



Medicines Evidence Commentary

commentary on important new evidence from Medicines Awareness Weekly

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Irritable bowel syndrome: effect of antidepressants and psychological interventions

A systematic review and meta-analysis found that antidepressants and psychological therapies are effective for reducing symptoms in adults with irritable bowel syndrome (IBS). Despite some limitations with the quality of the evidence, the findings support NICE recommendations on the [management of IBS in adults](#). There is national variation relating to accessibility to psychological therapies for IBS, which is dependent on local commissioning.

Overview and current advice

The full NICE guideline on [the diagnosis and management of irritable bowel syndrome](#) (IBS) states that this chronic, functional bowel disorder can have a significant negative impact on a person's quality of life. People with IBS present with varying symptom profiles, most commonly 'diarrhoea predominant', 'constipation predominant' or alternating symptom profiles. IBS is more common in women than men, most often affecting people between the ages of 20 and 30 years. Prevalence in the general population is estimated to be between 10% and 20%.

The underlying causes of IBS are not clear but are likely to be multifactorial. Possible factors include gut hypersensitivity, abnormal gastrointestinal motility, enteric infection, abnormal central pain processing of afferent gut signals, diet and psychosocial factors such as associated stress, anxiety or depression (Clinical knowledge summary on [IBS](#)).

The NICE guideline on [IBS in adults](#) recommends that people with IBS should be given self-help advice including information on general lifestyle and diet. Treatment choices should be based on the nature and severity of symptoms. NICE recommends considering the use of anti-spasmodic agents, laxatives or anti-motility agents such as loperamide. If these treatments do not help, NICE recommends then considering tricyclic antidepressants (TCAs) and considering selective serotonin reuptake inhibitors (SSRIs) if TCAs are ineffective.

NICE Pathways on [IBS](#) bring together all NICE guidance and associated products related to this condition in interactive topic-based diagrams. The Clinical knowledge summary information on [IBS](#) gives a general overview of prescribing considerations for this condition.

New evidence

A [systematic review](#) and [meta-analysis](#) of 53 [randomised controlled trials](#) (RCTs) by [Ford et al, 2018](#) investigated the effect of antidepressants and psychological therapies in people (aged over 16 years) with IBS. The analysis included 17 RCTs comparing antidepressants with placebo (1,127 participants),

35 RCTs comparing psychological therapy with control therapy (symptom monitoring, usual management) or placebo (2,487 participants) and 1 study (172 participants) comparing both psychological therapy and drug therapy with placebo.

Most antidepressant studies investigated TCAs (11 studies), 6 RCTs considered SSRIs and 1 RCT studied both. Psychological therapies included studies on cognitive behavioural therapy (CBT, 8 RCTs), internet-delivered CBT (2 RCTs), relaxation training or therapy (7 RCTs), hypnotherapy (5 RCTs), multicomponent psychological therapy (5 RCTs) and a number of single RCTs investigating a range of other interventions. Study follow-up time was a minimum of 7 days and with a minimum therapy duration of 7 days or more.

Primary outcomes were the effect of antidepressants and psychological therapies on abdominal pain and IBS symptoms.

Overall, 43.5% of participants assigned to receive antidepressant therapy reported no improvement in IBS symptoms, compared with 66.0% of those allocated to placebo ([relative risk \[RR\]](#): 0.66, 95% [confidence interval \[CI\]](#): 0.57 to 0.76). In relation to efficacy of antidepressants on abdominal pain, 47.8% of participants reported no improvement in symptoms compared with 72.8% allocated to placebo. According to the authors the improvement in abdominal pain appeared to be limited to TCAs (RR: 0.59; 95% CI: 0.42 to 0.83) with no statistically significant effect of SSRIs (RR: 0.64; 95% CI: 0.32 to 1.27). Adverse events were reported in 36.4% of participants taking antidepressants compared with 21.1% of those allocated to placebo (pooled data RR: 1.56, 95% CI: 1.23 to 2.06). No serious adverse events were reported.

Symptoms did not improve in 52.2% of participants receiving psychological therapies, compared with 75.9% in the control group (RR: 0.69, 95% CI: 0.62 to 0.76). When data from 2 or more RCTs were pooled CBT, relaxation therapy, multicomponent psychological therapy, hypnotherapy and dynamic psychotherapy were all more effective than control. Adverse events were poorly reported in RCTs involving psychological therapies.

The authors report that this exhaustive literature review and methodology enabled access to patient level data of more than 3,500 people with IBS. However, the authors state that very few of the included RCTs were at low risk of bias. Significant [heterogeneity](#) was detected between studies. There were also methodological limitations to some of the included psychological studies, including lack of blinding and possible publication bias. Only 2 RCTs were in a primary care setting which may limit the generalisability to UK practice.

Commentary

Commentary provided by NICE

The systematic review and meta-analysis by Ford et al. sought to establish the efficacy of alternative treatment options for people with IBS and concluded that antidepressants and psychological therapies are effective. There were limitations to the review. These included risk of bias in some studies available for the data synthesis, which may have resulted in over-estimation of the treatment effect, variation between trials for different therapy options, and a paucity of data on which symptom dominant types of the condition reported most suitable therapy.

NICE recommends considering TCAs in preference to SSRIs for the treatment of IBS, only considering SSRIs when the former has been shown to be ineffective. This is due to more uncertainty with the evidence on SSRIs than with TCAs (NICE full guideline: addendum on [IBS](#)). While reported side effects are more common with TCAs (at higher doses) than SSRIs, it is important to note that NICE recommends using low-dose TCAs, lower than the dose commonly used for depression. Evidence for the effectiveness of antidepressants for the management of IBS in a primary care setting

is limited. The NICE guideline update includes a research recommendation to assess the clinical and cost effectiveness of low-dose TCAs and SSRIs for treating IBS in primary care, as the initiation and monitoring of treatments for IBS are usually managed in this setting.

The study by Ford et al confirmed that CBT and psychotherapy are superior to other forms of psychological intervention. These are considered cost-effective interventions in people with refractory IBS and NICE recommends them as options. There is national variation relating to accessibility to these therapies, which is dependent on local commissioning.

Study sponsorship

The study received financial support from the American College of Gastroenterology.

References

Ford W, Lacy BE, Harris LA, et al. (2018). [Effect of antidepressants and psychological therapies in irritable bowel syndrome: An updated systematic review and meta-analysis](#). The American journal of gastroenterology 114(1):21-39

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