



What is Irritable Bowel Syndrome (IBS)?

Irritable Bowel Syndrome (IBS) is a group of uncomfortable symptoms affecting your intestine, also called the bowel. It is a condition in which the bowel does not work the way it should. It is a common disorder affecting as many as 20-30 million Americans. It is not a disease. It does not damage the bowel. And it does not lead to other health problems.

What are the symptoms of IBS?

Symptoms of IBS include: abdominal pain or discomfort, long-lasting diarrhea, constipation or a combination of both, bloating, gas, and sometimes white mucus in the stool. You may feel an urgent need to use the toilet or have the feeling that you have not finished a bowel movement. Some people have mild symptoms, while for others symptoms can be quite severe and interfere with life.

How is IBS diagnosed?

There is no test for IBS. Your health care practitioner will diagnose the condition based on a physical exam and your symptoms. Blood tests, x-rays of the colon, and a colonoscopy may be done to make certain you don't have a more serious condition. (A colonoscopy is a test that exams the inside of the colon using a long, thin tube with a camera on the end).

What causes IBS?

It is not clear what causes IBS. Some researchers think it is caused by changes in the nerves in the colon. Others believe the central nervous system may play a role. Hormonal changes may also be involved, since the disorder affects twice as many women as men, and many women find that symptoms are worse around the time of their menstrual periods.

Some of the latest thinking, described more fully on page 3, is that IBS results when the usual balance in the colon is disrupted for some reason.

How does Integrative Medicine treat the disease?

IBS can be affected by your emotions, physical activity, and nutrition. Integrative Medicine pays attention to all three of these areas, so you get the most help possible. Since IBS is complex, it is best treated by a clinician who gets to know you well. Your primary care clinician will sort through the many options to find those that are acceptable to you and that will give you the best quality of life with the fewest symptoms.

How can my emotions affect IBS?

The nervous system in the intestines has so many nerve endings and neurotransmitters (chemicals that transmit nerve impulses) that it has been referred as the "second brain." When you are feeling stressed, your stomach and intestines (known as the gastrointestinal or GI tract) often sympathize by having spasms, bloating and discomfort. This helps explain sayings such as, "I have a gut feeling" or "I have butterflies in my stomach" or "Something is eating me up inside."

What Integrative Medicine approaches can help prevent my emotions from affecting my gastrointestinal (GI) tract?

Mind-body therapies make use of the close connection between your physical health and your mind or spirit. Two that have been found to be the most helpful for IBS are Cognitive Behavioral Therapy (CBT) and Gut-directed Hypnotherapy (GDH).



Cognitive Behavioral Therapy (CBT)

CBT teaches people to change some of the ways they think and act. This in turn can relieve symptoms. CBT usually includes: 1) information about stress and its relationship to IBS, 2) how to determine what stresses you and helps cause IBS flare-ups, 3) how to problem-solve about stressors that aggravate symptoms, 4) muscle relaxation exercises and/or 5) ways to think differently about the stressors in your life.

Research that compared 17 studies using CBT for IBS to studies using drugs commonly prescribed for the disease found that CBT was far better in helping patients than the drugs were.

• Gut-directed Hypnotherapy (GDH)

GDH helps a person enter a dream-like state, relax the muscles, and mentally picture a healthy intestine. Patients are often taught how to do this themselves (self-hypnosis). They can then manage their symptoms without relying on medical professionals.

Four randomized controlled trials (considered the gold standard in research) have shown GDH to be successful for more than 75% of patients. In a study of 204 patients whose symptoms were not helped by other approaches, 81% responded to GDH. Seventy-one percent of these patients had continued benefit 5 years later. Another study found that GDH was more effective than standard treatment. It improved quality of life, decreased the number of visits to clinicians, and reduced disability.

GDH can require eight to twelve sessions, lasting 30-60 minutes each. This approach may be most helpful for people who have severe IBS symptoms that have not been helped by other treatments.

Other approaches

The following approaches may be helpful if your disease is not severe or if you are unable to see a clinician for CBT or GDH.

- Journaling: writing about experiences, thoughts, and feelings. This helps promote health by expressing thoughts and memories that may have been internalized (kept inside), causing symptoms to be worse. (See handout, Using Journaling to Aid Health.)
- Balloon technique self-hypnosis for abdominal pain. This helps you to relax and focus on your discomfort in a new way to reduce pain and help you feel more comfortable. (See handout on Self-Hypnosis, Balloon Technique for Abdominal Pain.)
- Guided imagery audiotapes. These help you relax and use your imagination and all your senses for healing. One source for these audiotapes is the following website: http://www.healthjourneys.com/shop.aspx.
 Enter "irritable bowel syndrome" in the search box on the website.
- Breathing exercises to help you relax. (See handout on Breathing Exercise.)

Where can I find someone who uses CBT or GDH to help patients with IBS?

Some clinical psychologists, clinical social workers, and other licensed counselors are experienced in using these approaches. A good place to start is to ask if these professionals are available at or through your medical home clinic.

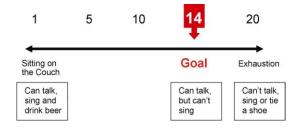
How does physical activity affect IBS?

A recent study suggests that exercise may help lessen the severity of symptoms of IBS, especially for people whose main symptom is constipation. Other research has shown that women with IBS who are more physically active have reported fewer and less severe daily symptoms. Mild physical exercise has also been found to help rid the body of gas and reduce bloating. Regular physical activity is something you can do to help yourself.



Some suggestions:

- If you have not been exercising, start slowly and gradually increase as you are able.
- Find an exercise that you enjoy and that you will do over time. It helps to try different types of exercise (walking, water aerobics, biking, swimming, dancing, tennis, etc.) Also pick some exercises that you can do indoors when the weather is bad. Use a "perceived exertion scale" to gage how hard to exercise. On a scale of 1-20, with 20 being exercising to the point of exhaustion, shoot for a level of 14. At this stage, you should be able to talk but not sing. Exercise for 25-40 minutes 3-4 times a week and work up to a "14" each time.
- Participating in a group exercise with others may help you feel even better.



How does nutrition affect IBS?

It has long been known that eating certain foods can make the symptoms of IBS worse. Some of the latest thinking about IBS helps explain why food that caused no problems in the past may now be causing you distress.

What is some of the latest medical thinking about IBS?

IBS symptoms seem to begin for some people following an infection, illness, medical treatment, or other major stressful event. IBS may result because the usual balance in the intestine is disrupted. The disruption may be caused by medications (e.g., antibiotics, steroids, non-steroidal anti-inflammatory drugs [NSAIDS]), malnutrition, infection, age, or stressful events in your life. The body's immune system becomes

stimulated, and inflammation occurs. The walls of the intestine can be damaged. This occurs especially if you are not eating healthy foods. The damage results in gaps in the wall of the intestine, sometimes referred to as leaky gut. These gaps allow proteins (from food or bacteria) that are normally blocked to enter the blood stream around the intestine. Constant stress can make the problem worse. Research is being done to investigate this theory. If it is true, treatment would focus on restoring a healthy intestinal wall and gut environment.

Is there a way to test for leaky gut?

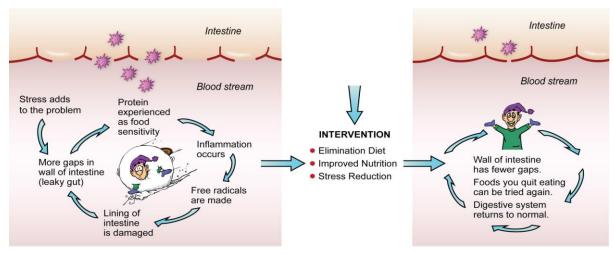
The health of the intestinal wall can be assessed using a lactulose/mannitol absorption test. This test measures how easily both large (lactulose) and small (mannitol) sugars pass through the wall of the intestine. If both of these sugars are found in your urine, there may be more gaps in your intestine, allowing damaging proteins to enter the blood stream. Lactulose/ Mannitol testing has been helpful in diagnosing both celiac disease and chronic diarrhea from other causes.

Information on Mannitol/Lactulose testing can be found at the following website: http://www.gdx.net/home/assessments/ip/. Testing costs about \$90. This test is not often covered by insurance. It may not be necessary if you can remember that an infection, medication use, or major stress occurred shortly before you started having symptoms. In that case, it would be reasonable to try the 4R approach described below to restore a healthy intestinal wall.

What can be done to return the intestinal wall to normal?

Naturopathic doctors have pioneered a "4R" approach to help heal the intestine, so that it works more normally. Steps include: 1) **removing** foods that irritate the lining of the intestine, 2) **replacing** agents for digestive support, 3) **reinoculating** with friendly bacteria and the foods they need to grow, and 4)





Leaky Gut Hypothesis

A protein (from food or bacteria) enters the intestines from the mouth. It stimulates the body's immune system. Inflammation occurs. You may experience this as a food sensitivity. Free radicals are created. These are a type of molecule that can cause damage to the wall of the intestine. This occurs especially if you are not eating healthy foods. The damage results in more gaps in the wall of the intestine (leaky gut). The process snowballs allowing even more proteins or foreign substances, which normally are blocked, to enter. Constant stress can make the problem worse. A healthy diet and reducing stress can help break this cycle. They allow the intestine to heal, so you can again start eating the foods that had been causing you problems.

repairing the lining of the intestine. Following are some highlights of this "4R" approach.

Elimination Diet (Removing irritating foods)

When gaps occur in the wall of the intestine, food proteins that caused no problems in the past may enter the blood stream and stimulate the immune system. Inflammation and symptoms of IBS occur. This is well known in celiac disease but can occur with other food proteins as well.

It is important to first remove foods that may be irritating the lining of the intestine. The most common food triggers to remove are listed in the table below. Once the intestinal wall has returned to normal, you can slowly try to start eating these foods again. Wait about 3 months before you try them. It is important to note that this is an intolerance, not a true food allergy. The key is to eat much less of the food protein initially. You may not need to give the food up entirely or forever.

See our handout on Elimination Diet.

Foods To Consider Eliminating for a Two Week Trial
Dairy (lactose)
Wheat (gluten)
High fructose corn syrup
Sorbitol (chewing gum)
Eggs
Nuts
Shellfish
Soybeans
Beef
Pork
Lamb

IgG Food Antibody Testing

As many as 65% of patients with IBS report that eating certain foods triggers their symptoms. Yet IgE antibodies are found in the blood of only about 3% of these patients. These IgE antibodies indicate that the body considers the food to be a foreign invader. Symptoms occur when the body tries to neutralize the food.



Some specialists believe that another antibody, IgG, may be playing a role. IgG testing is done to determine "hidden" food sensitivities or intolerance. These are ones in which symptoms are delayed and may not occur for up to three days after the food is eaten. Not all specialists agree on this.

One study evaluated IgG food sensitivity in 150 patients with IBS. After specific foods were identified, patients were divided into two groups. One group did not eat foods that were likely to cause hidden sensitivities, according to IgG testing. A control group ate a diet in which different foods were removed. After three months, those who ate the diet based on their own food sensitivities had a 26% greater improvement in IBS symptoms than did the other group. When patients started eating the problem foods again, their symptoms became 24% worse than the control group.

Despite these promising results, IgG food antibody testing requires further research, and laboratory standards need to be developed. An elimination diet remains the best standard of care.

If you find that an elimination diet is too hard to do and you are considering an IgG food antibodies test despite its limitations, a resource for this test is http://www.usbiotek.com/.

• Restoring Healthy Gut Flora

Bacteria found in the mucus of the intestinal wall play a key role in determining how tight or gappy it is. We are finding that probiotics, a type of healthy bacteria, are helpful for IBS. Taking a probiotic within the bacteria family, *Bifidobacterium*, seems to reduce gas, bloating, and inflammation of the intestinal wall.

See our handout on Probiotics.

Fiber

The benefits of fiber for patients with IBS have been mixed, according to a 2005 report. Since then, there have been some promising results with the use of guar gum for IBS. Guar gum (like psyllium and ground flax seed) is a fiber that helps maintain a healthy mucous layer in the intestine. It also can help lower cholesterol, improve constipation and promote the growth of healthy bacteria.

When two different doses of guar gum (5 gm/day and 10 gm/day) were given to 84 patients with IBS, both were found to reduce IBS symptoms and improve overall quality of life. The benefits decreased after 12 weeks of treatment. This suggests that you could stop taking guar gum after 12 weeks or stay on a maintenance dose. Bran fiber is also helpful for IBS, but many patients seem to prefer the guar gum.

• L-Glutamine

Glutamine is an amino acid that is used by rapidly growing cells. Some of the most rapidly growing cells of the human body are found in the lining of the GI tract. If glutamine gets used up, this lining will be less healthy. Research of L-glutamine has mainly been done on severely ill individuals in hospital intensive care units. Some patients develop severe infections when their intestinal barrier breaks down. This allows harmful bacteria into the blood stream resulting in serious infection. It can be prevented by taking L-glutamine.

There is no research on taking L-Glutamine for IBS. Since it is safe and causes very few side effects, taking 5 gms for two weeks may be helpful if it is suspected that you have increased gappiness in the wall of the intestine.



Zinc

Zinc may also be helpful in helping repair the intestinal wall. In a randomized study, 10 patients were given 37.5 mg of zinc to see if this would keep the intestinal wall healthy when they were given the medication Indomethacin. It did. When patients did not take zinc, there was a 3-4 fold increase in gappiness. The patients who took zinc also had a 75% reduction in stomach and small bowel injuries and 50% less injury to the cells of the intestine.

There is no good information regarding the use of zinc for IBS. Since zinc is one of the most common mineral deficiencies in our western diet, using it for 14-30 days at a dose of 20-35 mg daily may be helpful.

Other plant-based treatments for IBS

Peppermint

Peppermint is rich in menthol, which relaxes smooth muscle. Taking peppermint may reduce the amount of cramping and pain with IBS.

A review of 16 clinical trials showed an average response rate of 58% for peppermint compared to 29% with placebo. This is similar to the drugs prescribed for IBS (tegaserod, alosetron, cilansetron). Since peppermint is much safer, specialists have noted that "peppermint oil may be the drug of first choice for IBS patients."

Enteric-coated peppermint is recommended since it dissolves lower in the GI tract, reducing the risk of reflux (stomach contents flowing back into the esophagus). A common dose is 0.2-0.4 ml three times daily of enteric-coated capsules. The dose for children ages 8 and older is 0.1-0.2 ml three times daily. Look for a brand that has at least 44% menthol and less than 1% pulegone.

Cromolyn Sodium

Cromolyn appears to be helpful for inflammation. It tends to be most helpful when the main problem is diarrhea.

When cromolyn was compared to an elimination diet for 409 patients with IBS over 4 months, symptoms improved for 60% of the patients on the elimination diet and 67% for those on cromolyn. Patients who had positive skin tests to dietary antigens had better symptom control on cromolyn than those who didn't test positive. In a group of 101 patients whose worst symptom was diarrhea and who had previously been helped by going on an elimination diet, 60% had improved symptoms when using cromolyn.

If your symptoms have improved when you tried an elimination diet, using cromolyn sodium for a short time may be worth a try. It could help calm the inflammatory reaction that can occur with a food sensitivity.

Where can I find more information?

For more information on treating IBS with complementary and alternative medicine (CAM) therapies, see the May 2011 edition of the NCCAM Clinical Digest. It was published by the National Institutes of Health, National Center for Complementary and Alternative Medicine. This issue summarizes research on the most popular CAM therapies people try for IBS. See the section entitled. "Information for Your Patients."

The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use the information in the best way possible to promote your health.

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