



Surgery

ACPRC Editorial Board Surgery Scoping Review Synthesis

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The ACPRC editorial board was established in 2019 with the purpose of leading the scoping, commissioning, co-ordination and delivery of all new ACPRC guidance documents and resources. One of the first priorities was to produce a resource around surgery and physiotherapy. This topic was subsequently separated into cardiac, thoracic and upper-gastrointestinal (GI) surgery, and with 14 contributors these have culminated in three published scoping reviews.¹⁻³

The objective of each scoping review was to report the extent and type of evidence associated with post-operative physiotherapy in people undergoing surgery. The inclusion criteria for all scoping reviews comprised of invasive surgery that required post-operative hospital admission (not day surgery). Within cardiac surgery all cardiology procedures were excluded and chest wall surgery was excluded in thoracic surgery.

The search results found 2795 articles for cardiac surgery, 1809 for thoracic surgery and 4978 upper GI surgery. From these, 41 articles were included for cardiac surgery, 28 for thoracic surgery and 12 for upper GI surgery. The majority of study designs were randomised control trials, and all had a small number of systematic reviews. There were no observational studies within the upper GI scoping review. There was a wide range of different outcome measures used with some consistency across the different surgeries. It was noted that cardiac surgery included two qualitative studies, there were no qualitative studies in the thoracic and upper GI surgery search results.

The main themes identified across all surgeries were respiratory physiotherapy and mobilisation. Themes within cardiac surgery also included sternal wound and pain, patient/ staff experience and adverse events. Within thoracic surgery, themes also included taping and outcomes, and within upper GI surgery, themes included current practice and pre-operative education.

Across all surgeries early mobilisation was found to improve re-ambulation, reduce post-operative pulmonary complications (PPCs), reduced morbidity, and reduced length of stay (LOS). The thoracic surgery review also reported that pre-operative fitness correlates to post-operative outcomes.

Respiratory physiotherapy following thoracic surgery showed positive outcomes in PPCs, lung function, LOS and physical activity, but no benefit with incentive spirometry as a treatment method. Incentive spirometry and inspiratory muscle training showed positive results in upper GI surgery. However, there was little consensus across cardiac surgery studies with some evidence of the benefits of positive pressure interventions.

The cardiac surgery scoping review also covered sternal wound precautions and showed that the 'Keep your move in the tube' technique has a positive effective on recovery, LOS and reduced ongoing care needs on discharge.

Suggestions made following the scoping reviews included for cost effectiveness analysis studies to be undertaken to ascertain the best practice whilst considering expense. More qualitative studies should be undertaken with a focus on staff and patient experience, and patient reported outcome measures. This would provide insight on the success of treatment and care focussing on what is important to patients, thus improving patient engagement with services and recovery.

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REFERENCES

1. Eden A, Matthews E, Page A, et al. ACPRC scoping review of post-operative physiotherapy in people undergoing cardiac surgery. *ACPRC Journal*. 2023;55(1):114-150. [doi:10.56792/zuga7227](https://doi.org/10.56792/zuga7227)
2. Eden A, Gilbert N, Bendall A, et al. ACPRC scoping review: Post-operative physiotherapy in people undergoing thoracic surgery. *ACRPC Journal*. 2022;54(1):89-113.
3. Grafton K, Wheldon C, Stiger R, Robbins N, Baker C, Jones U. ACPRC scoping review: Post-operative physiotherapy management in upper gastrointestinal (GI) surgery. *ACPRC Journal*. 2022;54(2):92-106. [doi:10.56792/immq6301](https://doi.org/10.56792/immq6301)