



Understanding **IRRITABLE BOWEL SYNDROME (IBS)**

What is irritable bowel syndrome (IBS)?

Irritable bowel syndrome (IBS) is a disorder affecting the intestine. IBS involves problems with motility (movement of digested food through the intestines) and sensitivity (how the brain interprets signals from the intestinal nerves), leading to abdominal pain, changes in bowel patterns and other symptoms. Although often disruptive, debilitating and embarrassing, it may be some comfort to know that IBS is not life-threatening, nor does it lead to cancer or other more serious illnesses.

Canada has one of the highest rates of IBS in the world. It is estimated that at least 5 million Canadians suffer from IBS, with an additional 120,000 people developing the condition every year. About 40% of people with IBS seek medical attention, while those with milder symptoms typically self-treat their condition with lifestyle changes, food avoidance and the purchase of non-prescription remedies. IBS is more common in women than men.

In Canada, the economic and health-care related costs of IBS exceed \$6.5 billion annually. Causing frequent work and school absenteeism, IBS can significantly erode an individual's productivity and quality of life. Canadians suffering from IBS symptoms are absent from work an average of 13 days each year, representing an additional \$8 billion of lost productivity.

What are the symptoms of IBS?

- **Abdominal pain (cramping):**

IBS pain can be felt anywhere throughout the abdomen. Each bout of pain can vary in length and severity, and pain may increase and decrease over time. IBS pain is often relieved following a bowel movement.

- **Constipation:**

Symptoms of constipation can include passing three or fewer stools in one week, passing hard, dry stools, the passage of only small amounts of stool, and frequent straining during a bowel movement.

- **Diarrhea:** Symptoms of diarrhea can include passing stools three or more times per day, passing loose, watery stools or feeling an urgent need to have a bowel movement.

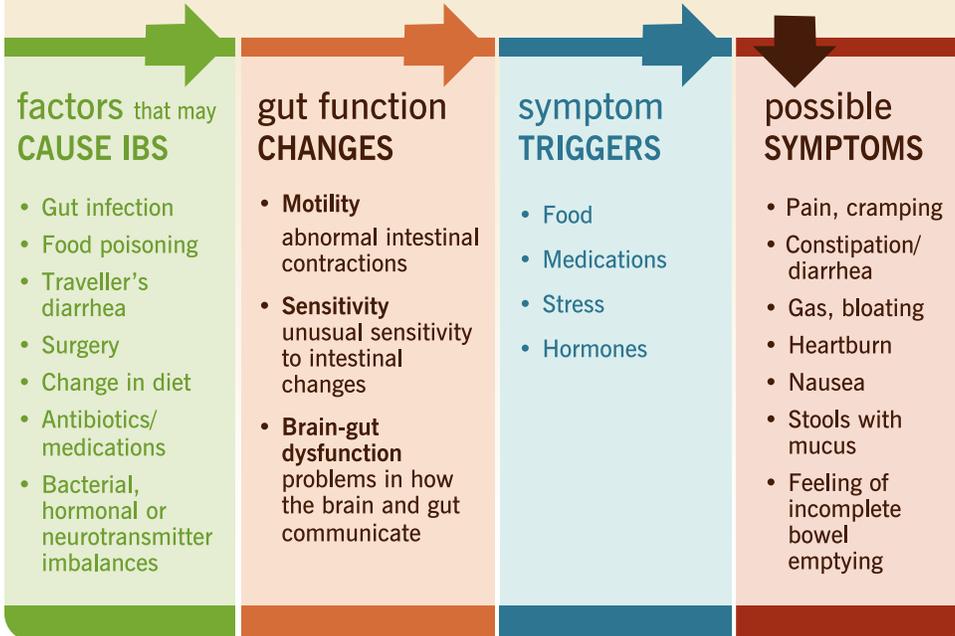
- **Other IBS symptoms may include:**

- Gas
- Bloating
- A feeling of incomplete emptying of the bowels
- Whitish mucus (a fluid made in the intestines) within or around the stools
- Heartburn
- Nausea

The **most common symptoms** of IBS are **abdominal pain** and **irregular bowel patterns** that result in **constipation, diarrhea**, or alternating periods of both.

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IBS causes, changes, triggers and symptoms



- **Motility (movement of contents through the intestines):** Normally, waves of coordinated intestinal muscle contractions (peristalsis) transport digested food through the intestines. In people with IBS, the rhythm and coordination of these contractions may be altered. This altered motor function can result in the bowel moving too quickly (causing diarrhea) or too slowly (causing constipation) and can lead to spasm and pain.
- **Sensitivity (how the brain interprets signals from the intestinal nerves):** The network of nerves surrounding the digestive organs may become unusually sensitive. For some people with IBS, even a small change in intestinal activity can trigger the

nerves to send messages to the brain causing abdominal pain.

- **Brain-gut dysfunction:** In IBS, there may be problems in how the brain receives and processes sensations coming from the intestines. A malfunction may occur along the many different pathways that connect the brain and gut, interfering with the normal function of the intestines.

While most people experience digestive troubles once in a while, what sets IBS apart is abdominal pain and diarrhea or constipation that comes back again and again. At times, the pain and discomfort of IBS symptoms may be severe and debilitating, and at other times, they may improve or even disappear completely.

What causes IBS?

The exact cause of IBS is unknown, however, it is believed that IBS may be caused by one of several factors. In some patients, it may be linked to a prior infection or event which disrupts the normal functioning of the intestines. It is common for people to develop IBS following a gastrointestinal infection, food poisoning, traveller's diarrhea, surgery, a change in diet or the use of antibiotics or new medications. In others, an imbalance of intestinal bacteria or a change in the body's level of hormones, immune signaling in the bowel wall or neurotransmitters (brain chemicals) may also lead to the development of IBS. Currently, there is a great deal of interest in possible alterations in the number or type of bacteria within the intestine, but the exact role this may play in IBS is not yet known. In people with IBS, bowel function can be altered in several ways:

Many aspects of everyday living can **trigger** or aggravate IBS symptoms. Triggers vary from person to person, but the most common ones include certain foods, medications,

Risk Factors

- **Age:** IBS can affect people of all ages, but it often begins in the teen years or early adulthood.
- **Gender:** IBS affects more women than men.
- **Family history of IBS:** People with a first-degree relative (parent or sibling) with IBS are at greater risk of developing the condition.

emotional stress and hormone fluctuations. In particular, foods such as caffeine, alcohol, carbonated drinks, fatty foods, certain fruits and vegetables, as well as lactose, fructose and gluten (wheat protein) can cause problems for people with IBS.

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How do I know if I have IBS?

Often, symptoms alone can provide doctors with the information they need to diagnose IBS. Your doctor will perform a physical examination and take a complete medical history that includes a careful review of your symptoms. For this reason, it is important to be candid and specific with your doctor about the problems you are having.

A set of specific symptom criteria (referred to by physicians as the Rome Criteria) has been developed to help physicians diagnose IBS. According to these criteria, IBS is suspected based on the symptoms shown to the right.

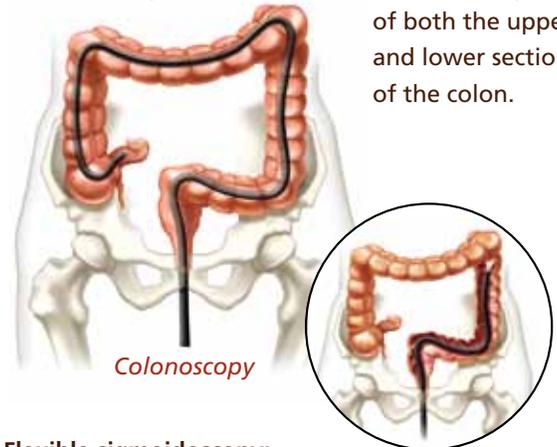
Rome Criteria

- Symptoms for at least **3 days per month** during the previous 3 months
- Symptoms first started at least **6 months ago**
- Symptoms are **improved with a bowel movement** or associated with a change in the stools (number or appearance).

In a young person, the diagnosis can be confidently made based on symptom criteria, absence of any “red flags” in the history or physical exam (e.g. blood in the stools, symptoms awakening patients from their sleep, a strong family history of colon cancer, unexplained weight loss). There is no laboratory test, X-ray or scope to diagnose IBS, however, your doctor may order tests, particularly if there are red flags. To rule out other infections or underlying medical problems, these tests may include some of those listed below:

- **Blood tests:** Blood tests can help to rule out anemia, diabetes, abnormal thyroid function, changes in the calcium level that can affect the gastrointestinal tract, and celiac disease.
- **Stool sample tests:** A stool analysis can detect blood in the stool and rule out bacterial infection, malabsorption, parasites and other digestive problems.
- **Imaging tests:** Your doctor may order tests to see inside your lower digestive organs. This is done to rule out potential, more serious health problems. These safe tests can help to identify problems such as ulcers, polyps (growths on the lining of the intestines), colon cancer or inflammatory bowel disease (IBD) and include:

- o **Colonoscopy:** A slim flexible tube equipped with a light and a tiny camera is guided through the rectum into the large intestine (colon). The colonoscope allows your doctor to examine the lining of both the upper and lower sections of the colon.



- o **Flexible sigmoidoscopy:** In a procedure similar to a colonoscopy, a flexible scope allows your doctor to view the lining of lower part of the colon only.
- o **CT (computed tomography) colonography:** In most centers, barium enemas have been replaced by CT colonography. This scan takes cross-sectional pictures of the abdomen and uses special computer software to create a 3D image of the entire colon. It is very accurate at detecting larger polyps and cancers.
- **Dietary tests:**
 - o **Lactose intolerance:** Lactose intolerance (an inability to digest the sugar in milk) can cause gastrointestinal symptoms similar to IBS. Your doctor can rule out lactose intolerance by performing a hydrogen breath test or by asking you to eliminate lactose from your diet for 2 weeks, and then reintroducing lactose and recording your symptoms.
 - o **Celiac Disease:** Celiac disease (a condition where the immune system reacts against gluten, a protein found in wheat) causes damage to the lining of the small intestine and may also cause symptoms similar to IBS. Celiac disease can be ruled out with a simple blood test performed at the doctor's office or with a home kit that you can purchase at the pharmacy. You must be eating gluten at the time of the test in order for the results to be accurate. If the blood test is positive, a biopsy is needed to confirm a diagnosis of celiac disease.

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How is IBS treated?

Take comfort in knowing that IBS is an extremely common problem, and in many cases, simple changes in your lifestyle and diet can provide symptom relief. However, no one treatment works for everyone and treatment will depend on the types of symptoms you have, their severity and how they affect your daily life.

Lifestyle changes

The following lifestyle changes may help to prevent or ease your IBS symptoms:

- **Exercise regularly** to promote movement of the colon and reduce stress. Exercise can take many forms, but 20 to 30 minutes of activity at least three times per week can be helpful.
- **Get enough rest.** A lack of sleep and fatigue can worsen the symptoms of IBS.
- **Minimize stress and tension.** The brain and colon are linked through many complex pathways and emotional stress can disrupt intestinal function and cause pain. Yoga, meditation, and slow, relaxed breathing techniques can help people with IBS manage stress.
- **Limit intake** of caffeine, alcohol, carbonated drinks and fatty foods.
- **Follow through on an urge** to have a bowel movement, if at all possible.

Dietary changes

Food intolerances have been linked to IBS symptoms for many years, however conflicting information often creates confusion and frustration as to what foods IBS patients should include, or avoid, in their diet. Recent research has identified six key strategies for the successful dietary management of IBS.

1) Rule out lactose intolerance.

The symptoms of lactose intolerance (an inability to digest the sugar in milk) and the symptoms of IBS often overlap.

2) Limit insoluble fibre.

The type of fibre in the diet is important for people with IBS. **Insoluble fibre** (cannot dissolve in water) which is found primarily in wheat bran, brown rice, seeds, nuts, dried fruit and whole grain breads, adds bulk to the stool and can aggravate IBS symptoms in some people. Peeling fruits and

vegetables to remove the high insoluble fibre skin or peel can be beneficial.

3) Supplement with linseeds for constipation.

Linseeds (also known as flaxseed) may help to relieve constipation, abdominal discomfort and bloating. For IBS patients with constipation, adding ground linseeds to the diet for a 3-month trial may help bowel function.

4) Reduce fermentable carbohydrates (FODMAPs).

Fermentable carbohydrates (also known as FODMAPs), are small carbohydrate (sugar) molecules found in everyday foods that may be poorly absorbed in the small intestine of some people. FODMAPs are fermented (digested) by intestinal bacteria, which can lead to symptoms of abdominal pain, excess gas, constipation and/or diarrhea. Following a low-FODMAP diet may help to reduce gastrointestinal symptoms in 75% of IBS patients.

5) Try a probiotic.

Probiotics are live microorganisms that, when taken in adequate amounts over sufficient time, may provide a health benefit. They are natural, 'healthy' bacteria that may help with digestion and offer protection from harmful bacteria in the intestines. Studies have found that, in some cases, probiotics may help to improve symptoms of IBS. If other dietary strategies have not been successful, a 4-week trial of a probiotic (in the dose recommended by the manufacturer) may be helpful.

Probiotics are not medicine. They are available to purchase as capsules, tablets or powders, and can also be found in some fortified yogurts and fermented milk products. However, not all probiotics are the same. It is important to choose a product that is reliable, proven to be safe and offers benefits for the specific symptoms you want to relieve. Speak to your doctor or pharmacist about which probiotic may be right for you. It is important to take the probiotic in the dose and duration recommended by the manufacturer to achieve the best results.

6) Eliminate a suspected trigger food for 2-4 weeks.

If a particular food seems to trigger IBS symptoms, eliminate the food from your diet for a period of 2 to 4 weeks. If symptoms do not improve during that time, the food is unlikely the cause of IBS symptoms.

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Medication

Your doctor may recommend prescription or over-the-counter products if your IBS symptoms are severe and if lifestyle and dietary strategies have not helped. Typically, medications are targeted at the dominant symptom – diarrhea, constipation or pain.

- **Antispasmodic medications** may help reduce muscle spasms, abdominal pain and cramping.
- **Antidepressant medications**, in low doses, act on the chemical messengers in the digestive tract and can help relieve diarrhea, pain and cramping. In higher doses, these medications help to relieve depression and anxiety that may accompany IBS.
- **Antidiarrheal medications**, such as Loperamide, can help control diarrhea by reducing stool frequency and slowing the movement of the intestines.
- **Laxatives** speed up the motion of stool through the intestines and may be prescribed for people who have IBS with constipation. Laxatives are available in prescription or over-the-counter formulations. Speak to your doctor about which one is best for you.
- **Prosecretory and analgesic agents**, which increase the amount of fluid in the digestive tract as well as reduce the sensitivity of pain nerves in the intestines. They have been shown to soften bowel movements and make them occur more often, reduce the amount of bloating and to decrease abdominal pain in patients with IBS.

How can I tell if my treatment is working?

For some people, IBS symptoms will significantly improve within a short time after making lifestyle and dietary changes. For others, finding relief from IBS symptoms is a slow process and it may take longer for a definite improvement to be noticed. It is important for you and your doctor to work together to determine what triggers your symptoms and to find the right treatment to help your bowel function return to a more normal state.

Are there any complications of IBS?

While IBS can cause pain and stress, it does not cause any permanent damage to the bowel or lead to cancer or any other major illness.

Living positively with IBS.

IBS is a chronic (long term), but manageable condition. Over time, the symptoms of IBS typically do not get worse, and with an effective treatment plan, as many as one-third of IBS patients may eventually become symptom-free.

Preparing for your health care professional appointment.

Good communication with your doctor is an important part of effective management of a functional GI disorder like IBS. Before your appointment, take the time to keep a symptom journal that can help you and your doctor see patterns in your activities and identify specific triggers for your symptoms.

Include the following information in your journal:

- Write down the symptoms that are bothering you and how long you have had them.
- Write down key personal and medical information, including any recent changes or stressful events in your life.
- Make a list of the triggers (food, stress, activity, menstrual cycle) that seem to make your symptoms worse.
- Make a list of medications are you taking, including the conditions you take them for. Also note if any of your medications seem to affect your symptoms.
- Talk to your family members and note if any relatives have been diagnosed with IBS, inflammatory bowel disease (IBD), celiac disease or colon cancer.
- Questions to ask your doctor during your appointment.

You may want to ask:

- What do you think is causing my symptoms?
- Are there other possible causes for my condition?
- What diagnostic tests do I need?
- Do these tests require any special preparation?
- What treatment approach do you recommend trying first?
- If the first treatment doesn't work, what will we try next?
- Are there any side effects associated with these treatments?

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Alarm symptoms

Alarm symptoms are not typical of IBS and can signal additional, more serious health concerns. Consult your physician if you experience any of the following:

- Symptoms that first begin after the age of 50
- Rectal bleeding with dark red blood mixed in with the stool
- Unexplained weight loss
- Fever
- Nausea, vomiting
- Abdominal pain that wakes you at night
- Symptoms worsen over a short period of time

Note: People with a family history of colon cancer, celiac disease, or inflammatory bowel disease (IBD) may also require additional testing.

The CDHF has a SmartPhone app called **Gi BodyGuard**, featured on the following page, that can help you manage and share information about your symptoms with your doctor.

Learning more about IBS.

The Canadian Digestive Health Foundation provides information, tools and support to help you take control of your digestive health with confidence and optimism. Visit www.CDHF.ca to view WebSeminars, personal stories and helpful resources about IBS and other digestive disorders or browse the links below.

The CDHF has videos, on-line seminars, personal stories and other resources about IBS that you can access anytime you have an internet connection. Please visit:

<http://www.CDHF.ca/IBS>

• **Understanding Irritable Bowel Syndrome...**

Let's Talk

This video features interviews and comments from physicians and patients

• **More than Gas and Bloating. IBS – the Mind-Gut Connection**

This on-line seminar, presented by Dr. Stephen Vanner, provides an in-depth overview of IBS, symptoms, possible causes and suggested treatments.

• **IBS with Dr. Adam Weizman**

This public presentation provides an overview of IBS.

CDHF App helps track information

The CDHF has developed a smart phone app for iPhone and Android called **Gi BodyGuard** to help you quickly, easily and privately track and share your digestive symptoms with your physician.

Gi BodyGuard has a built-in symptom tracker (stool, pain, blood), food, fitness and medication trackers, a health history form and appointment/medication reminders. Using **Gi BodyGuard** is quick, easy and private.

As well, **Gi BodyGuard** lets you produce comprehensive reports so you can share important information with your physician during your next appointment. You can download **Gi BodyGuard** for free at:

www.CDHF.ca/GIbodyguard



Please note: The information contained in this digestive disorder guide is not a substitute for medical care and the advice of your physician. There may be variations in treatment that your physician may recommend based on your individual facts and circumstances. Always consult with your physician when you have concerns about your health.

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- I have enclosed a cheque for \$ _____
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I would like to make a donation using my credit card. Please charge my

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- Please send me information about protecting and improving my digestive health.

Over 20 million Canadians suffer from digestive disorders every year. The Canadian Digestive Health Foundation believes this is unnecessary and unacceptable.

We reduce suffering and improve quality of life by empowering Canadians with trusted, up to date, science-based information about digestive health and disease.

As the Foundation of the Canadian Association of Gastroenterology, we work directly with leading physicians, scientists, and other health care professionals to help you understand and take control of your digestive health with confidence and optimism.

Through research and public education, we aim to:

 **REDUCE**
the incidence and prevalence of digestive disorders

 **IMPROVE**
understanding of digestive health issues

 **SUPPORT**
those suffering from digestive disorders

 **ENHANCE**
quality of life for those living with digestive disorders

Request for support

The Canadian Digestive Health Foundation is a national charity governed by a volunteer board of directors. We rely on donations from the public and the generosity of our partners to develop and deliver our programs. Please consider including our Foundation as one of your chosen charities.

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