

MANAGEMENT OF CONSTIPATION IN HOSPITALISED ELDERLY PATIENTS

Supporting information

This guideline has been prepared with reference to the following:

World Gastroenterology Organisation. Constipation. Practice Guideline. WGO, 2010

http://www.worldgastroenterology.org/assets/export/userfiles/05_constipation.pdf

McKay SL, Fravel M, Scanlon C. Management of constipation, 2009. Gerontological Nursing Interventions Research Center, University of Iowa

Drinking more than 1 L of fluid daily encourages a regular bowel habit?

A study in 15 volunteers aged 23-46 years (Chung, 1999) had 9 increase their consumption, over 4 days, of isotonic fluids (Gatorade) and the remaining 6 increased water intake. In both cases this was between 1 and 2L above a measured baseline. No significant change in stool output was noted either during, or 2 days after, 4 days of increased fluid intake.

A study in 8 volunteers aged 21-28 years (Klauser, 1990) measured stool output during a week with a fluid intake of more than 2.5L per day, followed by a week (after a wash-out week in between) in which fluid intake was less than 0.5L per day. Stool frequency diminished from 6.9 +/- 0.9-4.9 +/- 0.3 (mean +/- SEM) defaecations per week ($p = 0.041$) and stool weight from 1.29 +/- 0.20-0.94 +/- 0.17 kg per week ($p = 0.048$) during the period of fluid restriction.

Reduced fluid intake is associated anecdotally with constipation in the elderly (Leung, 2006; Bosshard, 2004). There is, however, "no evidence that constipation can successfully be treated by increasing fluid intake unless there is evidence of dehydration" (Muller, 2005).

Bosshard W, Dreher R, Schnegg JF, et al. The treatment of chronic constipation in elderly people: an update. *Drugs Aging* 2004;21:911-30

Chung BD, Parekh U, Sellin JH. Effect of increased fluid intake on stool output in normal healthy volunteers. *J Clin Gastroenterol* 1999;28:29-32

Klauser AG, Beck A, Schindlbeck NE, et al. Low fluid intake lowers stool output in healthy male volunteers. *Z Gastroenterol* 1990;28:606-9

Leung FW. Myths about etiologic factors of chronic constipation: scientific evidence. *Adv Stud Med* 2006;6:S67-73

http://www.jhasim.com/files/articlefiles/pdf/XASIM_Issue_6_2A_p67_73.pdf

Muller LS, Kamm MA, Scarpignato C, et al. Myths and misconceptions about chronic constipation. *Am J Gastroenterol* 2005;100:232-42

Evidence Level: IV

Bisacodyl suppositories are more effective than glycerine suppositories?

A 2010 review found that was insufficient evidence with which to answer this question.

Frizelle F, & Barclay M. Constipation in adults. *BMJ clinical evidence*; 2010

<http://europepmc.org/articles/PMC3217654>

Arachis oil or docusate enema is more effective than phosphate enema, which in turn is more effective than Microlax enema?

No robust evidence that demonstrates the superiority of one type of enema over another can be identified. Anecdotally, some patients may respond more readily to a particular type of enema, but consideration should be given to possible contraindications in the choice of agent used. Arachis oil, for example, may not be used in patients with a peanut allergy, and phosphate enemas may be dangerous in dehydrated patients or those with renal failure (Bowers, 2006; Davies, 2004).

Bowers B. Evaluating the evidence for administering phosphate enemas. *Br J Nurs* 2006;15:378-81

Davies C. The use of phosphate enemas in the treatment of constipation. *Nurs Times* 2004;100:32-5

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Evidence Level: V

How does manual evacuation compare with bowel washout in the management of impacted faeces?

No studies that compared the two procedures were identified. The need for an evidence-based guideline has been recognised, especially as “Digital removal of faeces is viewed as a last resort in the management of severe constipation and is only practised when all other methods of bowel evacuation have failed” (Kyle, 2004).

Kyle G, Pryn P, Oliver H. An evidence-based procedure for the digital removal of faeces. *Nurs Times* 2004;100(48):71

Evidence Level: V

What are the relative advantages and disadvantages of senna, bisacodyl and docusate as stimulant laxatives?

A Health Technology Assessment review (Petticrew, 1997) found that “It was not possible to determine the relative effectiveness of different types of laxative as few good quality comparative studies have been carried out. However, a combination of a bulk plus stimulant laxative (Agiolax) was found in two good quality trials to be more effective in improving stool consistency and frequency than an osmotic laxative alone (lactulose).”

More recent reviews (Joy, 2005; Haycox, 2001; Petticrew, 1999) agree that “there appears to be no evidence to support the current NHS trend towards prescribing the more expensive stimulant laxatives” (Petticrew, 1999).

Good evidence does exist, on the other hand, to support the use of osmotic laxatives such as polyethylene glycol (PEG) (Lee-Robichaud 2010; Joy, 2005; Ramkumar, 2005).

Joy JP. Review: good evidence supports the use of polyethylene glycol and tegaserod for constipation. *Evidence Based Nurs* 2005;8:109

<http://ebn.bmj.com/content/8/4/109.full>

Lee-Robichaud H, Thomas K, Morgan J and Nelson RL. Lactulose versus Polyethylene Glycol for Chronic Constipation Intervention Review. *Cochrane Database Syst Rev* 2010; 7 (7): Art. No.: CD007570.

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007570.pub2/full>

Petticrew M, Watt I, Sheldon T. Systematic review of the effectiveness of laxatives in the elderly. *Health Technol Assess* 1997;1(13):1-52

http://www.journalslibrary.nihr.ac.uk/_data/assets/pdf_file/0009/64863/FullReport-hta1130.pdf

Petticrew M, Watt I, Brand M. What's the 'best buy' for treatment of constipation? Results of a systematic review of the efficacy and comparative efficacy of laxatives in the elderly. *Br J Gen Pract* 1999;49:387-93

<http://bjgp.org/content/bjgp/49/442/387.full.pdf>

Ramkumar D, Rao S. Efficacy and safety of traditional medical therapies for chronic constipation: systematic review. *Am J Gastroenterol* 2005;100:936-71

Evidence Level I (in support of osmotic laxatives)

A minimum daily fluid intake is necessary for effective use of an osmotic laxative such as lactulose?

No evidence has been identified with which to answer this question, although fluid intakes of < 0.5L per day have been shown to result in smaller and less frequent motions in healthy volunteers (Klauser, 1990).

An Effective Health Care review concludes that “Research is also required into the effectiveness of overall dietary change (including increased fluid intake) in the treatment of constipation.” (Anon, 2001).

Anon. Effectiveness of laxatives in adults. *Effective Health Care* 2001;7(1):1-12

<https://www.york.ac.uk/media/crd/ehc71.pdf>

Klauser AG, Beck A, Schindlbeck NE, et al. Low fluid intake lowers stool output in healthy male volunteers. *Z Gastroenterol* 1990;28:606-9

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Evidence Level: V

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