

# Review: Laxatives and fibre therapies improve bowel movement frequency in adults with chronic constipation

Tramonte SM, Brand MB, Mulrow CD, et al. **The treatment of chronic constipation in adults. A systematic review.** *J Gen Intern Med.* 1997 Jan; 12:15-24.

## Objective

To determine whether laxatives and fibre therapies improve symptoms and bowel movement frequency in adults with chronic constipation.

## Data sources

Studies were identified with MEDLINE (1966 to 1995), Biological Abstracts, and Micromedex (a drug information service) using the terms constipation, defecation, feces-impacted, fecal incontinence, and dietary fiber or laxative. Laxative terms were acrylic resins, bisacodyl, cascara, castor oil, cathartics, cisapride, dioctyl sulfosuccinates, enema, glycerin, lactulose, magnesium citrate, magnesium compounds, magnesium hydroxide, magnesium sulfate, methylcellulose, mineral oil, phenolphthaleins, phosphates, polyethylene glycols, psyllium, senna, sodium phosphate, and sorbitol plus trade names. Bibliographies from studies and textbooks were checked,

## Commentary

Constipation is a vague term used by patients and physicians to mean different things. The review by Tramonte and colleagues shows the inadequacies of the literature; it remains unclear whether laxatives improve the perception of constipation (which may not be reflected in improved stool frequency) or quality of life. Importantly, the authors found it impossible to quantify the efficacy of the different classes of laxatives because of the inadequate and variable outcome measures applied. However, the possible benefit of fibre (bulk) therapies on other symptoms, such as pain, along with the safety of these therapies argues for their continued use despite a lack of established efficacy. The benefits of nonpharmacological therapies (e.g., exercise, evacuation posture) remain poorly documented. Another key unresolved issue is whether stimulant laxatives

and laxative manufacturers and experts were contacted.

## Study selection

Randomised controlled trials were selected if they were published in English and studied adults with chronic constipation and if the study duration was > 2 weeks, treatment was > 1 week, and clinical outcomes were assessed. Surgical interventions were excluded.

## Data extraction

Data were extracted on populations; interventions, including class of laxatives (osmotic; irritant or peristaltic stimulant; bulk or hydrophilic; and surfactant, softener, or wetting agents); outcomes (bowel movement frequency; symptoms, including stool consistency and abdominal pain); study design; and methodological quality.

## Main results

36 trials (1815 participants) were identified (20 single-agent and 16 multiple comparisons). 25 different laxative or dietary fibre therapies were studied. Approximately 40% of the participants were > 60 years of age, and 70% were women. 13 of the single-agent trials that reported data on bowel movement frequency showed that the mean bowel

movement frequency per week increased with laxative or fibre use (5.0 for treatment vs 3.5 bowel movements/wk for control, 95% CI for the weighted 1.4 difference, 1.1 to 1.8). 5 of 16 trials that compared active agents showed a difference in bowel movement frequency. 9 of 11 single-agent trials showed overall improvement in symptoms, and 8 of 11 trials showed improvement in stool consistency. Of the 11 trials that assessed abdominal pain, 1 trial showed increased pain, and 1 trial showed decreased pain. General well-being was assessed in 2 trials, and no differences were found. Studies also did not show differences in rates of adverse effects across interventions, although data were limited.

## Conclusions

Laxatives and fibre therapies improve bowel movement frequency in adults with chronic constipation. Inadequate evidence exists to determine differences between classes of laxatives.

*Source of funding:* Department of Veterans Affairs Health Services Research and Development Service.

*For article reprint:* Dr. C. Mulrow, Audie L. Murphy Memorial Veterans Hospital (11C6), 7400 Merton Minter Boulevard, San Antonio, TX 78284, USA. FAX 210-567-4685.

cause long-term harm (e.g., anthraquinone derivatives and neuronal damage) because adequate follow-up studies are unavailable.

Constipation is not a single disorder but includes slow colonic transit (based on colonic marker studies), pelvic floor dysfunction that includes paradoxical anal sphincter contraction, and normal transit (presumably part of the spectrum of irritable bowel syndrome). Colonic symptoms do not reliably distinguish among these diagnoses (1). Theoretically, laxative treatment should be targeted to the underlying pathophysiology. A recent uncontrolled study reported that 85% of patients who were constipated and had normal colonic transit responded to 15 to 30 g of proprietary fibre over 6 weeks; in comparison, only 20% of those with slow colonic transit and 37% of those with pelvic floor dysfunction responded to this therapy (2).

More work is needed to adequately test this hypothesis in a randomised controlled trial.

Optimal management of chronic constipation remains a challenge because of a lack of adequate data on the long-term cost-benefits of therapy.

Nicholas J. Talley, MD, PhD  
University of Sydney  
Penrith, New South Wales, Australia

## References

1. Grotz RL, Pemberton JH, Talley NJ, Rath DM, Zinsmeister AR. Discriminant value of psychological distress, symptom profiles, and segmental colonic dysfunction in outpatients with severe idiopathic constipation. *Gut.* 1994;35:798-802.
2. Voderholzer WA, Schatke W, Muhldorfer BE, et al. Clinical response to dietary fiber treatment of chronic constipation. *Am J Gastroenterol.* 1997;92:95-8.