



BRIEF ANSWERS
TO SPECIFIC
CLINICAL
QUESTIONS

1-MINUTE CONSULT

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Q: Which bowel preparation should be used for colonoscopy in patients who have had bariatric surgery?

A: We routinely use low-volume (2-L) polyethylene glycol electrolyte preparations such as Moviprep and Miralax in split-dose regimens, in which patients drink half of the preparation the day before the procedure and the other half the day of the procedure. In our experience, these are well tolerated by patients with a history of bariatric surgery and provide adequate colon cleansing before colonoscopy.

■ RATIONALE

Adequate bowel preparation by the ingestion of a cleansing agent is extremely important before colonoscopy: the quality of colon preparation affects the diagnostic accuracy and safety of the procedure, as inadequate bowel preparation has been associated with failure to detect polyps and with a higher rate of adverse events during the procedure.¹⁻³

The most commonly used bowel preparations can be divided into high-volume (which require drinking at least 4 L of a cathartic solution) and low-volume (which require drinking about 2 L).⁴ Polyethylene glycol electrolyte solutions are among the most commonly used and are available in both high-volume (eg, Golytely, Nulytely) and low-volume (eg, Moviprep, Miralax) forms.

Other low-volume preparations include sodium picosulfate (Prepopik), magnesium citrate, and sodium phosphate tablets. However, these should be avoided in patients with renal insufficiency.⁴

Prices for bowel preparations vary. For example, the average reported wholesale price of

Golytely is \$24.56, Moviprep \$81.17, and Miralax \$10.08.⁴ However, the final cost depends on the patient's insurance coverage. Generic formulations are available for some preparations.

After bariatric surgery, patients have a smaller stomach

After bariatric surgery, patients have significantly reduced stomach volume, due either to resection of a part of the stomach (such as in partial gastrectomy) or to diversion of the gastrointestinal (GI) tract to bypass most of the stomach (such as in Roux-en-Y gastric bypass). This causes early satiety with smaller amounts of food and leads to weight loss. However, this restriction in stomach volume also makes it more difficult for the patient to tolerate the intake of large volumes of fluids for bowel cleansing before colonoscopy.

Bariatric surgery patients may require colonoscopy for indications such as colorectal cancer screening, chronic diarrhea, or GI bleeding, all of which are commonly encountered during routine clinical practice.

Guidelines are available

Currently, there are no published data available to support the use of one preparation over another in patients with a history of bariatric surgery. However, for patients who have had bariatric surgery, guidelines from the US Multi-Society Task Force on Colorectal Cancer—endorsed by the three major American gastroenterology societies, ie, the American Gastroenterological Association, the American College of Gastroenterology, and the American Society for Gastrointestinal Endoscopy—recommend either a low-volume

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solution or, if a high-volume solution is used, extending the duration over which the preparation is consumed.⁵ In addition, it is recommended that patients consume sugar-free drinks and liquids to avoid dumping syndrome from high sugar content.⁶

The use of split-dose regimens is also strongly recommended for elective colonoscopy by the US Multi-Society Task Force on Colorectal Cancer.⁵

Our clinical experience has been in line with the above recommendations. ■

REFERENCES

1. Chokshi RV, Hovis CE, Hollander T, Early DS, Wang JS. Prevalence of missed adenomas in patients with inadequate bowel preparation on screening colonoscopy. *Gastrointest Endosc* 2012; 75:1197–1203.
2. Rex DK, Schoenfeld PS, Cohen J, et al. Quality indicators for colonoscopy. *Gastrointest Endosc* 2015; 81:31–53.
3. Wexner SD, Beck DE, Baron TH, et al; American Society of Colon and Rectal Surgeons; American Society for Gastrointestinal Endoscopy; Society of American Gastrointestinal and Endoscopic Surgeons. A consensus document on bowel preparation before colonoscopy: prepared by a task force from the American Society of Colon and Rectal Surgeons (ASCRS), the American Society for Gastrointestinal Endoscopy (ASGE), and the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). *Gastrointest Endosc* 2006; 63:894–909.
4. ASGE Standards of Practice Committee; Saltzman JR, Cash BD, Pasha SF, et al. Bowel preparation before colonoscopy. *Gastrointest Endosc* 2015; 81:781–794.
5. Johnson DA, Barkun AN, Cohen LB, et al; US Multi-Society Task Force on Colorectal Cancer. Optimizing adequacy of bowel cleansing for colonoscopy: recommendations from the US Multi-Society Task Force on Colorectal Cancer. *Gastroenterology* 2014; 147:903–924.
6. Heber D, Greenway FL, Kaplan LM, Livingston E, Salvador J, Still C; Endocrine Society. Endocrine and nutritional management of the post-bariatric surgery patient: an Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab* 2010; 95:4823–4843.

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