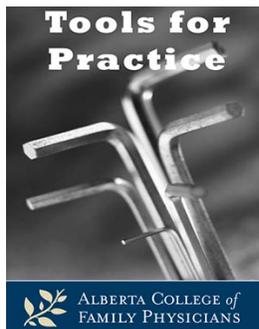


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**Reviewed: March 10, 2015**  
**Evidence Updated: Four systematic reviews, three RCTs**  
**Bottom Line: No change**  
**First Published: April 4, 2011**



## **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):<sup>1-8</sup>
  - Adults outcomes, statistically significant:
    - PEG versus placebo:<sup>1,2</sup>
      - Relief of constipation: Number Needed to Treat (NNT)=2-3.
      - Increased stool frequency: 2-3 more per week.
    - PEG versus lactulose:<sup>3</sup>
      - Increased stool frequency and reduced need for additional interventions.
  - Paediatrics outcomes, statistically significant:
    - PEG versus placebo:<sup>4,5</sup>
      - Increased stool frequency: 1.5 to 2.6 more per week.
    - PEG versus lactulose:<sup>3,4,5</sup>
      - Increased stool frequency: 0.7 to 1.5 more per week.
    - PEG versus milk of magnesia:<sup>5</sup>
      - 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.<sup>3,5</sup>
    - One review found no difference between PEG and other laxatives, but excluded relevant studies.<sup>6</sup>
  - Other reviews found similar.<sup>7,8</sup>

- Recent RCTs found similar efficacy to prucalopride<sup>9</sup>, superior efficacy to lactulose<sup>10</sup> and efficacy in irritable bowel syndrome.<sup>11</sup>

#### Context:

- Chronic constipation impacts quality of life similar to diabetes and stable ulcerative colitis.<sup>12</sup>
- Compared to lactulose, PEG may be better tolerated<sup>2</sup> and is cost effective<sup>13</sup> 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.<sup>3,4</sup>
- Current guidelines recommend PEG as the first line agent in paediatric<sup>14,15</sup> and adult constipation.<sup>16</sup>
- In reviews of multiple agents versus placebo, PEG has better evidence (versus senna or docusate)<sup>2</sup> or better NNT (than psyllium or prucalopride).<sup>1,2</sup>
- Recommended starting doses:
  - Adults, 17 grams daily.<sup>4</sup>
  - Paediatrics, 0.6 grams/kg/day (or 5-12 grams/day).<sup>4</sup>
  - Titrate doses to symptom relief and adverse events (diarrhea).

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