

IRRITABLE BOWEL SYNDROME

KEY POINTS

- The diagnosis of IBS can be made from the clinical history as long as there are no alarm features of other pathology
- In primary care, the mainstays of treatment are explanation and reassurance, coupled with sensible advice about lifestyle, diet and stress
- Treatment is tailored to the predominant symptoms
- People with IBS often report a close relationship between stress and their bowel symptoms and both anxiety and depression are common in people with IBS
- Psychological support is an integral part of the management of IBS in primary care and there is some evidence more formal psychological therapies can be effective
- The results of pharmaceutical interventions for IBS are often disappointing but some individuals will get good responses

Expert Reviewer

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Irritable Bowel Syndrome (IBS) affects approximately one in ten of the population, mostly women between the ages of 20 and 50 years.

The diagnosis of IBS can be made from the clinical history as long as there are no alarm features of other pathology. However a firm diagnosis cannot be made until symptoms have been present for the previous three months with onset of symptoms at least six months before diagnosis. IBS has a prolonged course and over half of people with it still get symptoms seven years after diagnosis.

Although symptoms may occur over a long period of time, with no risk of life threatening complications, making a diagnosis as early as possible is useful. It helps prevent exacerbation of the anxiety many people with IBS experience and prevents additional costs and risks from unnecessary investigations.

CAUSES OF IBS ARE NOT YET WELL DEFINED

Although the causes of IBS are not well defined, there is some understanding of contributory factors.

Parental influences appear to be environmental rather than genetic

There is a definite familial association with IBS, however this appears to be related to environmental factors, such as parental influences on illness behaviour, rather than genetic factors. Any genetic contribution to IBS is currently thought to be minor.

Altered gastrointestinal motility: associated but not necessarily causative

Altered gastrointestinal motility occurs frequently in people with IBS. Different patterns of gastric, small bowel and colonic motility appear to be related to different symptom complexes. For example people with IBS and diarrhoea generally have increased colonic motility while those with constipation have reduced motility.

However, it has not been established that altered motility causes the symptoms of IBS, and at least 25% of people with IBS change their gastrointestinal motility pattern at least once per year.

Visceral hypersensitivity appears to be important

Visceral hypersensitivity, caused by peripheral and central sensitisation, appears to play an important role in IBS and can be demonstrated experimentally in approximately one-third of people with IBS. It may explain why some people report their symptoms began with an episode of gut inflammation due to gastroenteritis.

Distress response strongly associated with IBS

There is a strong association between IBS and psychological distress. Approximately half of people with IBS who seek medical care are depressed or anxious, and approximately two-thirds of patients attending an out patient clinic for IBS reported anxiety provoking incidents or episodes of psychiatric illness preceding the onset of symptoms. Anxiety and depression also appear to predispose people to developing IBS following a bout of gastroenteritis.

People with IBS often report multiple somatic complaints and this may indicate that somatisation or abnormal pain perception are contributing to their symptoms.

Post-infective IBS

Prevalence studies reveal between 6–12% of patients develop IBS after an infection, and it may be associated with a number of different pathogens. It is 11 times more likely that a person will develop IBS in the year following if they have experienced a bout of gastroenteritis. Female gender, as well as the adverse psychological factors previously mentioned, increase this risk.

CLINICAL FEATURES OF IBS

History is key to making a diagnosis of IBS

The diagnosis of IBS can almost always be made on the basis of the history. A good history will identify:

- Diagnostic features of IBS
- Predominant symptoms
- Health anxieties
- Precipitating or aggravating factors
- Psychological factors
- Relevant family history
- Dietary manipulations
- Presence or absence of alarm symptoms for other pathology

Diagnostic features of IBS

IBS is recurring abdominal pain or discomfort associated with disturbed bowel habit, lasting for at least six months in the absence of structural abnormalities, likely to account for these symptoms.

Disturbance of bowel habit needs clarification. Many of the symptoms experienced in IBS can be described as diarrhoea or constipation by patients. These terms may be being used when there is change in stool frequency or consistency, straining, a feeling of incomplete evacuation, passage of mucus per rectum, urgency or bloating.

The pain or discomfort of IBS is usually associated with bowel habit. For example, it may occur with changes in stool frequency or consistency or be relieved by defaecation. Pain that is not associated with bowel habit or is constant raises the possibility of other causes.

ROME III diagnostic criteria* for IBS

Recurrent abdominal pain or discomfort** at least 3 days per month in the last three months associated with two or more of the following:

- Improvement with defaecation
- Onset associated with change in frequency of stool
- Onset associated with change in form (appearance) of stool

**Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis*

***Discomfort means an uncomfortable sensation not described as pain*

Predominant symptoms

IBS is not a homogenous condition and people with it may experience a range of symptom patterns. The pattern often varies from time to time in the same patient. Treatment is tailored to the predominant symptoms.

The history often reveals one of the following as the most troublesome symptoms:

- Pain
- Diarrhoea
- Constipation
- Bloating with distension
- Bloating without distension

Health anxieties

As many as 50% of people with IBS are concerned they have cancer or some other serious underlying pathology. Anxiety about this may be the most troublesome feature of IBS and may lead patients to want invasive investigations. Discussion of these anxieties can help patients avoid unnecessary procedures.

Precipitating or aggravating factors

Some patients will be able to identify an event, which preceded the onset of their IBS, such as a bout of gastroenteritis (page 37).

Patients may be able to identify factors, which aggravate their symptoms. These may include menstruation, antibiotics, NSAIDs and statins.

Psychological factors

Anxiety, stress and other psychological factors, are common accompaniments to IBS. Their presence has been shown to negatively impact on response to treatment and they require careful management.

Relevant family history

A family history of bowel disorders may raise patient anxieties, sometimes appropriately, about a serious underlying pathology.

Dietary manipulations

Most people with IBS will have tried some form of dietary manipulations and some may be on diets, which contain excessive amounts of fruit, bran, dairy products, caffeine or other foods in efforts to control their symptoms.

Alarm signals

Alarm signals, which may indicate other pathology, such as gastrointestinal cancers and inflammatory bowel disease, must be excluded before a confident diagnosis of IBS can be made. Alarm signals include:

- Aged over 50 years at first presentation
- Male
- Short history of symptoms
- Nocturnal symptoms
- Significant family history of colon cancer
- Rectal bleeding
- Recent antibiotic use
- Unexplained iron deficiency anaemia

Physical examination in IBS usually reveals no relevant abnormality

Physical examination is usually normal in IBS; any abdominal tenderness, as with abdominal pain, is generalised, as it is visceral in origin. Examination may reveal signs of another cause for the abdominal pain such as localised abdominal wall tenderness or tenderness over the gall bladder or other organs.

More extensive examination may be indicated by any alarm signals identified.

Investigation

The diagnosis of IBS is made from the pattern of symptoms as previously discussed. It is not a diagnosis of exclusion. Investigation to exclude other causes are not needed, particularly for young people with straightforward symptoms, unless there are features which suggest other causes.

Initial investigation is usually complete blood count to check for iron deficiency anaemia and CRP. Further investigations, such as thyroid function tests, glucose and coeliac serology will be indicated if there are any alarm signals, suspicion of coeliac disease (page 20) or persistent diarrhoea.

Referral for colonoscopy is usually not indicated in a young patient. In specialist practice, partial investigation of the colon (flexible sigmoidoscopy) may be useful to obtain biopsy specimens, however this is not often required or performed. Occasionally management outcomes appear to be improved by performing these procedures and confirming a normal colon, but there are always risks associated with over investigation.

TREATMENT

In primary care, the mainstays of treatment are explanation and reassurance, coupled with sensible advice about lifestyle, diet and stress.

Psychological factors are best raised at the first consultation and clinicians in primary care can build upon their ongoing relationships with their patients. Fears of cancer and other serious organic pathology are often easily allayed if handled sensitively.

Pharmaceutical interventions are available but their efficacy is limited and they need to be used judiciously.

Dietary treatment

Adjusting the intake of fibre, carbohydrate and fats in the diet is a simple and sometimes effective intervention in IBS. Effects of changes in the diet may be delayed for one to five days, or longer if the patient has constipation.

Alterations in fibre intake needs careful management

The majority of therapeutic trials in secondary care examining the effect of fibre in the diet do not show much benefit. Cereal fibre may make the majority of patients worse. Soluble fibres, such as psyllium (Mucilax, Konsyl D) and ispaghula can be better.

In primary care, it is worthwhile trialling soluble fibres for patients in whom it seems to be indicated, but reducing or stopping them if there is no improvement. Some patients will need to be cautioned against excessive fibre intake.

Alterations in carbohydrate intake

Lactose and fructose intolerance have been associated with IBS-like symptoms. Reliance on history and trials of low intakes of either lactose or fructose may give the diagnosis. However, there appears to be little difference between the prevalence of carbohydrate intolerance in people with IBS and the general population.

Alteration in fat intake often helps

Fat in the gut can induce flatulence and bloating and people with IBS are often particularly aware of this because of their visceral hypersensitivity. It is often worth decreasing the fat intake.

Some patients may respond to food exclusions

Some patients appear to respond to food exclusion but a systematic review has concluded that there is insufficient evidence to use this routinely. It may however be worth trying when other options have failed.

The most frequently reported food intolerances in IBS are dairy and wheat products.

People who undertake food exclusion diets are at risk of a nutritionally inadequate diet so this is probably best supervised by a dietician. It is important to re-challenge with the excluded food to confirm any association.

Psychological therapies

People with IBS often report a close relationship between stress and their bowel symptoms and both anxiety and depression are common in people with IBS. Psychological support is an integral part of the management of IBS in primary care and there is some evidence more formal psychological therapies can be effective. These are less likely to be effective for patients who have constant pain or bowel upsets or have depression. Lack of availability and cost often limit the use of formal psychological therapies.

Psychodynamic interpersonal therapy

Psychodynamic interpersonal therapy shows signs of being successful. Its goal is to provide insights into why symptoms developed in association with life events or changes and to provide an understanding of the link between bowel symptoms and emotions. This uses the therapeutic relationship to help patients recognise the association between present stressors and symptoms. It appears to lead to significant improvement in quality of life and reduction in symptoms.

Cognitive behaviour therapy

Studies suggest that cognitive behaviour therapy helps people with IBS cope with their symptoms but does not relieve the symptoms themselves.

Hypnotherapy

Hypnotherapy has evidence of effectiveness for people with symptoms refractory to standard treatments but its use as a first line treatment is not proven.

Relaxation therapy

Relaxation therapy appears to be useful when exacerbation of symptoms is associated with stress.

Pharmaceutical interventions are guided by the predominant symptoms

The results of pharmaceutical interventions for IBS are often disappointing but some individuals will get good responses. The targets of drug therapy include relaxing the smooth muscle of the gut wall, altering gut transit patterns and reducing visceral sensation. There appears to be a significant placebo response, which is enhanced by more frequent dosing and therapeutic doctor/patient interactions.

Pharmaceutical interventions are targeted at the predominant symptoms and are more likely to be effective for diarrhoea or constipation than they are for pain, discomfort and bloating.

Antispasmodics

Cochrane Reviews have confirmed the efficacy of anti-spasmodic therapies in controlling pain in IBS sufferers. As with all trials in IBS therapies there is a significant placebo response and large numbers of patients require treatment to benefit one patient.

Peppermint oil, in capsule form or from tea, has proven antispasmodic properties. Many IBS sufferers report benefit from peppermint but large scale trials are lacking.

Antidepressants

Tricyclics reduce pain Low-dose tricyclics can be effective at reducing pain associated with IBS (NNT 5.2) and appear particularly effective when pain is associated with diarrhoea. Unfortunately, even at low doses, adverse effects such as constipation, dry mouth, drowsiness and fatigue can be troublesome (NNH 22) and affect adherence to medication. Warning patients about the possibility of transient adverse effects, starting with a low dose (e.g. nortriptyline 10 mg) at night, increasing slowly and sticking to the medication for at least four weeks can improve results.

PSYCHODYNAMIC-INTERPERSONAL THERAPY

Psychodynamic-interpersonal therapy (formerly known as the Conversational Model of Therapy) assumes that symptoms and problems arise from, or are exacerbated by, disturbances of significant personal relationships. It explores feelings using cue-based responses and metaphor; links distress to specific interpersonal problems and uses the therapeutic relationship to test out solutions in the 'here and now'.

Predominant symptom pattern	Medication
Pain	1. Antispasmodics 2. Tricyclics
Diarrhoea	Loperamide
Constipation	Ispaghula, Psyllium
Bloating with distension	1. Dietary manipulation 2. Macrogols (only if constipation present)
Bloating without distension	1. Antispasmodics 2. Tricyclics

Selective serotonin re-uptake inhibitors improve quality of life

SSRIs in standard doses appear to improve the health-related quality of life in people with chronic IBS, but with no significant changes in bowel symptoms or pain. This may well be a result of influencing associated depression, anxiety or somatisation.

Anti-diarrhoeals reduce diarrhoea in IBS

Loperamide reduces diarrhoea in IBS but has little effect on abdominal pain. It can be used as required or, if needed, on a regular basis. Regular use does not lead to a reduced effect.

Codeine is best avoided because of the potential for dependence.

Fibre and laxatives

Psyllium (Mucilax, Konsyl D) and ispaghula, soluble fibres, are usually the laxatives of choice in IBS. However, although this may improve constipation it does not usually improve abdominal pain. Insoluble fibres, such as bran, aggravate the symptoms of half of people with IBS and are associated with increased incidence of flatulence and bloating.

Stimulant laxatives are recommended for occasional, short term use only and have not been demonstrated to be effective in IBS.

Other pharmaceutical treatments

Other treatments, not funded in New Zealand or under investigation, include drugs which act through serotonin (5-HT) receptors. Serotonin plays a significant role in gastrointestinal motility, sensation and secretion and drugs, such as tegaserod, alosetron and cilansetron, which influence selected 5-HT receptors are proving to be effective.

Antibiotics and probiotics are also under investigation for the management of IBS, but no clear role has yet been identified.

Herbal remedies

Some trials of herbal remedies have shown significant improvement for some people with IBS. Most of these trials appear to relate to mixed plant preparations. For example a trial of a combination of bitter candytuft, chamomile flower, peppermint leaves, caraway fruit, liquorice root, lemon balm leaves, celandine herbs, angelic root and milk thistle fruit demonstrated improvement in IBS scores and abdominal pain.

RONGOA MAORI

Rongoa is the Māori term for medicines produced from native plants in New Zealand. Rongoa is enthusiastically used within a number of communities throughout the country, sometimes in conjunction with other Māori and mainstream health services.

There are numerous plants used for rongoa to treat gastrointestinal complaints. Two of the more common are Koromiko (Hebe) and Harakeke (NZ Flax):

Koromiko (Hebe)

The young leaves and shoots are chewed to relieve diarrhoea and dysentery. The active ingredient is phenolic glycoside.

Harakeke (NZ Flax)

Flax root is considered by users to be an effective remedy for constipation, diarrhoea and dysentery. The root is chewed or crushed and boiled with water. The harakeke rhizome has been shown to contain a red crystalline substance which is thought to be a purgative anthraquinone.

<http://pharmacy.otago.ac.nz/rongoa/inex.html>

Further reading and references available from:

1. Spiller R. Clinical update: irritable bowel syndrome. *Lancet* 2007;369: 1586-1588
2. Spiller R, Aziz Q, Creed F et al. Guidelines for the management of Irritable Bowel Syndrome. *Gut* 2007; [ePub ahead of print]