

# Regular exercise halves complication rate after lung cancer surgery

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Exercising regularly before surgery for lung cancer halves the complication rate afterwards, finds a synthesis of the available published evidence in the *British Journal of Sports Medicine*.

And it reduces length of hospital stay for these patients by almost three days, the findings show.

Several studies have suggested that an [exercise](#) programme undertaken before [surgery](#) might help produce better outcomes.

But as this is a rapidly growing area of research, the study authors wanted to explore this in more depth and find out whether exercise before surgery might reduce the complication rate, length of hospital stay, and boost quality of life in patients who had had surgery for cancer.

They trawled research databases for relevant studies and found 17 suitable articles which reported on 13 clinical trials, involving 806 participants and six different types of cancer: bowel; liver; gullet (oesophageal); lung; mouth; and prostate.

The exercise programmes, which were compared with standard care or advice, lasted from one to four weeks, with the average length a fortnight.

Most of the trials assessed aerobic exercise—walking, for example—breathing, and resistance (weight training) exercises. The

frequency of the sessions varied from three times a week to three times a day.

Pooled analysis of the data showed that compared with standard care/advice, an exercise programme before surgery cut the complication rate afterwards by 48 percent and reduced length of hospital stay by nearly three days for patients with lung cancer.

Trials that reported more numerous sessions of exercise had better results, suggesting that there may be a dose response effect, say the study authors.

The impact on the other types of cancer was much less clear, largely because of the few trials which included other cancers and the poor quality of the evidence.

But exercise may improve quality of life after surgery for patients with mouth and prostate cancers, say the study authors, although this was only assessed in individual studies rather than in several, they point out.

"Postoperative complication is a major concern for patients undergoing [cancer] surgery," note the authors, who go on to say that based on their findings, exercise before lung [cancer](#) surgery might be worth considering.

"[The] findings may also impact on healthcare costs and on patients' quality of life, and consequently have important implications for [patients](#), healthcare professionals and policy makers," they add, although future research would be needed to test this out, they say.

**More information:** Daniel Steffens et al. Preoperative exercise halves the postoperative complication rate in patients with lung cancer: a systematic review of the effect of exercise on complications, length of

stay and quality of life in patients with cancer, *British Journal of Sports Medicine* (2018). [DOI: 10.1136/bjsports-2017-098032](https://doi.org/10.1136/bjsports-2017-098032)

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