

## **Randomized clinical trial on enhanced recovery versus standard care following open liver resection.**

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T, Fry CH, Karanjia N, Quiney N. Br J Surg. 2013 Jul;100(8):1015-24. doi: 10.1002/bjs.9165. Epub 2013 May 21.

**BACKGROUND:** Enhanced recovery programmes (ERPs) have been shown to reduce length of hospital stay (LOS) and complications in colorectal surgery. Whether ERPs have the same benefits in open liver resection surgery is unclear, and randomized clinical trials are lacking.

**METHODS:** Consecutive patients scheduled for open liver resection were randomized to an ERP group or standard care. Primary endpoints were time until medically fit for discharge (MFD) and LOS. Secondary endpoints were postoperative morbidity, pain scores, readmission rate, mortality, quality of life (QoL) and patient satisfaction. ERP elements included greater preoperative education, preoperative oral carbohydrate loading, postoperative goal-directed fluid therapy, early mobilization and physiotherapy. Both groups received standardized anaesthesia with epidural analgesia.

**RESULTS:** The analysis included 46 patients in the ERP group and 45 in the standard care group. Median MFD time was reduced in the ERP group (3 days versus 6 days with standard care;  $P < 0.001$ ), as was LOS (4 days versus 7 days;  $P < 0.001$ ). The ERP significantly reduced the rate of medical complications (7 versus 27 per cent;  $P = 0.020$ ), but not surgical complications (15 versus 11 per cent;  $P = 0.612$ ), readmissions (4 versus 0 per cent;  $P = 0.153$ ) or mortality (both 2 per cent;  $P = 0.987$ ). QoL over 28 days was significantly better in the ERP group ( $P = 0.002$ ). There was no difference in patient satisfaction.

**CONCLUSION:** ERPs for open liver resection surgery are safe and effective.

Patients treated in the ERP recovered faster, were discharged sooner, and had fewer medical-related complications and improved QoL.