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**Title**

*Exercise-based rehabilitation interventions for people with long term conditions: an overview of systematic reviews*

**Priority 1 (Research Category)**

Obesity, exercise and nutrition

**Presenters**

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**Abstract**

Objective – To undertake a comprehensive and contemporary overview of systematic reviews (SRs) of health benefits from exercise-based interventions across a number of long-term conditions (LTCs).

Design – An overview of systematic reviews.

Data sources – Electronic database searches of Cochrane Database of Systematic Reviews, MEDLINE, Embase, CINAHL, and PsychINFO were conducted between March-August 2022.

Eligibility criteria for selecting studies – SRs investigating the health benefits/impact of exercise-based rehabilitation compared with usual care in adults diagnosed with a LTC. Where multiple eligible SRs were identified, we selected one per LTC based on inclusion of RCTs, focus, recentness, comprehensiveness, inclusion of meta-analysis and assessment of intervention reporting quality . Where no SRs were found, supplementary searches for randomised controlled trials (RCTs) were conducted . We excluded articles unavailable as full text or not written in English.

Data extraction and synthesis – Outcomes of interest were mortality, hospital admissions, exercise capacity, frailty, disability, health-related quality of life and physical activity levels. We also examined how comorbidity was considered within reviews. Evidence was synthesized narratively and using a mix of tabular and graphical presentations. The methodological quality of SRs was assessed using AMSTAR-2.

Results – 41 SRs were selected covering 37 LTCs, and three primary RCTs for two LTCs . No evidence was identified for six LTCs. Evidence of efficacy of exercise-based interventions was identified in 25 LTCs, with improvements in exercise capacity and health-related quality of life. For 13 LTCs the evidence was unclear or inconclusive. None of the SRs described how comorbidities were taken into account in the delivery of exercise training programmes. Methodological quality of SRs was rated high for five (12%), moderate for 11 (26%), low for 12 (29%), and critically low for 14 (33 %).

Conclusions – Current commissioning of exercise-based rehabilitation services in most developed countries is limited to a small number of individual LTCs, typically pulmonary and cardiac conditions, with no formal provision of rehabilitation services for other single LTCs or multiple LTCs. Expanded access to exercise-based rehabilitation is needed along with a need to consider provision of such services to people living with multiple LTCs.