Therapeutics

Review: soluble fibre improves overall symptoms and constipation but not abdominal pain in irritable bowel syndrome

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Bijkerk CJ, Muris JW, Knottnerus JA, *et al.* **Systematic review: the role of different types of fibre in the treatment of irritable bowel syndrome.** *Aliment Pharmacol Ther* 2004;**19**:245-51. [PMID: 14984370]

Clinical impact ratings GP/FP/Primary care ●●●●●○○ IM/Ambulatory care ●●●●●○○ Gastroenteroloy ●●●●●○○

Question: In patients with irritable bowel syndrome (IBS), does dietary fibre relieve symptoms?

Keywords: dietary fibre; irritable bowel syndrome

Methods

Data sources:

Medline (1966–2002) and reference lists.

Study selection and assessment:

English language randomised controlled trials (RCTs) or quasi-RCTs of dietary fibre in patients with IBS. Exclusion: studies that combined fibre and drug treatment.

Outcomes:

global IBS symptoms, IBS related abdominal pain, and IBS related constipation.

Main results

17 studies (1363 patients) met the selection criteria. 9 studies used soluble fibre, and 8 used insoluble fibre. Study duration ranged from 3–52 weeks (mean 12 wks) in 16 studies; 1 study did not report duration. Studies were combined using a fixed effects model. Fibre improved overall IBS symptoms and IBS related constipation but not IBS related abdominal pain (table). Results were similar for soluble fibre (table). Insoluble fibre improved IBS related constipation but not overall symptoms or IBS related abdominal pain (table).

Conclusions

In patients with irritable bowel syndrome, soluble fibre improves overall symptoms and IBS related constipation but not IBS related abdominal pain. Insoluble fibre improves IBS related constipation but not overall symptoms or abdominal pain.

Fibre *v* control in irritable bowel syndrome (IBS) at 3–52 weeks*

Outcomes	Type of fibre (number of studies)	Weighted event rates	RBI (95% CI)	NNT (CI)
Global IBS symptom improvement	All (12)	61% *v* 45%	33% (19 to 50)	7 (5 to 10)
	Soluble (8)	64% *v* 42%	55% (35 to 78)	5 (4 to 7)
			RBR (CI)	NNH (CI)
IBS related abdominal pain improvement	Insoluble (4)	50% *v* 56%	11% (-11 to 28)	Not significant
	All (9)	33% *v* 43%	22% (5 to 36)	11 (7 to 39)
	Soluble (3)	29% *v* 43%	33% (5 to 53)	8 (4 to 34)
	Insoluble (6)	36% *v* 43%	13% (-8 to 31)	Not significant
			RBI (CI)	NNT (CI)
IBS related constipation improvement	All (8)	39% *v* 25%	56% (21 to 102)	8 (5 to 15)
	Soluble (2)	42% *v* 25%	60% (6 to 142)	6 (4 to 20)
	Insoluble (6)	37% *v* 25%	54% (10 to 114)	9 (5 to 32)

*RBR = relative benefit reduction. Other abbreviations defined in glossary; RBI, RBR, NNT, NNH, and CI calculated from data in article.

Commentary

Conventional wisdom is difficult to change, especially when it involves advice that is simple and safe. Many practitioners recommend fibre for the treatment of IBS. The thinking is that fibre can have a laxative effect when people have constipation as well as a stool forming effect when people have diarrhoea. Thus, fibre has been thought to be a reasonable treatment option in IBS.

What is the evidence that fibre is helpful? In the systematic review by Bijkerk *et al*, a total of 17 studies involving 1363 patients were analysed. When all 17 studies were pooled, a beneficial effect of fibre was identified for global symptom improvement. However, when the data were evaluated for soluble and insoluble fibre separately, the effect on overall symptoms was positive for soluble but not insoluble fibre. These studies were conducted between 1979 and 1999 and likely used varying definitions of IBS. Only recently have standardised definitions of IBS been used in clinical trials. Recent studies of IBS have often separated patients with predominantly diarrhoea from patients with predominantly with constipation. Specific treatments have differential effects on IBS subtypes. None of the studies in this systematic review evaluated the IBS subtypes. Conceivably, dietary fibre might be more helpful in constipation predominant IBS as the studies suggest improvement in the symptom of constipation.

None of the studies were conducted in primary care practices. Often the advice related to fibre is offered at the initial encounter. The lack of effect may reflect a referral bias; that is, people who respond well to fibre in a primary care setting are not likely to be referred and thus, not likely to be recruited into specialty clinic based clinical trials. The authors of this systematic review appropriately highlight the need for trials in primary care.

Among the studies of soluble fibre, 7 of 9 were of ispaghula. Thus, only single small studies have been done using the other commonly prescribed forms of soluble fibre. Again, this argues for the need of further research. Finally, the overall effect was relatively small. In part, this is due to the high levels of improvement in the control groups. Thus, the number needed to treat for an effect on global IBS symptom improvement with soluble fibre was 5.

What's the bottom line? Conventional wisdom is partially correct. Soluble fibre in the form of ispaghula appears effective for IBS overall. Any other conclusions related to fibre are based on very little evidence.

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