Comparison of Bowel Preps

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Inadequate bowel prep for colonoscopy is common (up to 25%) and can lead to cancelled procedures, missed detection and/or removal of polyps, prolonged duration of procedures, and other problems.[1,2,d] Providing written instructions for bowel preps may improve the quality of cleansing.[3,4] Patients should avoid products (e.g., *Gatorade*, *Popsicles*, *Jell-O*, cranberry juice) with red or purple coloring or dyes due to interference with colonoscopy results (e.g., confused as blood).[5,6] Use this chart to compare bowel preps and help improve adherence with colonoscopy bowel prep instructions.

Products/Cost[a]	Adult Split Dosing[c,g]	Efficacy	Tolerability/Cautions[b,e]
Polyethylene glycol (PEG) ELS: **iso-osmotic**, nonabsorbable electrolyte solution cleanses the intestinal lumen through catharsis.[5] • PEG with electrolytes is generally considered the gold standard despite being least tolerable.[1] (PEG 2 L plus bisacodyl is preferred if unable to tolerate PEG 4 L.[7])			
Standard volume (PEG 4 L) **US**: *GaviLyte*, *GoLytely*, *TriLyte* (sulfate-free) **Canada**: *CoLyte*, *PegLyte* **All**: ~$20 to $25	**Evening before**:[5] Reconstitute powder per labeling. Drink 2 L of prep (~250 mL every 10 minutes). **Day of** (4 to 6 hours before colonoscopy):[5] drink the rest (~2 L), finishing 2 hours prior to colonoscopy.	• PEG 4 L appears **equally effective** to: ○ low-volume PEG and PEG 2 L plus bisacodyl tabs (10 mg).[1,4,9-16] ○ sodium phosphate (US)[17] • PEG 4 L appears **slightly more effective** than PEG without eletrolytes.[11,15,16] • PEG 4 L may be **slightly less effective** than PEG 2 L plus magnesium citrate or sodium picosulfate, citric acid, and magnesium oxide.[4,9,12,14] • Using only ½ of the PEG 4 L plus oral bisacodyl is as effective as low-volume PEG products.[14] • Adding senna to lower volumes of PEG does NOT result in additional benefit.[9,17]	• Sulfate-free PEG 4L (US) or low-volume PEG may be better tolerated than PEG 4 L.[1,9,10,13,18] • PEG 2 L plus magnesium citrate or PEG without electrolytes appear more tolerable than PEG 4 L.[9,11,15,16] • To improve taste:[18,19] ○ drink cold (keep refrigerated) ○ drink through a straw ○ rub a sliced lemon or lime on the tongue ○ add sugar-free flavoring (e.g., *Crystal Light*)[5,6,20] • Sulfate-free preps (US) taste a little less salty and may be preferred by some patients.[21] • If patient has nausea, bloating, or abdominal cramping, patient can slow or pause drinking solution and drink additional water until symptoms lessen.[22]
Low-volume[f] **US**: *MoviPrep* ($125) **Canada**: *MoviPrep* ($25)	**Evening before** (~10 to 12 hours prior to dose 2):[8,30] Mix the 2 pouches with 1 L lukewarm water. Drink over ~1 hour, then drink at least 0.5 L of clear fluid before bed. **Day of**:[8,30] Repeat above steps, finishing at least 2 hours (1 hour in Canada) before colonoscopy.		
Low-volume[f] **US only**: *Plenvu* ($140) *Continued…*	**Evening before** (~12 hours prior to dose 2):[31] Mix one dose with 500 mL of lukewarm water. Drink over ~30 minutes. Then drink at least 0.5 L of clear fluid over 30 minutes. Drink additional fluids before bed. **Day of**:[31] Repeat above steps, finishing at least 2 hours prior to colonoscopy.		

Products/Cost[a]	Adult Split Dosing[c,g]	Efficacy	Tolerability/Cautions[b,e]
Polyethylene glycol (PEG) with electrolytes, continued		See above.	See above.
Low-volume (does not contain ascorbate) **US only**: *Suflave* ($125)	**Evening before**:[22] reconstitute 1 dose with water and add flavoring packet. Drink over ~1 hour. Drink an additional 480 mL of water. **Day of** (~5 to 8 hours prior and at least 4 hours after dose 1):[22] Repeat above steps, finishing at least 2 hours prior.		
Low-volume* plus bisacodyl **US**: *PEG-Prep and Bisacodyl* ($79) **Canada**: *Bi-PegLyte* ($25) (*Can also use ½ of the PEG 4L product)	**Day before**:[19,22] Dilute each sachet in 1 L of lukewarm water, then refrigerate. Take 10 mg (15 mg in Canada) bisacodyl at the time instructed by prescriber. After a bowel movement, or 6 hours after the bisacodyl dose, drink 1 L (250 mL every 10 minutes) of solution. **Day of**:[19,22] ~4 hours before colonoscopy, drink 1 L (250 mL every ten minutes) of prepared solution.		
Polyethylene glycol (PEG) 3350 WITHOUT electrolytes (off-label):[11] osmotic, nonabsorbable, cleanses intestinal lumen via cathartic effect.[5,11,19] • may be combined with magnesium citrate or bisacodyl.[17] Becomes **hyposmotic** when combined with an electrolyte sports drink.[5] • second-line option.[22]			
Multiple formulations **US**: *Clearlax*, *Gavilax*, *Miralax* (~$6/238 g bottle) **Canada**: *Clearlax*, *Lax-A-Day*, *RestoraLAX* (~$12/238 g bottle)	Mix 1 bottle (238 g) with 2 L of light-coloured or clear carbohydrate-electrolyte drink (sports drink), then:[3,11,16,22] **Evening before**: Drink 1 L (250 mL every 10 minutes). **Day of**: ~ 5 hours before colonoscopy, drink remaining 1 L (250 mL every 10 minutes).	• Split-dose PEG 4 L may be more effective than split-dose PEG 3350 without electrolytes with or without bisacodyl.[11,15,16]	• May be better tolerated than PEG with electolytes.[11,13,15,16] • Fluid and electrolyte loss can occur. Use with caution in patients with heart failure, kidney impairment, or advanced liver disease.[1]

Products/Cost[a]	Adult Split Dosing[c,g]	Efficacy	Tolerability/Cautions[b,e]
Sodium sulfate, magnesium sulfate, potassium sulfate or potassium chloride: small-volume, **hyperosmotic** solution or tablets that draws water into the intestinal lumen to exert its purgative effect.[23,24]			
US only: *Suprep* ($115/2 x 177 mL bottles) (contains potassium sulfate)	**Evening before**:[24] Drink one 177 mL bottle diluted to 500 mL with water. Then drink an additional 1 L of water over ~1 hour. **Day of**:[24] Repeat the above steps. Start ~10 to 12 hours after the first dose and finish at least 2 hours before colonoscopy.	• As effective or slightly more effective than PEG 2 L (1/2 4L) plus bisacodyl, PEG 4 L, and sodium picosulfate, citric acid, and magnesium oxide products.[4,13,25]	• Appears more tolerable than PEG 4 L.[13,25] • Use with caution in patients with heart failure, kidney impairment, or advanced liver disease, as can cause fluid shifts and electrolyte abnormalities.[1,7,23] • Avoid in patients taking meds that may increase the risk of kidney injury (e.g., ACEIs, ARBs, diuretics, NSAIDs).[23,24] • Similar in administration to sodium phosphate; however, phosphate free so no risk of acute phosphate nephropathy.[22,24]
US only: *Sutab* ($165/24 tablets) (contains potassium chloride)	**Evening before**:[23] Take 12 tablets with 0.5 L of water over 15 to 20 minutes. Then ~1 hour after taking the tablets, drink an additional 500 mL of water over 30 minutes, wait 30 minutes then drink another 500 mL of water over 30 minutes. **Day of**:[23] Repeat the above steps. Starting ~5 to 8 hours before colonoscopy and at least 4 hours after starting the first dose.		
Sodium picosulfate, citric acid, and magnesium oxide: combines **stimulant effect** (sodium picosulfate) to increase motility with **hyperosmotic** effect (magnesium oxide and citric acid) to induce diarrhea.[5] • consider over PEG for patients WITHOUT heart failure, kidney impairment or advanced liver disease, due to better tolerability.[7,12,14]			
US: *Clenpiq* ($175/2 bottles)	**Evening before**: drink one bottle, followed by 5 x 250 mL of clear liquids. **Day of** (~5 hours prior): drink one bottle followed by 3 x 250 mL of clear fluids (finish within 2 hours of colonoscopy).	• Appears similar to or slightly more effective than PEG 4 L.[4,9,12,14] • Appears to be as effective as PEG 2 L plus bisacodyl and oral sodium phosphate products (US).[12,27]	• Appears to be more tolerable than PEG 4 L and PEG 2 L plus bisacodyl.[7,9,12,13,27] • Use with caution in patients with heart failure, kidney impairment, or advance liver disease.[1,4,7] • Adequate hydration may improve safety and tolerability by minimizing electrolyte and fluid shifts.[9] • Consider avoiding with meds that increase the risk of kidney injury (e.g., ACEIs, ARBs, diuretics, NSAIDs).
Canada: *Pico-Salax* ($31/2 sachets) *Purg-Odan* ($25/2 sachets)	**Evening before** (~5PM):[26] drink 1 sachet in 150 mL cold water. Then (over 4 hours) drink 1.5 to 2 L of a **variety** of clear liquids (water, *Gatorade*, fruit juice, clear broth, black coffee or tea) and/or a balanced electrolyte solution (NOT just water). **Day of** (~6 hours prior):[26] Repeat above steps. Finish all fluids at least 2 hours prior to colonoscopy.		

Products/Cost[a]	Adult Split Dosing[c,g]	Efficacy	Tolerability/Cautions[b,e]
Magnesium citrate: (off-label) hyperosmotic. Draws fluid into the intestine, increasing motility, causing fluid and electrolytes to induce diarrhea.[5] • Not recommended for routine use; generally last choice, due to limited efficacy data and adverse effects (e.g., hypermagnesemia).[5]			
US: *Citroma* (~$2/300 mL) **Canada**: *Citrodan*, *Citro-Mag* ($5/300 mL bottle)	**Evening before**:[17] 1 bottle (300 mL) **Day of**:[17] 1 bottle (300 mL) 3 to 5 hours before colonoscopy.	• Rarely used alone as a colonoscopy preparation due to poor efficacy.[5,9]	• Risk of hypermagnesemia, especially in the elderly and patients with impaired kidney function.[9,17]
Although **not recommended** for bowel prep due to adverse effects, **sodium phosphate (US only) oral** products have been used. They are **hyperosmotic** and work by drawing water into the bowel and increasing peristalsis.[4,5] • Higher risk of electrolyte/fluid imbalances (≤20% of patients have low potassium) compared to PEG.[9] • Rare, serious reports (boxed warning) of acute phosphate nephropathy when used orally for bowel prep.[28]			

Abbreviations: ACEIs = angiotensin converting enzyme inhibitors; ARB = angiotensin receptor blockers; ELS = electrolyte lavage solution; GI = gastrointestinal; NSAIDs = nonsteroidal anti-inflammatory drugs; OTC = over-the-counter; PEG = polyethylene glycol.

a. Pricing based on wholesale acquisition cost (WAC). Cost of generics (where available) may be lower than brand products. Medication pricing by Elsevier, accessed November 2024.
b. Bowel preps have a significant number of precautions and considerations. Refer to product labeling for complete details.
c. Split dosing (as provided) is preferred to improve efficacy and tolerability of bowel preps.[4,5] If split dosing is not possible, refer to product labeling for single-day dosing (i.e., entire dose is taken in one day; doses separated by several hours).
d. It is common practice to ONLY drink clear fluids the day before a colonoscopy. Some recommend a low residue diet (avoiding high-fiber or difficult to digest foods [e.g., whole grains, nuts, raw fruits, raw vegetables]) for a few days before a colonoscopy.[5,7,17,26] These dietary changes may improve the effectiveness of bowel preps.[4]
e. Case reports of ischemic colitis with bowel prep regimes.[29]
f. Low-volume PEG products are often referred to in studies as "low-volume PEG **with ascorbate**" to better differentiate them from other PEG products.
g. The timing of dosing may need to be adjusted based on the scheduled time of the colonoscopy (e.g., if the colonoscopy is scheduled in the afternoon). Note that many prescribers and clinics may have their own instruction protocols that differ from the above dosing and timing guidance.

Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

Levels of Evidence

In accordance with our goal of providing Evidence-Based information, we are citing the **LEVEL OF EVIDENCE** for the clinical recommendations we publish.

Level	Definition	Study Quality
A	Good-quality patient-oriented evidence.*	1. High-quality randomized controlled trial (RCT) 2. Systematic review (SR)/Meta-analysis of RCTs with consistent findings 3. All-or-none study
B	Inconsistent or limited-quality patient-oriented evidence.*	1. Lower-quality RCT 2. SR/Meta-analysis with low-quality clinical trials or of studies with inconsistent findings 3. Cohort study 4. Case control study
C	Consensus; usual practice; expert opinion; disease-oriented evidence (e.g., physiologic or surrogate endpoints); case series for studies of diagnosis, treatment, prevention, or screening.	

***Outcomes that matter to patients** (e.g., morbidity, mortality, symptom improvement, quality of life).

[Adapted from Ebell MH, Siwek J, Weiss BD, et al. Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. Am Fam Physician 2004;69:548-56. https://www.aafp.org/pubs/afp/issues/2004/0201/p548.html.]

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