

Prehabilitation and Enhanced Recovery After Surgery (ERAS)

Bridget Mason

Multimodal prehabilitation in colorectal cancer patients to improve functional capacity and reduce postoperative complications: the first international randomized controlled trial for multimodal prehabilitation

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Oncology/Hematology > Other Cancers

'Prehab' Boosts Fitness Before Upper GI Surgery

— Walk time improved before, after esophagogastric cancer procedures

by Charles Bankhead, Senior Associate Editor, MedPage Today

Anaesthesia

Peri-operative medicine, critical care and pain



Review Article | Free Access

Multi-modal prehabilitation: addressing the why, when, what, how, who and where next?

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“The *postoperative* period may not be the best time to ask surgical patients to make significant changes in their nutrition and exercise...”

Rooijen et al, 2019

Promoting a culture of prehabilitation for the surgical cancer patient

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PREHAB study: a protocol for a prospective randomised clinical trial of exercise therapy for people living with frailty having cancer surgery

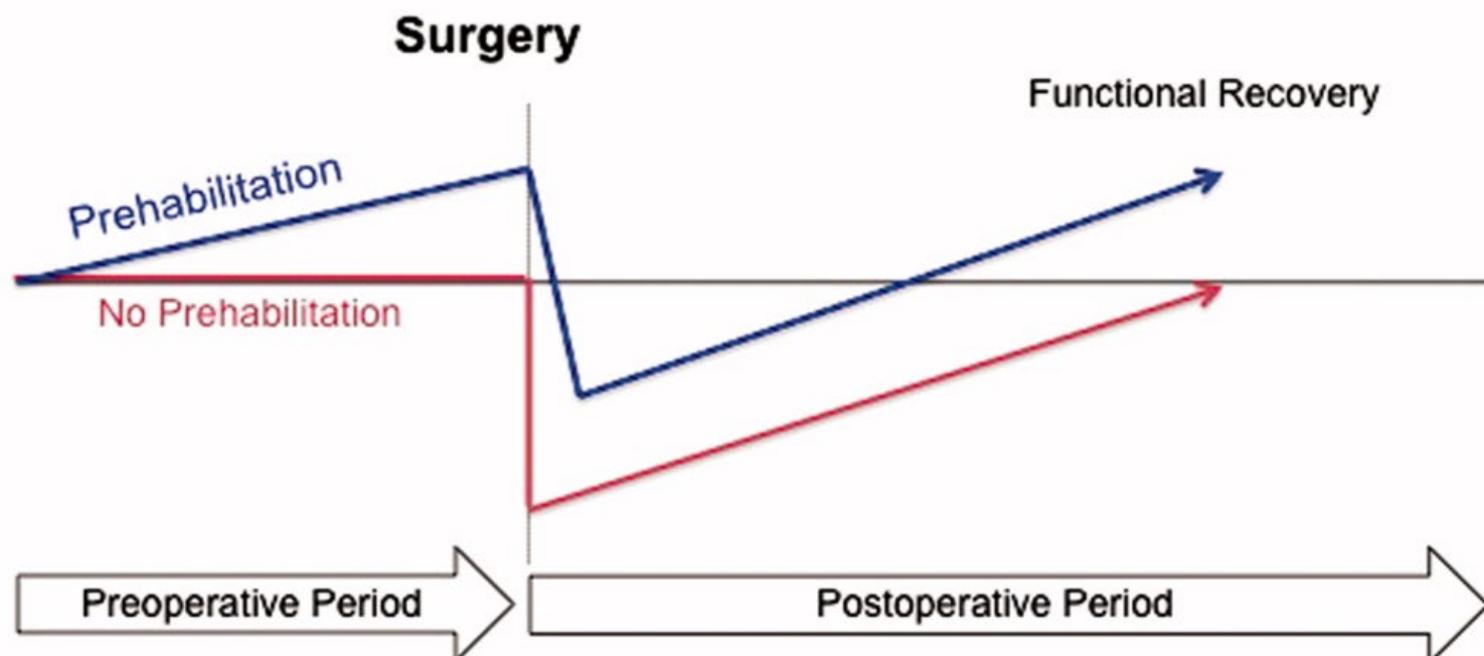
Daniel J McIsaac, Chelsey Saunders, Emily Hladkovic, Gregory L Bryson, Alan J Forster, Sylvain Gagne, Allen Huang, Manoj Lal, Luke T Lavallee, Husein Moloo, Julie Nantel, Barbara Power, Celena Scheede-Bergdahl, Monica Taljaard, Carl van Walraven and Colin J L McCartney

The effectiveness of prehabilitation or preoperative exercise for surgical patients: A systematic review

What is it?

- A process on the continuum of care
 - After diagnosis
 - Before treatment
- Prehab is an intervention aimed at improving functional capacity preoperatively, to reduce the risk of post operative complications
 - Exercise
 - Respiratory
 - Nutrition
 - Lifestyle factors
 - Psychological
- No single definition
- Prescriptive?

Prehabilitation



Carli F. et al. *Curr Opin Clin Nutr Metab Care*. 2005; 8: 23-32.

Why do it?

- Poor functional capacity, malnutrition and lifestyle factors are all associated with an increased incidence of complications post surgery
- Prehab is focused on reducing post operative complications and lowering mortality
- Half of all people newly diagnosed with cancer are over 70
- 36% of cancer patients are over 75
- Sarcopenia and cachexia associated with adverse outcomes, post operative complications and mortality
- Increase potential for patients to cope with post operative interventions
- Improved adherence to ERP?
- Long term behaviour change

West 2017 *Curr Anesthesiol Rep*
Roojen et al 2019 *BMC Cancer*
Macmillan, 2012, Age old excuse
report
Cancer Research UK 2018,
Advancing care, advancing years
Williams 2013, *British Journal of
Cancer*

Author(s)	Intervention arm	Control arm	Outcomes
Boden et al, 2017.	Information booklet plus 30 minute pre-op physio education session. Standardised early ambulation post op.	Information booklet only. Standardised early ambulation post op.	Incidence of PPC within 14 days post op. LOS. D/C within 21 days. LOS in Critical Care or HDU. 6/52 follow up- various outcome measures used. 12 month mortality.
Roojen et al, 2019	High intensity Exercise 3 x a week. Nutritional assessment and intervention. Smoking cessation. Psychological coping support.	Standard post op care. No pre-operative involvement.	Post op complications. 6MWT at 4/52 post surgery. HrQOL, depression and anxiety scores, CPET, LOS.
Hijazi et al, 2017	9 studies 9 included aerobic exercise. 2 included nutritional intervention Same 2 included psychological support.	7 studies control arm was standard care. 2 compared different modes of exercise.	Functional capacity HrQOL PPC

Study		Intervention	Control	Patient group
PREPARE ABC	SupPoRtive Exercise Programmes for Accelerating REcovery after major ABdominal Cancer surgery	Hospital supervised exercise programme vs Home supported exercise.	Standard care.	Colorectal cancer patients, pre-surgery.
PREHAB	Multimodal prehabilitation in colorectal cancer patients to improve functional capacity and reduce postoperative complications	3 weeks pre-operative exercise.	Standard perioperative care.	Frail patients having elective cancer surgery, intra-abdominal and intra-thoracic.
WesFIT	A pragmatic parallel group design randomized controlled study to assess the efficacy of the implementation of a prehabilitation program in patients undergoing elective major cancer surgery in Wessex, UK	In hospital transition to a community based exercise programme with psychological support.	Standard care.	Patients undergoing major electively resectable intra - cavity cancer surgery with or without neoadjuvant cancer treatments

Enhanced Recovery After Surgery (ERAS)

- Implemented in 1990s
- Aim to reduce post operative complications and improve post surgical outcomes
- Reduction in surgical stress response
- Guidelines for perioperative care in patients undergoing Whipples
 - Preoperative counselling
 - Smoking and alcohol cessation
 - Early mobilisation
- ERAS for patients undergoing Upper GI surgery at Addenbrookes Hospital
 - Prehab clinic post neoadjuvant, pre surgery physiotherapy advice session
 - Day zero respiratory review and advice
 - Day one mobilisation, two physiotherapy reviews
 - Day 2-7 two-three times daily physio review plus mobilisation with ward staff
 - Independent at discharge

Oesophagectomy Patients

	Goal	Physio provision	? nurse/HCA led
Day 0	Chest review	1 session	
Day 1	Mob X2	2 sessions	
Day 2	Mob X3	2 sessions	1 session
Day 3	Mob X4	2 sessions	2 sessions
Day 4	Mob X5	3 sessions	2 sessions
Day 5	Mob X6	3 sessions	3 sessions
Day 6	Mob X6	3 sessions	3 sessions/independent
Day 7	Discharge review/independent	1 session	Patient should be independent

Gastrectomy Patients

	Goal	Physio Provision	? nurse/HCA led
Day 0	Chest Review	1 session	
Day 1	Mob X2	2 sessions	
Day 2	Mob X3	2 sessions	1 session
Day 3	Mob X4	3 sessions	2 sessions
Day 4	Mob X5	2 sessions	3 sessions
Day 5	Mob X6	2 sessions	4 sessions/patient independent
Day 6	Discharge review	1 session	Patient should be independent

Summary

- Prehabilitation is an intervention which can reduce rates of post operative complications
- Ideally include exercise and nutrition advice with psychological support
- Presents an opportunity to hold conversations about physical activity levels and encourage positive behaviour change
- Part of a continuum of care and works alongside enhanced recovery

Thank
you.

Any questions?



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