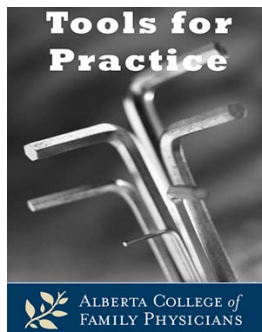


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Reviewed: March 10, 2015
Evidence Updated: Four systematic reviews, three RCTs
Bottom Line: No change
First Published: April 4, 2011



Polyethylene Glycol (PEG) for Paediatric and Adult Chronic Constipation

Clinical Question: How effective is Polyethylene Glycol (PEG) in paediatric and adult chronic constipation?

Bottom-line: In adults and paediatric patients with chronic constipation, PEG is as or more effective than other agents. Compared to placebo, it relieves constipation in one in every 2-3 patients and adds 1-3 bowel movements per week.

Evidence:

- At least eight systematic reviews of constipation with PEG versus other laxatives and/or placebo (range 5-19 trials, 594-1,643 participants 2-52 weeks long):¹⁻⁸
 - Adults outcomes, statistically significant:
 - PEG versus placebo:^{1,2}
 - Relief of constipation: Number Needed to Treat (NNT)=2-3.
 - Increased stool frequency: 2-3 more per week.
 - PEG versus lactulose:³
 - Increased stool frequency and reduced need for additional interventions.
 - Paediatrics outcomes, statistically significant:
 - PEG versus placebo:^{4,5}
 - Increased stool frequency: 1.5 to 2.6 more per week.
 - PEG versus lactulose:^{3,4,5}
 - Increased stool frequency: 0.7 to 1.5 more per week.
 - PEG versus milk of magnesia:⁵
 - Increase in stool frequency: 0.7 more per week.
 - Multiple outcomes improved such as resolved constipation, reduced abdominal pain, and reduced need for additional interventions.^{3,5}
 - One review found no difference between PEG and other laxatives, but excluded relevant studies.⁶
 - Other reviews found similar.^{7,8}

- Recent RCTs found similar efficacy to prucalopride⁹, superior efficacy to lactulose¹⁰ and efficacy in irritable bowel syndrome.¹¹

Context:

- Chronic constipation impacts quality of life similar to diabetes and stable ulcerative colitis.¹²
- Compared to lactulose, PEG may be better tolerated² and is cost effective¹³ at approximately \$1.00 per day (at 17 grams/day).
- Although types of PEG vary in trials, this seems to have little impact on success.^{3,4}
- Current guidelines recommend PEG as the first line agent in paediatric^{14,15} and adult constipation.¹⁶
- In reviews of multiple agents versus placebo, PEG has better evidence (versus senna or docusate)² or better NNT (than psyllium or prucalopride).^{1,2}
- Recommended starting doses:
 - Adults, 17 grams daily.⁴
 - Paediatrics, 0.6 grams/kg/day (or 5-12 grams/day).⁴
 - Titrate doses to symptom relief and adverse events (diarrhea).

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