studies

Seven studies published between 2014 and 2025 were included in this review. The evidence comprised randomized controlled trials, prospective comparative studies, quasi-experimental studies, and long-term follow-up investigations. The studies were conducted primarily in India and Iran, with one study from Egypt. Sample sizes ranged from 20 to 300 participants. The evaluated interventions included Yoga-CaRe, Yoga Nidra, integrated yoga therapy, structured yoga lifestyle modification programs, virtual yoga-based rehabilitation, and combined yoga–physiotherapy protocols. Intervention duration varied considerably, ranging from several weeks to 12 months, whereas one study reported long-term clinical outcomes over

a 15-year follow-up period. Comparator groups generally received standard cardiac rehabilitation, conventional physiotherapy, or usual postoperative care. Across the included studies, the most frequently reported outcomes were health-related quality of life, left ventricular ejection fraction (LVEF), functional capacity, heart rate variability, cardiometabolic risk factors, inflammatory biomarkers, and long-term cardiovascular outcomes. A detailed summary of study characteristics is presented in Table 1.

Effectiveness of Yoga-Based Cardiac Rehabilitation

Overall, the available evidence suggests that yoga-based cardiac rehabilitation provides beneficial effects across multiple domains of postoperative recovery following elective CABG surgery. Although intervention protocols differed among studies, improvements were consistently observed in physical function, psychological well-being, autonomic regulation, and several cardiometabolic parameters.

1. Cardiac Function

Three studies consistently reported significant improvements in left ventricular ejection fraction following yoga-based cardiac rehabilitation, particularly among patients with moderate-to-severe left ventricular dysfunction.

2. Functional Capacity and Quality of Life

Four studies demonstrated improvements in exercise tolerance, mobility, and health-related quality of life following yoga-based rehabilitation. Yoga interventions were consistently associated with improvements in exercise tolerance, functional mobility, and health-related quality of life. Patients receiving yoga-based rehabilitation demonstrated better performance on the six-minute walk test, Functional Reach Test, L-test, WHOQOL-BREF, and SF-12 compared with patients receiving conventional rehabilitation alone. Improvements were also reported in emotional well-being, sleep quality, anxiety, depression, and perceived stress.

3. Cardiometabolic and Inflammatory Outcomes

Four studies demonstrated favorable changes in cardiometabolic risk factors following yoga interventions, including reductions in body mass index, fasting blood glucose, LDL cholesterol, triglycerides, salivary cortisol, and high-sensitivity C-reactive protein (hs-CRP). These findings suggest that yoga may contribute to improved metabolic control and attenuation of postoperative inflammatory responses.

4. Autonomic Function

Evidence from studies evaluating Yoga Nidra demonstrated improvements in heart rate variability, characterized by increased high-frequency power and a lower LF/HF ratio, indicating enhanced parasympathetic activity and improved autonomic recovery during the postoperative period.

5. Long-Term Clinical Outcomes

Long-term follow-up evidence suggested that yoga-based rehabilitation may reduce all-cause mortality and improve long-term cardiovascular prognosis after CABG surgery. Although data regarding major adverse cardiovascular events (MACE) remain limited, the available evidence demonstrated a favorable trend toward lower event rates among patients participating in yoga-based rehabilitation programs.

Safety of Yoga-Based Cardiac Rehabilitation

No serious adverse events directly attributable to yoga-based cardiac rehabilitation were reported across the seven included studies. Participants generally tolerated yoga interventions

well, with no evidence of cardiovascular instability, wound complications, respiratory deterioration, or exercise-related injuries. Mild transient fatigue or discomfort during stretching and breathing exercises was occasionally described but did not require discontinuation of the intervention. Several studies emphasized that yoga programs were initiated only after participants had achieved hemodynamic stability and were delivered under the supervision of trained rehabilitation professionals. However, adverse event reporting was inconsistent across studies, and relatively small sample sizes may have limited the detection of uncommon complications. Overall, the available evidence indicates that yoga-based cardiac rehabilitation appears to be safe for appropriately selected patients recovering from elective CABG surgery.

This systematic review synthesized evidence from seven studies evaluating yoga-based cardiac rehabilitation following elective CABG surgery. Overall, the findings suggest that yoga-based rehabilitation is associated with improvements in cardiac function, exercise capacity, autonomic regulation, cardiometabolic health, psychological well-being, and health-related quality of life. Importantly, no serious adverse events attributable to yoga interventions were reported, supporting the feasibility and safety of incorporating yoga into postoperative cardiac rehabilitation.

These findings support the growing recognition that successful recovery after CABG requires a multidisciplinary rehabilitation strategy addressing not only physical performance but also psychosocial and behavioral health (Prisacariu et al., 2026; Majumdar et al., 2025; Serag El-Dine et al., 2025; Costanzo & Januzzi, 2024).

One of the most consistent observations across the included studies was the improvement in functional capacity and health-related quality of life (QoL). Patients receiving yoga-based rehabilitation demonstrated superior exercise tolerance, mobility, emotional well-being, and perceived QoL compared with those receiving conventional rehabilitation alone. Similar benefits have been reported in previous systematic reviews evaluating yoga interventions in broader cardiovascular populations, suggesting that yoga provides complementary benefits beyond traditional exercise training (Dibben et al., 2021; Choudhary et al., 2026; Raghuram et al., 2014; Kalra et al., 2022). Unlike conventional rehabilitation, yoga integrates physical exercise with breathing techniques, relaxation, and mindfulness, potentially enhancing adherence while simultaneously addressing psychological distress and autonomic dysfunction, both of which are common after CABG surgery (Yadav et al., 2015).

The present review also demonstrated favorable effects on cardiac and cardiometabolic outcomes, including improvements in left ventricular ejection fraction (LVEF), lipid profile, fasting blood glucose, inflammatory biomarkers, and cortisol concentrations. Although the magnitude of these effects varied among studies, the overall direction of the evidence consistently favored yoga-based rehabilitation. These findings are consistent with previous meta-analyses demonstrating that yoga improves blood pressure, lipid metabolism, glycemic control, and inflammatory status in patients with cardiovascular disease (Choudhary et al., 2026; Raghuram et al., 2014). However, unlike previous reviews that included heterogeneous cardiovascular populations, the present review specifically focused on patients undergoing elective CABG surgery, thereby providing a more clinically relevant synthesis for postoperative cardiac rehabilitation.

Several biological mechanisms may explain the observed benefits of yoga-based rehabilitation. Slow diaphragmatic breathing and meditation have been shown to increase vagal

activity while suppressing excessive sympathetic nervous system activation through modulation of the autonomic nervous system and the hypothalamic–pituitary–adrenal (HPA) axis. Enhanced parasympathetic activity improves heart rate variability, lowers circulating cortisol concentrations, and attenuates systemic inflammation, thereby facilitating cardiovascular recovery (Kumar & Saxena, 2023; Fakharirad et al., 2020). Furthermore, regular yoga practice may improve endothelial function, reduce oxidative stress, and enhance nitric oxide bioavailability, contributing to improved vascular function and exercise tolerance (Antony et al., 2025). These physiological adaptations provide biologically plausible explanations for the improvements in autonomic regulation and cardiometabolic outcomes observed across the included studies.

Experimental evidence suggests that yoga improves vagal modulation, baroreflex sensitivity, endothelial function, and inflammatory balance through coordinated neuroendocrine and autonomic mechanisms (Pascoe & Bauer, 2015).

Beyond the physiological effects, the psychological components of yoga may also contribute to postoperative recovery. CABG is frequently associated with anxiety, depressive symptoms, fear of physical activity, and reduced self-efficacy during rehabilitation. Mindfulness-based practices incorporated into yoga may improve emotional resilience, reduce stress perception, and promote long-term adherence to healthy lifestyle behaviors, thereby complementing conventional exercise-based cardiac rehabilitation. Previous cardiovascular rehabilitation guidelines increasingly recognize psychosocial management as an essential component of comprehensive secondary prevention (Prisacariu et al., 2026; Dibben et al., 2021; Chattopadhyay et al., 2019).

An important finding of this review was the potential long-term benefit of yoga-based cardiac rehabilitation. The 15-year follow-up study by Majumdar et al. demonstrated lower all-cause mortality and a favorable trend toward reduced major adverse cardiovascular events (MACE) among participants receiving yoga-based rehabilitation (Majumdar et al., 2025). Although these findings originated from a single long-term cohort and should therefore be interpreted cautiously, they raise the possibility that sustained lifestyle modification through yoga may provide benefits extending well beyond the immediate postoperative period. Additional multicenter studies with prolonged follow-up are required to confirm these observations. Contemporary models of cardiac rehabilitation increasingly advocate flexible hospital-, community-, and home-based delivery strategies to improve accessibility and long-term adherence, particularly in low-resource settings where participation in conventional programs remains suboptimal (Grace et al., 2016).

From a clinical perspective, yoga-based rehabilitation represents an attractive adjunct to conventional cardiac rehabilitation. The intervention is inexpensive, requires minimal equipment, and can be delivered in hospital-based, community-based, or home-based settings. These characteristics are particularly relevant for low- and middle-income countries, where access to supervised cardiac rehabilitation programs remains limited (Serag El-Dine et al., 2025; Costanzo & Januzzi, 2024). Moreover, the increasing availability of telehealth and virtual rehabilitation platforms may facilitate broader implementation of yoga-based interventions while maintaining patient adherence and long-term lifestyle modification.

The present review has several strengths. It specifically evaluated patients undergoing elective CABG surgery, reducing clinical heterogeneity compared with previous reviews that

included mixed cardiovascular populations. In addition, this review synthesized evidence from randomized controlled trials, prospective comparative studies, and long-term follow-up investigations while evaluating a broad spectrum of clinically meaningful outcomes, including cardiac function, functional capacity, autonomic regulation, cardiometabolic parameters, quality of life, and long-term prognosis. Methodological quality was systematically assessed using validated risk-of-bias instruments in accordance with current recommendations for evidence synthesis (Choudhary et al., 2026; Behroozi & Barkhordari Sharifabad, 2022).

Current European recommendations also recognize psychosocial management, behavioral modification, and long-term lifestyle optimization as essential components of comprehensive cardiovascular rehabilitation.²⁰ Nevertheless, several limitations should be acknowledged. First, only seven studies met the eligibility criteria, limiting the overall strength of the available evidence. Second, substantial heterogeneity existed regarding yoga protocols, intervention intensity, treatment duration, comparator interventions, and outcome assessment, precluding quantitative meta-analysis. Third, several studies were conducted at single centers with relatively small sample sizes, increasing the possibility of selection bias and limiting generalizability. Fourth, adverse-event reporting and long-term adherence were inconsistently described across studies. Finally, only English-language publications were included, introducing the possibility of language and publication bias. Consequently, the certainty of the current evidence should be interpreted as moderate rather than definitive.

Future research should prioritize adequately powered multicenter randomized controlled trials using standardized yoga intervention protocols and harmonized outcome measures. Longer follow-up periods, rigorous adverse-event reporting, objective assessment of adherence, and inclusion of more diverse populations—particularly women and participants from different geographical regions—will be essential to establish the role of yoga-based cardiac rehabilitation within contemporary international cardiac rehabilitation guidelines.

CONCLUSION

Current evidence suggests that yoga-based cardiac rehabilitation is a safe and potentially effective adjunct to conventional rehabilitation following elective CABG surgery. Available studies indicate improvements in cardiac function, functional capacity, quality of life, autonomic regulation, and cardiometabolic outcomes without evidence of serious intervention-related adverse events. However, the certainty of the evidence remains limited due to methodological heterogeneity and relatively small sample sizes. Large multicenter randomized controlled trials with standardized yoga-based rehabilitation protocols and longer follow-up periods are required before routine implementation can be recommended. Future research should prioritize adequately powered trials with harmonized outcome measures, rigorous adverse-event reporting, objective adherence assessments, and the inclusion of diverse populations to strengthen the evidence base and facilitate the integration of yoga-based cardiac rehabilitation into international clinical practice guidelines.

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