

Title:

Unrestricted vs 3-day low-residue diet for colonoscopy preparation. Results of a feasibility randomized trial

Authors:

Salvador Machlab Mashlab, Eva Martínez-Bauer, Pilar López, María del Mar Pujals, Fernando Fernández-Bañares, Anna Selva, Xavier Calvet, Rafel Campo

DOI: 10.17235/reed.2024.10417/2024

Link: [PubMed \(Epub ahead of print\)](#)

Please cite this article as:

Machlab Mashlab Salvador, Martínez-Bauer Eva, López Pilar, Pujals María del Mar, Fernández-Bañares Fernando, Selva Anna, Calvet Xavier, Campo Rafel. Unrestricted vs 3-day low-residue diet for colonoscopy preparation. Results of a feasibility randomized trial. Rev Esp Enferm Dig 2024. doi: 10.17235/reed.2024.10417/2024.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Unrestricted vs 3-day low-residue diet for colonoscopy preparation. Results of a feasibility randomized trial

Salvador Machlab (1) (2), Eva Martínez-Bauer (1) (2), Pilar López (3), María del Mar Pujals (4), Fernando Fernández-Bañares (4) (5), Anna Selva (3)(6), Xavier Calvet (1) (2) (5), Rafel Campo (1) (2) (5)

(1) Endoscopy Unit, Gastroenterology Department, Institut d'Investigació i Innovació Parc Taulí I3PT, Parc Taulí Hospital Universitari. Sabadell, Barcelona, Spain.

(2) Departamento de Medicina. Universidad Autónoma de Barcelona.

(3) Clinical Epidemiology and Cancer Screening, Institut d'Investigació i Innovació Parc Taulí I3PT, Parc Taulí Hospital Universitari. Sabadell, Barcelona, Spain.

(4) Gastroenterology Department, Hospital Universitari Mutua Terrassa, Terrassa, Barcelona, Spain.

(5) Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (CIBEREHD), Instituto Carlos III, Madrid, Spain.

Corresponding author:

Dr. Salvador Machlab

Address:

Parc Taulí Hospital Universitari

Unidad de Endoscopia Digestiva

Carrer Parc Taulí, 1.

08208 Sabadell, Barcelona, Spain

E-mail: stmachlab@tauli.cat

Keywords: Colonoscopy. Diet. Polyethylene glycols. Patient satisfaction. Early detection of cancer. Cathartics.

Dear Editor,

Recent studies have challenged the length of pre-colonoscopy restrictive diets, as current cleansing solutions and split-dosing regimens have proven to be highly effective for bowel preparation (1–3). Restrictive diets, such as clear liquid and low residue diets, have been found to decrease participant satisfaction, quality of life, and the willingness to undergo repeated procedures (1,4).

We conducted a randomized, multicenter, feasibility trial comparing the impact on bowel preparation quality of an unrestricted diet with a 3-day low-residue diet before colonoscopy. We enrolled participants of the colorectal cancer screening program with no factors linked to poor bowel cleansing. The Boston Bowel Preparation Scale was used to evaluate colon preparation during intubation and withdrawal. Secondary outcomes included bowel exploration time, adenoma and polyp detection rates, and preparation and diet tolerability.

We evaluated tolerability using a Likert Scale. Preparation included 1 liter of PEG plus ascorbic acid (PEG+Asc, Pleinvue®) in split-dose regimens, with the second dose scheduled to finish 2-4 hours before the intervention.

Forty individuals were randomly assigned to the unrestricted diet group while were randomly assigned to each diet, 40 to the 3-day low-residue diet (mean age 59.3 ± 5.5 years, 40.1% female). Both groups had similar characteristics. All participants in both groups achieved adequate bowel preparation, and the majority of colonoscopies demonstrated excellent cleansing, with 95% confidence intervals ranging between 0.89 – 0.99 in the unrestricted diet group and 0.92 – 0.99 for the control group. Complete adherence to preparation was observed uniformly. No significant differences were noted between the secondary outcomes but the unrestricted diet was better tolerated (82.5% vs. 32.3%). Relevant results are shown in the table 1.

In conclusion, it is feasible to test the impact of an unrestricted diet for adequate bowel preparation. Comparable cleansing results were achieved, but the unrestricted

diet showed better tolerability.

REFERENCES

1. Walter J, Patel A, Matro R, et al. The impact of diet liberalization on bowel preparation for colonoscopy. Vol. 108, American journal of gastroenterology. 2013. p. S162.
2. Machlab S, Martínez-Bauer E, López P, et al. Comparable quality of bowel preparation with single-day versus three-day low-residue diet: Randomized controlled trial. *Dig Endosc.* 2020;
3. Gimeno-García AZ, De La Barreda Heuser R, Reygosa C, et al. Impact of a 1-day versus 3-day low-residue diet on bowel cleansing quality before colonoscopy: A randomized controlled trial. *Endoscopy.* 3 de julio de 2019;51(7):628-36.
4. Gómez-Reyes E, Tepox-Padrón A, Cano-Manrique G, et al. A low-residue diet before colonoscopy tends to improve tolerability by patients with no differences in preparation quality: a randomized trial. *Surg Endosc.* 3 de julio de 2020;34(7):3037-42.



Table 1. Principal study findings

	Unrestricted diet	3-day LRD
Global BBPS score 9, n (%)	23 (57.5)	38 (61.3)
Global BBPS score 6-7-8, n (%)	17 (42.5)	24 (38.7)
Intubation BBPS Adequate cleansing, n (%)	33 (82.5)	56 (90.3)
Cecal intubation, n (%)	40 (100)	61 (98.4)
Insertion time, min [median (IQR)]	6 (4'-7'59'')	6 (3'59''-8'59'')
Withdrawal time, min [median (IQR)]	14'59'' (10'15''-18')	13 (9'59''-19'59'')
Aspirated volume (ml), [median (IQR)]	400 (262.5-575)	400 (300-560)
Adenoma detection, n (%)	26 (65)	43 (70.5)