

Randomized Clinical Trial of Chewing Gum After Laparoscopic Colorectal Resection



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Background

- ❑ Chewing gum may enhance intestinal motility after surgery
- ❑ This trial studied whether chewing gum could further reduce ileus in patients who underwent laparoscopic colorectal resection and followed an enhanced recovery program

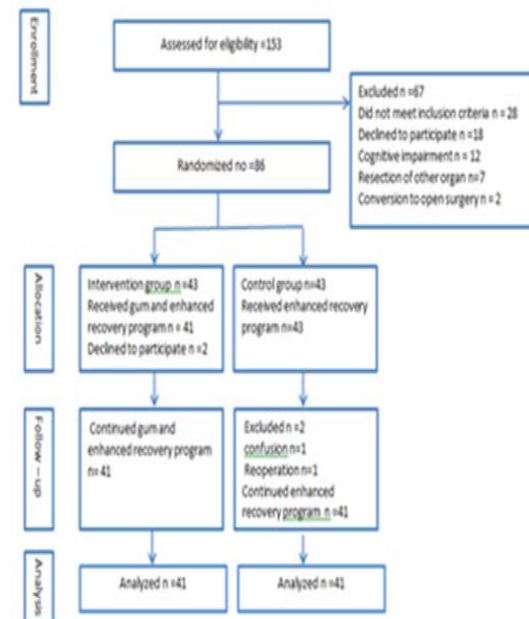


Method

- ❑ Patients underwent laparoscopic colorectal resection were randomized into the control or intervention group.
- ❑ Patients in the control group received a standardized recovery program. In the interventional group patients were, in addition, given chewing gum three times daily from day one until discharge.
- ❑ The primary outcome measures were time to first flatus and first bowel motion. Time to feeling hungry and hospital stay were secondary outcome measures.
- ❑ This study was registered at the clinicaltrials.gov (NCT02419586).

Consort diagram for the study

Between January and July 2015



Overall outcomes

	Control (n=41)	Chewing gum(n=41)	<i>P</i> *
Time to first flatus (h)	34(7-144)	18(5-90)	0.007
Time to first bowel motion (h)	44(9-152)	19(5-81)	0.001
Time to first sensation of hunger (h)	25(12-132)	16(4-67)	0.001
Duration of hospital stay (days)	5.5(3-26)	5(3-23)	0.142

Postoperative complications

	Chewing gum (n=41)	Control (n=41)	<i>P value</i>
Complications:			0.21
Chest infection	0	2	
Retention of urine	2	0	
Wound infection	0	1	
Anastomotic bleeding	0	1	

Values are median (range). * Mann-Whitney U test

Outcomes in patients with and without a stoma

	Without stoma (n=45)			With stoma (n=37)		
	Control (n=23)	Chewing gum (n=22)	<i>P</i> *	Control (n=18)	Chewing gum (n=19)	<i>P</i> *
Time to first flatus (h)	35 (7-144)	20 (5-90)	0.043	24 (9-124)	18 (6-36)	0.076
Time to first bowel motion (h)	53 (12-152)	19 (5-81)	0.014	35 (9-124)	20 (6-36)	0.028
Time to first sensation of hunger (h)	40 (12-132)	14 (4-67)	0.001	18 (12-72)	17 (5-44)	0.124
Duration of hospital stay (days)	6 (3-26)	5 (3-19)	0.432	5 (4-20)	4.5 (3-23)	0.262

Values are median (range). * Mann-Whitney U test

Discussion

Chewing gum

- ☐ influence intestinal activity within a standardized care package
- ☐ Simple , cheap and well tolerated intervention
- ☐ No report of patients experienced adverse effects though potential minor side effects reported before
- ☐ Benefits of chewing gum is clearer in patient without stoma (shorter time to first flatus, bowel motion and sensation of hunger)
- ☐ Benefits of chewing gum in patient with stoma creation is only time to first flatus

Conclusion

- ☐ Gum chewing is a simple and well tolerated intervention that can reduce ileus in patients managed with enhanced recovery program after laparoscopic colorectal resection