

For the Primer, visit [doi:10.1038/nrdp.2016.14](https://doi.org/10.1038/nrdp.2016.14)

→ Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder and is not associated with structural or biochemical abnormalities in the gut. Gastrointestinal symptoms include abdominal pain or discomfort, stool irregularities and bloating. In addition, IBS is often associated with somatic comorbidities (for example, pain syndromes, overactive bladder and migraine), psychiatric conditions (including depression and anxiety) and visceral sensitivity.

EPIDEMIOLOGY

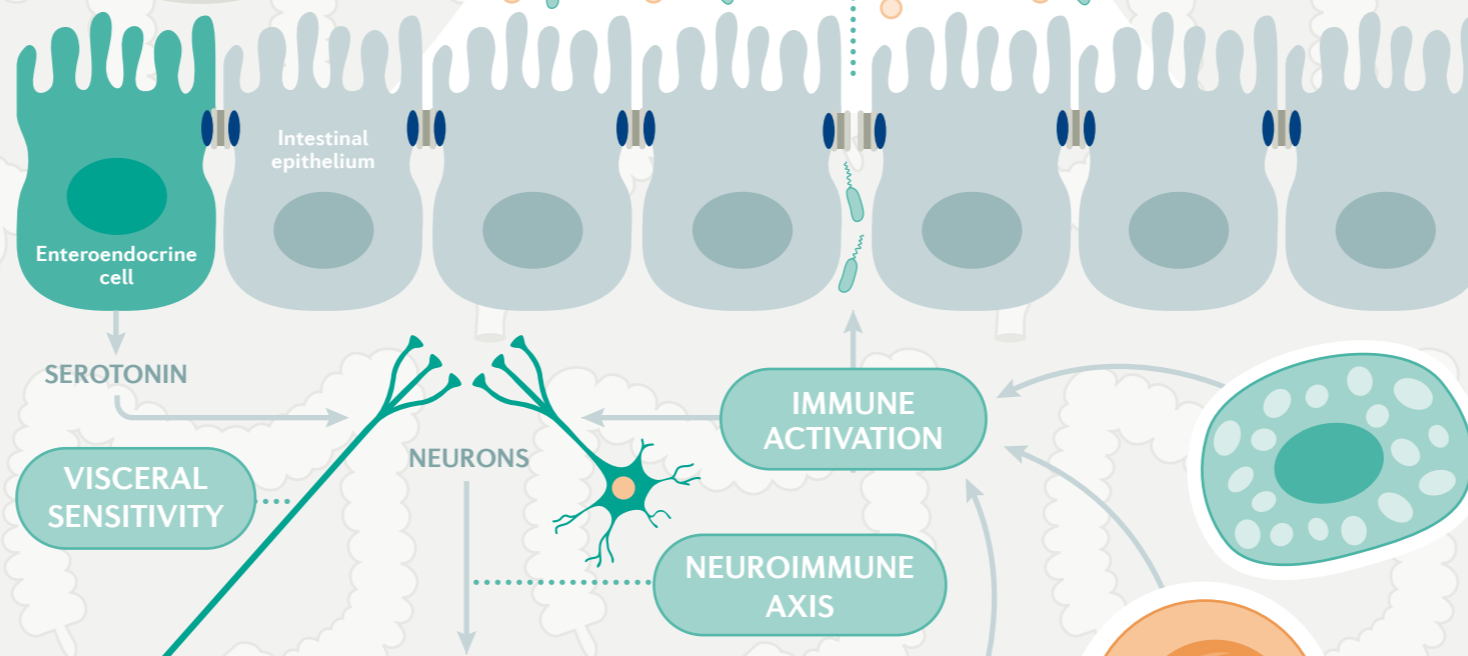
IBS has a global estimated prevalence of ~11%, with rates of 5–10% in most European countries, the United States and China. Approximately 2% of all patients show spontaneous disease remission every year. Women are more prone to developing IBS than men. IBS is strongly associated with other conditions and >20% of patients with IBS have other functional gastrointestinal disorders, including gastroesophageal reflux disease, diarrhoea, incontinence and pelvic floor dyssynergia. In addition, IBS is linked to functional, non-gastrointestinal syndromes such as pain syndromes or disorders associated with dysfunction of the autonomic nervous system, including overactive bladder, chronic fatigue syndrome and eating disorders. Finally, several psychiatric comorbidities

In general, 10% of all IBS cases arise after a gastrointestinal infection (independent of the origin); on the basis of symptoms alone, post-infectious IBS cannot be distinguished from IBS without an infectious origin

(such as anxiety, depression and neuroticism) are associated with IBS and other IBS-associated diseases.

MECHANISMS

The aetiology of IBS is multifactorial and the precise molecular pathophysiology is not yet understood



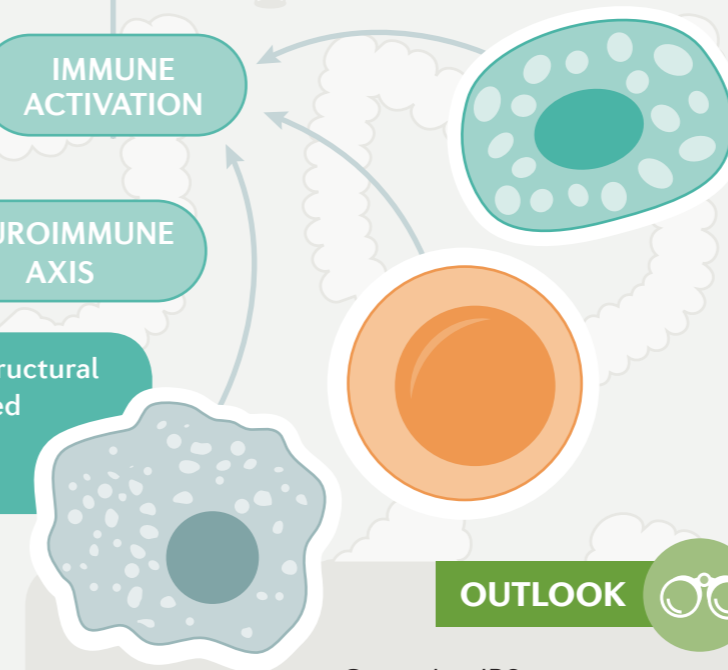
The brain–gut interaction is bidirectional. Although structural and functional brain abnormalities have been described in IBS, whether they are a cause or a consequence of the gastrointestinal symptoms is unknown.

QUALITY OF LIFE

Both the gastrointestinal symptoms and the psychiatric comorbidities impair quality of life in patients with IBS, which is even lower than in those with gastroesophageal reflux disease, diabetes mellitus or severe chronic kidney disease.

DYSBIOSIS

INTESTINAL PERMEABILITY



OUTLOOK

Given that IBS is a heterogeneous condition, many drugs have failed in randomized controlled trials. Adequate patient stratification might reveal that some subgroups of patients benefit from available drugs, making the evaluation of new drugs more efficient.

DIAGNOSIS

IBS can be debilitating in some patients, whereas others might have only mild or moderate symptoms. IBS is diagnosed using diagnostic criteria that take a combination of symptoms into account, including abdominal pain or discomfort associated with chronic or recurring abnormal bowel habits. Other diseases (including functional gastrointestinal diseases, such as dyspepsia and gastroesophageal reflux disease) that cause typical IBS symptoms should be excluded. IBS can be associated with diarrhoea, constipation or both, and patients often switch between these different subtypes over time.

MANAGEMENT

Only half of patients with IBS seek medical treatment and pain is an important driver. A stepped-care approach to treatment is recommended, which includes psychotherapy. Medical treatment is aimed at improving bowel habits and/or visceral pain and consists of antispasmodic drugs, low-dose antidepressants, gut motility accelerants and antidiarrhoeals — depending on the symptoms.

! Dietary advice plays an important part in IBS treatment because most patients have some form of food intolerance (that is, a physiological response to food allergens that is not associated with an immune response). Diets containing low levels of fermentable oligosaccharides, disaccharides, monosaccharides and polyols (low FODMAP diets) might improve symptoms, as can other dietary interventions.

