AUSTRALIAN GASTROENTEROLOGY INSTITUTE

The Australian Gastroenterology Institute (AGI) is an educational body committed to promoting better health in the Australian community, by reducing illness and premature death from all forms of gastrointestinal and liver disease, through educational and community service programmes. Education activities are directed towards the public at large, the government, the medical profession and other related health professionals, and specialists, surgeons and scientists within the discipline of gastroenterology.

The AGI is a voluntary, non-profit organisation established under the aegis of the Gastroenterology Society of Australia and is the official educational arm of that professional body.

Since its establishment in 1990 the AGI has developed programmes to improve community awareness and understanding of important problems of digestive health including Hepatitis C, Guidelines for Screening for Colorectal Cancer, Gastro-oesophageal Reflux Disease in Adults, Coeliac Disease, and Haemochromatosis. Booklets on many more topics are currently in preparation. Seminars for General Practitioners have been held and will continue to be an important part of the AGI educational programme.

Through its associated Research Institute, the AGI provides funds for new research into digestive and liver diseases.

Digestive diseases result in a great deal of time lost from work throughout Australia. Research and education are vital if these diseases are to be conquered. But we cannot do this without your help. Any donation towards this research would be most welcome. Donations of more that $2 are tax deductible.

Please make your cheque payable to “Gastroenterological Society of Australia Research Institute” and send to the address below.

For further information about the AGI and its programmes please contact:

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WHAT IS IBS?

- Irritable bowel syndrome (IBS) is a condition characterised by abdominal pain and altered bowel habit without abnormalities on radiological, endoscopic and laboratory investigations.

- Several subgroups of IBS can be recognised on the basis of symptoms eg. pain and constipation (“spastic colon”); pain with alternating constipation and diarrhoea; and painless diarrhoea.

- IBS is usually a chronic disorder; symptoms often occur in discrete episodes which vary in frequency and severity.

- IBS is characterised by the presence of abdominal pain and altered bowel habit in the absence of identifiable disease.

HOW COMMON IS IBS?

- IBS symptoms are very common, occurring in 15% of the general population. Fewer than 20% of these individuals, however, seek medical advice for their symptoms.

- IBS accounts for 5% or more of attendances to general practitioners and 20-50% of referrals to gastroenterologist.

- IBS is twice as common in females as males and half of the individuals who present with IBS are younger that 35 years of age.

- It has been reported that approximately 30% of IBS sufferers take sick leave for it, with half of these being absent from work at least two weeks per year.

| IBS is a common disorder and represents a substantial source of morbidity and cost to the community. |

WHAT CAUSES IBS?

- The pathogenesis of IBS is unknown. No inflammation is present in the intestine and previous terminology such as “mucous colitis” is inappropriate.

- ‘Up-regulation’ of the sensory pathways travelling from the gut to the central nervous systems to account for a heightened perception of normal gut sensations arising from intestinal distension and contraction.

- This phenomenon may result in abdominal discomfort or pain; it may also trigger disordered gut motility and/or alterations in gut secretion/absorption resulting in an erratic bowel habit. In the majority of patients a trigger factor is not found.

| In IBS the gut appears to be sensitised, over-reacting to various stimuli. |
In some patients IBS symptoms appear to be precipitated by an attack of infective diarrhoea of gastroenteritis, perhaps due to occult damage to the erratic nervous system. Symptoms in this “post infective” irritable bowel syndrome can persist for months, years or even a lifetime.

There is no evidence that colonisation of the intestine with Candida albicans is a cause of IBS.

**Behavioural Factors**

- **No specific personality type** has been shown to be at special risk for development of IBS.

- **Mental stress** is associated with the *onset and exacerbation* of IBS symptoms in some patients. It is *not known*, however, whether the common associations of *depression and anxiety* are cause or effect.

- Psychological factors are also important as they influence the individual’s decision to *seek medical attention* as well as the *ability to cope* with the symptoms.

**Dietary factors**

- Eating often provokes symptoms in patient with IBS.

- In general, meals high in fat move slowly through the gut, and in IBS patients may exacerbate symptoms such as bloating and constipation. Foods such as baked beans, cabbage, and brussel sprouts may exacerbate symptoms in patients complaining of excessive flatulence.

- Patients frequently associate ingestion of *specific food items* with the development of symptoms. Although this may be a chance association, there is evidence that a non-immunological gut reaction may occur to a variety of foods such as dairy products, caffeine, and citrus fruits. Such *food intolerance* should be distinguished from the rare condition of true *food allergy*.

Only a very small proportion of patients with IBS appear to have true allergenic or immunological responses to specific foods.

- Other dietary factors may produce symptoms indistinguishable from those of IBS, eg.
  - **deficiency of dietary fibre** is commonly associated with simple constipation.
  - **excessive ingestion of sugars** such as lactose present in milk products and fructose and sorbitol present in fruits, some soft drinks and confectionary, may provoke bloating, flatulence and diarrhoea.
A confident diagnosis of IBS can frequently be made on the basis of **history and physical examination**. Nevertheless, the diagnosis usually needs to be confirmed by appropriate investigations to exclude other gastrointestinal disorders.

**A protracted or piecemeal approach to investigation of the patient with IBS should be avoided as it is likely to increase patient uncertainty and anxiety.**

### Important aspects of the history

- The history is often prolonged with symptoms dating from a relatively early age and a course characterised by **exacerbations and remissions**. In a patient with recent onset of symptoms, the diagnosis of IBS should be considered after a period of three months.

- **Abdominal pain**
  - the abdominal pain of IBS can be colicky of aching in character but the description varies widely.
  - although most often situates in the iliac fossae, the discomfort can be perceived in virtually **any site** in the abdomen and **may shift in location** in the same patient.

- **Altered bowel habit**
  - by ‘**diarrhoea**’, the patient can mean periods of more frequent or looser stools than usual, often with associated urgency.
  - by ‘**constipation**’, the patient can mean hard, scybalous, pellet-like or ribbon-like stools or infrequent defaecation with excessive straining.

- Because IBS cannot be proven by any investigation, it is important to take **structured history**, including the following:

<table>
<thead>
<tr>
<th>Features which supported the diagnosis of IBS*</th>
<th>Features which suggest another cause for the symptoms</th>
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<tbody>
<tr>
<td>• Frequent defaecation at the time of abdominal pain?</td>
<td>• Rectal bleeding?</td>
</tr>
<tr>
<td>• Relief of pain by defaecation?</td>
<td>• Steatorrhoea?†</td>
</tr>
<tr>
<td>• Loose motions with onset of abdominal pain?</td>
<td>• Weight loss?</td>
</tr>
<tr>
<td>• Per rectal passage of mucus</td>
<td>• Fever?</td>
</tr>
<tr>
<td>• Sensation of incomplete evacuation?</td>
<td>• Nocturnal symptoms?</td>
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</table>
Visible abdominal bloating?

* Although these features (Manning criteria) are not specific for IBS, in the appropriate clinical setting the more of these criteria present, the more likely is IBS to be the diagnosis.

† Loose, foul, bulky, floating bowel motions are suggestive of steatorrhoea.

Other symptoms

- **upper gastrointestinal symptoms** such as heartburn, dyspepsia, nausea and excessive belching are frequently present.

- **non-gastrointestinal symptoms** such as fatigue, dysmenorrhoea, migraine and symptoms of bladder irritability are also common.

Medication History

- some prescription and non-prescription medications such as iron tablets and antacids can provoke irregular bowel habit; inappropriate long-term laxative use may account for altered bowel habits, particularly “unexplained” diarrhoea.

Physical examination

- Physical examination is **usually normal** in IBS. Mild abdominal tenderness, a ‘squelch’ in the iliac fossae, or mild abdominal distension are features which may be present.

- Abdominal mass, anaemia, or other ‘alarm’ signs are **not** typical of IBS and require full investigation.

Investigations

- Important disorders in the differential diagnosis of IBS are:
  - **carcinoma of the colon**
  - **inflammatory bowel disease** (Crohn’s disease, ulcerative colitis, or rarely microscopic colitis or collagenous colitis)
  - **malabsorption** (eg coeliac disease, lactase deficiency).

- Most Patients with IBS should undergo **sigmoidoscopy** and **full blood count/ESR** to help exclude inflammatory bowel disease and malignancy. Air insufflation during sigmoidoscopy may reproduce the patient’s pain.
• If organic colonic disease is more strongly suspected, full colonic examination by colonoscopy, or sigmoidoscopy and barium enema, is indicated.

In patients over 40 years of age, with recent onset symptoms or a change in pre-existing symptoms, or in patients with a family history of colorectal carcinoma or colonic polyps, colonoscopy is the preferred investigation to rule out colorectal neoplasia.

• Stool microscopy should be carried out, particularly in patients with diarrhoea, as it is helpful in the diagnosis of infection and mucosal inflammation.

• Empiric therapy for possible giardiasis may be warranted, given the low diagnostic yield from stool examination in infected individuals.

• Other investigations such as red cell folate, faecal fat estimation, and small bowel biopsy, may be necessary to exclude malabsorptive states.

• If diverticulitis is suspected, the temperature should be checked, along with white cell count and ESR.

• Pelvic pathology may masquerade as IBS in the female patient; hence gynaecological examination and pelvic ultrasonography may be valuable.

MANAGEMENT STRATEGIES FOR IBS (Figure 2)

General Approach

• Therapy begins at the initial consultation, where it is essential to establish rapport with the patient and secure confidence. This is achieved by a process of reassurance regarding the genuine nature of the symptoms. Many patients have been told that they are not suffering from a significant illness; the patient should be reassured that IBS is a well-recognised and common, though benign and chronic, clinical entity.

The patient should be made aware at the outset that investigations will probably be negative but that they serve to confirm the initial clinical diagnosis of IBS.

• An explanation about the possible mechanism of symptoms should be given. This depends on an assessment of the patient’s level of sophistication, but always needs to be sympathetic and unhurried.

• Patient information leaflets and diagrams can be very helpful but are not a substitute for individual explanation and discussion. The help of a professional interpreter should be sought where appropriate. At the follow-up visit the physician should check how much the patient has really understood.

The patient should receive an explanation of the possible origins of the symptoms.
• A concise **dietary history** should focus on fibre intake, fat and specific carbohydrate ingestion, and any possible food intolerances (eg. dairy products, soft drinks, some ‘diet’ confectionary, ‘gas-producing’ foods, other specific foods). Different symptoms clusters or subgroups will require attention to different aspects of the dietary history.

• The pattern of symptoms in relation to the patient’s day, including work habits, eating habits, and exercise and sleeping habits then leads naturally into a discussion about **stresses at work and at home**.

• The presence of **psychological disorders**, and if possible their onset in relation to the onset of gastrointestinal symptoms, should be ascertained. It is important to consider “why is this patient seeking my help now?”

A **careful history to identify possible precipitating or contributing factors should lead to advice about individualised simple lifestyle modifications**.

• It is essential for the patient to understand that IBS is generally a **chronic condition** in which **exacerbations and remissions** are often a feature.

• Notwithstanding this pattern of the disorder, the patient should be advised to report any **major changes in symptoms** which develop over the years.

• Reassurance that the condition **does not predispose to other gut disorders**, particularly malignancy, and that **residual symptoms may persist despite therapy**, is important.

A **discussion of prognosis is important and is often overlooked**.

**Diet and the Role of Fibre**

• Foods and beverages which clearly and consistently provoke symptoms should be avoided. If bloating and flatulence are prominent symptoms, the patient should be advised to eat slowly, to avoid smoking and chewing gum, and try to avoid excessive belching which is associated with air swallowing.

• Although it is controversial whether dietary fibre supplementation is of any greater overall benefit than placebo, a **trial of stool bulking** by a regular increased intake of fibre-rich foods (eg. cereals, wholemeal bread, unprocessed wheat bran), and/or proprietary bulking agents, should be undertaken in patients whose symptoms include constipation.

• Fibre supplementation should be introduced **gradually** (eg. a starting dose of two teaspoons unprocessed bran daily), and **continued for at least one month** before its effect is judged. Patients should be made aware that too much fibre can produce excessive intestinal gas and cause flatulence. Proprietary bulking agents may be less likely to cause flatulence than bran.
• A trial of stool bulking may also be worthwhile in patients with pain of diarrhoea predominant IBS, but is less likely to be effective.

• In selected cases, where there is a high suspicion of food intolerance, a symptom and food diary may enable the patient to more readily recognise specific items.

**Medications**

• The decision to use medications in IBS depends on the severity of symptoms and their impact on the quality of life of the patient; the choice of medication depends on the pattern of symptoms.

• Controlled efficacy studies of pharmacotherapy in IBS have generally been disappointing.

• For predominant diarrhoea, however, **antidiarrhoeal drugs** such as loperamide have been shown to be effective.

• For predominant constipation, in addition to a trial of stool bulking, an increase in fluid intake, and regular exercise, **osmotic laxatives** such as magnesium-containing salts (eg. Epsom salts) or lactulose, are safe and are often effective.

• **Anticholinergic agents** (such as hyoscine butylbromide, hyoscyamine hydrobromide or sulphate, or dicyclomine), or **antispasmodic agents** (such as mebeverine or peppermint oil), may be helpful in some individuals with prominent abdominal pain. Differentiation from placebo response, however, is difficult. Ideally such drugs should be used in the short term only, and the dose adjusted to the timing and severity of symptoms.

• **Minor tranquillisers (eg. benzodiazepines)** are not recommended for use in this chronic condition.

**If no improvement**

• It is important to assess whether the patient can cope with ongoing symptoms or still **fears that some other underlying diagnosis is being overlooked**. In this latter group, continued reassurance may be necessary.

• It is also important to re-emphasise to the patient the **limitations of current therapies** and that treatment strategies are not aimed at a cure, which in most is not achievable.

• A small (non-antidepressant) dose of a **tricyclic antidepressant**, eg. amitryptiline 10mg in the evening, has been reported to be useful in some patients with resistant IBS symptoms, probably by influencing central pain perception. When significant symptoms of depression are present, however, adequate therapy with full antidepressant doses should be employed.
• If food intolerance is strongly suspected, trials of exclusion diets, and blind challenges to identify offending foods and additives have been reported to improve symptoms in some patients, especially those with predominant diarrhoea. This is rarely necessary, and may be most appropriately carried out in an allergy clinic with a research interest in this field. There is no proven role for a gluten-free diet in IBS. If coeliac disease is suspected, small bowel biopsy is indicated.

• The prokinetic agent cisapride may improve symptoms in some patients with predominant constipation, but further study of its efficacy in IBS is required.

• Relaxation therapy may be appropriate and relaxation courses are becoming increasingly available, often based at local hospitals.

• Individual psychotherapy of hypnotherapy, which have been reported to improve symptoms if other measures have not been helpful, can also be arranged by a psychologist, psychiatrist, or interested general practitioner. In practice, these are not commonly recommended.

• Occasional patients with severe intractable chronic abdominal pain may warrant assessment and treatment via a Pain Management Clinic.

When to review the diagnosis

• If new symptoms develop or there is a change in the pattern of existing symptoms, it is important to carefully review the diagnosis or consider the possibility that an additional problem may have arisen. Other disorders which may need to be considered, depending on the individual case, include:
  – development of colon cancer
  – an episode of diverticulitis or an intercurrent gastrointestinal infection
  – symptoms due to gallstones
  – peptic ulceration
  – development of pancreatic carcinoma
  – development of exacerbation of a psychological problem such as depression.

SUMMARY OF MANAGEMENT PRINCIPALS IN IBS

• thorough history and physical examination
• avoid protraced investigation which raises uncertainty in the patient’s mind
• reassure patient of:
  – correctness of diagnosis
- genuine nature symptoms
- likelihood that residual symptoms may persist or recur from time to time
- no predisposition to other bowel disorders such as cancer

- use simple dietary modifications and non-drug therapy initially, according to predominant symptoms
- assure patient that the opportunity for review is available during difficult times or if new symptoms develop.

**FURTHER READING**


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Information leaflets on irritable bowel syndrome for patients and the general public are available through the Australian Gastroenterology Institute, 145 Macquarie Street, Sydney NSW 2000.

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