

Irritable Bowel Syndrome (IBS) in Children and Adolescents

Reprinted from: www.aboutKidsGI.org, an IFFGD website dedicated to digestive health issues in children.

What does IBS mean?

Irritable bowel syndrome is a disturbance of bowel function that includes symptoms of abdominal pain or discomfort and altered bowel habit (change in frequency or consistency) – chronic or recurrent diarrhea, constipation, or both in alternation.

“Irritable bowel” refers to a disturbance in the regulation of bowel function that results in unusual sensitivity and muscle activity.

“Syndrome” refers to a number of symptoms and not one symptom exclusively.

How common is IBS?

A population based study of 507 middle school and high school students by Hyams et. al. indicated that 6–14% of the adolescent population note symptoms consistent with IBS. In the study, anxiety and depression scores were significantly higher for students with IBS-type symptoms compared with those without symptoms. Eight percent of all students had seen a physician for abdominal pain in the previous year. These visits were correlated with abdominal pain severity, frequency, duration, and disruption of normal activities; they were not correlated with anxiety, depression, gender, family structure, or ethnicity.

What are the symptoms of IBS?

In 1995, an international group of pediatric gastroenterologists gathered together to define the diagnostic criteria for functional gastrointestinal (GI) disorders in the pediatric population (published in 1999 as part of the larger Rome II Criteria). The development of these diagnostic criteria was based on several underlying principles applicable to children.

Rome II Diagnostic Criteria for IBS in Children

In children old enough to provide an accurate pain history, at least 12 weeks, which need not be consecutive, of continuous or recurrent symptoms during the preceding 12 months of:

- (1) Abdominal discomfort or pain that has two out of three, features:
 - (a) Relieved with defecation; and/or
 - (b) Onset associated with a change in frequency of stool; and/or
 - (c) Onset associated with a change in form (appearance) of stool.
- (2) There are no structural or metabolic abnormalities to explain the symptoms.

Symptoms that cumulatively support the diagnosis of irritable bowel syndrome:

- Abnormal stool frequency (for research purposes “abnormal” may be defined as greater than 3 bowel movements per day and less than 3 bowel movements each week);
- Abnormal stool form (lumpy/hard or loose/watery stool);
- Abnormal stool passage (straining, urgency, or feeling of incomplete evacuation);
- Passage of mucus;
- Bloating or feeling of abdominal distension.

Children with IBS may also have headache, nausea, or mucus in the stool. Weight loss may occur if a child eats less to try to avoid pain.

Clinical evaluation

A history that fits the Rome Criteria for a diagnosis of IBS, accompanied by a normal physical examination and normal growth history, are consistent with a diagnosis of childhood IBS. A nutritional history, assessing for adequacy of dietary fiber in those with constipation, as well as ingestion of sugars such as sorbitol and fructose in those with diarrhea, is often useful. Factors alerting the clinician to the possibility of disease other than IBS include night time (nocturnal) pain or

diarrhea, weight loss, rectal bleeding, fever, arthritis, delayed puberty, and a family history of inflammatory bowel disease.

A limited laboratory screening for other conditions is frequently reassuring to the clinician, patient, and family for patients with persistent symptoms and may include a complete blood count, stool studies, and breath hydrogen testing or a trial of a milk free diet for lactose malabsorption.

SOME SUGARS CAN CAUSE DIARRHEA

The artificial sugar **sorbitol** is used as a sweetener. For example, it is often used to sweeten diet gums and candies. It has no calories, but is a known laxative if taken in sufficient amount. A glance at the ingredients of many confections or sweets will reveal the offending sugar. Mannitol is another sweet substance frequently found with sorbitol.

Fructose is a natural calorie-containing sugar found in fruit. It is one reason why large amounts of fruit can cause diarrhea. It is also naturally present in onions, artichokes, and wheat. It is used as a sweetener and may be found in candies, soft drinks and fruit drinks, honey, and preservatives and in sufficient amounts can cause diarrhea.

Treatment

Once there is a diagnosis of IBS, the treatment goals are to provide effective reassurance to the child and family, and to reduce or eliminate the symptom(s). The doctor must educate and reassure the child and family that although IBS causes discomfort it is not life-threatening and will not develop into another more serious condition. The presence or severity of the pain should not be disputed. A review of the current understanding of IBS and the exacerbating effects of stress and anxiety on the problem helps the child and family to understand why the pain occurs. Psychosocial difficulties and triggering events for symptoms will be asked about and, if present, addressed.

Medications may be used – such as a tricyclic antidepressant, which in low doses acts as a pain reliever, or anticholinergics to help control intestinal cramping. However, effectiveness of these drugs in children is anecdotal and not supported by well-designed studies to confirm their efficacy. In those with constipation increased dietary fiber may be recommended. However, fiber is often associated with an increase in intestinal gas production, and may increase abdominal cramps and flatulence. Flatulence is especially embarrassing to the school-age child. Mineral oil may be a helpful adjunct, but use only as recommended by your child's physician. In patients with symptoms that do not respond to treatment, endoscopic evaluation of the colon may be done. Irritable bowel syndrome may coexist with other conditions, such as inflammatory bowel disease (colitis or Crohn's disease). Tests can differentiate an inflammatory bowel disease from a functional GI disorder such as IBS.

References:

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- Hyams JS, Burke G, Davis PM, Rzepski B, Andrulonis PA. Abdominal pain and irritable bowel syndrome in adolescents: a community-based study. *J Pediatr* 1996 Aug;129(2):220-6.
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Does Diet Play a Role in IBS?

While dietary factors do not cause IBS, they may aggravate symptoms in some persons. Increased intestinal muscle reactivity and/or heightened sensitivity in IBS can cause the bowel to over-respond to stimuli. Even a normal event such as the act of eating itself, and not a particular food, may aggravate symptoms at times.

Nonetheless, certain foods are known to stimulate gut reactions in general, and in those with IBS eating too much of these might influence or worsen symptoms. For example, meals that are too large or high in fat, fried foods, coffee, caffeine, or alcohol may provoke symptoms of abdominal cramps and diarrhea. Eating too much of some types of sugar that are poorly absorbed by the bowel can also cause cramping or diarrhea. Some foods are gas producing and eating too much may cause increased gaseousness, particularly since IBS can be associated with retention of gas and bloating. (Go to IFFGD's web page at www.aboutIBS.org/Publications/gas.html for information on controlling intestinal gas.)

The influence of diet is unique to each individual and there is no generalized dietary advice that will work for everyone. A physician can take a brief dietary history and with a 2–3 week diary of dietary intake, symptoms, and any associated factors (e.g., daily obligations, stressors, poor sleep, medications) can help identify dietary and/or other factors that may impact symptoms. (IFFGD has an easy to follow *Personal Daily Diary* designed for this purpose – call us toll-free at 1-888-964-2001 to obtain a Diary. Cost, which includes shipping and handling, is \$2 to members and \$3 to non-members. (You can access a free condensed on-line version at: www.iffgd.org/images/DailyDiary.pdf)

For those with IBS who benefit from simple dietary modifications, it makes sense to adjust the diet and reduce intake of the offending food. It does not make sense to adopt unnecessarily limited diets, which can lead to reduced quality of life or even malnutrition. Physicians and patients need to talk about diet. Guidance needs to be provided by a knowledgeable health care professional (e.g., physician or registered dietician) who can assess individual circumstances while helping make sure that nutritional needs are being met through a balanced diet, and healthy eating habits.

Source: [www.aboutIBS.org/Publications/dietary Guidelines.html](http://www.aboutIBS.org/Publications/dietary%20Guidelines.html), an IFFGD web page

Coping with IBS from the Inside Out: Relaxation Techniques to Manage Symptoms

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You've been to the doctor and you've had all of the tests. The diagnosis you've been given is irritable bowel syndrome or IBS . . . now what?

Dealing with a chronic gastrointestinal disorder such as IBS can be distressing. You may have days where you don't want to leave the house. You may feel you are sensitive to certain foods and/or have made significant restrictions to your diet. You may feel abdominal cramping one minute and bloating the next. You may walk into a room and check to see where the nearest restroom is, and may even avoid social situations more than you would like. Your bowel symptoms may feel unpredictable and you wish there was something more you could do to regain a sense of control of your life.

If this sounds familiar, you are not alone. IBS is a common digestive/gastrointestinal disorder that affects 10–20% of the population. Individuals with IBS experience abdominal pain or discomfort associated with episodes of constipation and/or diarrhea, and sometimes various other symptoms. Doctors refer to IBS as a "functional" disorder, meaning that there is no visible explanation for the symptoms. In other words, no evidence of tissue damage, inflammation, or disease appears on traditional tests such as an x-ray or blood test. Instead, there is a difficulty with the way the bowels function. This can result in changes in bowel sensation and motility (contractions). For example, the bowels may move too much or too often, and sometimes they don't move enough or often enough.

Your doctor or other health care provider may have suggested that your IBS is "stress-related." In no way does this mean that your symptoms are "all in your head." Rather, your doctor is referring to the ways in which the brain and digestive system communicate and interact with each other, commonly referred to as the "brain-gut connection." In response to either a significant physical (e.g., bowel infection) or psychological stressor (e.g., change of job, change in role in life), a disturbance in these complex interactions often can lead to the first onset of symptoms or aggravate symptoms you are already having.

In order to regain a sense of control and better manage your symptoms, there are several steps you can take.

Learn about IBS to gain a better understanding of what your body is experiencing. IBS may be a topic you have a difficult time discussing with others, but as you begin to educate yourself, you will find that you are not alone and there are many available resources to assist you.

It is often useful to identify possible factors that trigger or aggravate symptoms. Begin by keeping track of your symptoms and noting when they are more likely to occur. Some individuals find it useful to keep a diary of their symptoms, recording such information as when and where symptoms began, what situation(s) precipitated the symptoms, the nature and severity of symptoms, and how one was feeling at the time. [IFFGD has available a *Personal Daily Diary* for this purpose.] Try this for seven to ten days and see if you notice any patterns. Keep in mind, the way persons experience IBS symptoms and respond to treatments is highly individualized. Discuss your findings with your healthcare provider to help develop a management or treatment plan best suited to your circumstances.

Relaxation Techniques

Given that IBS is a disorder of brain-gut and mind-body interactions, many individuals find symptom relief and an improved sense of well-being when they incorporate simple relaxation techniques into their daily lives. Although stress is inevitable, if not managed well, it can become detrimental to one's physical and emotional health. Thus, a regular practice of deep relaxation is associated with several health benefits including: a reduction of generalized anxiety, increased energy levels and productivity, improved concentration and memory, improved sleep, decreased fatigue, increased sense of self-confidence, and reduced muscle tension.

Whether you have five minutes or one hour to spare, regular use of the relaxation exercises discussed here will help you to feel more in control of your symptoms, while also promoting positive self-care. It is best to

practice on a daily basis and, if possible, at the same time each day. Most people prefer to do the exercises either just upon awakening or prior to bedtime.

Here is a description of three widely used relaxation exercises – diaphragmatic/abdominal breathing, progressive muscle relaxation, and visualization/positive imagery.

Diaphragmatic/Abdominal Breathing

To locate your diaphragm, place your hand above your belly button, just below your ribcage. Practicing abdominal breathing involves allowing your breath to travel deep into your diaphragm.

- To begin, close your eyes (if you desire) and become aware of your breathing. Notice the way the air feels as it travels in through your nostrils and then out. Next, take a long, slow deep breath inward, bringing the breath all the way down into your abdomen (to know if you are doing this correctly, you should feel your hand rising as you inhale.)
- When you've taken your breath inward, pause briefly and then exhale slowly through your nose or mouth, depending on your preference.
- Continue this exercise taking 5–10 slow, deep inhalations and exhalations. It is important to keep your breathing slow and rhythmic. To help you slow down, practice counting to four on the inhalation and exhalation, pausing in between. The process will be as follows:
 - Inhale to the count of four 1 . . . 2 . . . 3 . . . 4. Pause. Exhale to the count of four 1 . . . 2 . . . 3 . . . 4.
 - Some people enjoy saying a word or mantra to themselves on the inhalations and exhalations. For example, Inhale R-E-L-A-X . . . Pause. Exhale R-E-L-A-X. There is no single right way, so choose whatever feels most comfortable for you.

Continue this process 5–10 times. If you begin to feel faint or light-headed, stop the breathing for 15–20 seconds and then begin again.

Progressive Muscle Relaxation

This method of relaxation focuses on the

tensing and then relaxing of the various muscle groups. When used in combination with abdominal breathing, this method of relaxation can have profound effects on one's level of tension and anxiety by promoting a state of deep relaxation.

This exercise may take approximately 20–25 minutes to complete. Although this may feel like a significant time commitment, keep in mind the positive results you will experience when you give yourself permission to take this personal time. Allow yourself to put aside your worries during this time, realizing you can always return to them later.

- To begin, find a comfortable space where you can sit or lie down and where you are free from distractions. Take 3–4 deep abdominal breaths, inhaling and exhaling slowly and rhythmically as discussed above. You may wish to close your eyes for this exercise.
- Begin by tensing the muscles in your forehead, making a frown. Hold this for 3–4 seconds and release the tension. Notice the difference in sensation between the tensing and relaxing of these muscles.
- Next, squeeze your eyelids together for the same count. Hold and release the tension, letting your eyelids become heavy and relaxed.
- Wrinkle your nose for several seconds. Hold and relax.
- Move to your jaw. Tense, hold and relax these muscles.
- Allow all of the muscles in your face to relax. Imagine the tension draining away. Take a nice, deep breath in and then out.
- Next, move to the muscles in your neck. Slowly roll your head from one side to the other. Reverse directions and do this again. Imagine your neck muscles feeling loose and relaxed.
- Shrug your shoulders, bringing them up tightly toward your ears. Hold for a count of three and then relax them.
- Move to your upper and lower arms and fists, tightening and then releasing the tension. Allow your arms and hands to hang limply by your side. Feel the tension draining from your shoulders through your arms and hands.
- Take another slow, deep breath inward and tighten your abdominal muscles. Hold this for three counts and then slowly exhale, focusing on the warmth and positive sensation you are feeling.

- Next, focus on tensing your upper legs. Hold and then release the tension. Slowly move to your lower legs and calf muscles. Again, hold and release.
- Now move to your feet and ankles. Point your toes toward you, hold and then release. Circle your ankles in both directions, releasing any tension you may be feeling in this area.
- Now take 2–3 slow, deep breaths. Scan your body to see if there are any areas where you are still feeling tension. If there are, direct your attention to these areas, tensing and relaxing them as you have just done. Imagine the tension being completely drained, leaving you feeling a sense of warmth and heaviness.

Enjoy this feeling of relaxation for several minutes. Allow yourself 3–4 deep abdominal breaths before resuming your breathing to its normal pace. When you are ready, open your eyes, stretch, and reorient yourself to your surroundings.

You may want to tape the above exercise on an audiocassette to help guide you through it. As stated above, it is best to practice the exercise on a daily basis to gain its full benefits. As you become more familiar with the exercise, you may find you are able to complete it in 20 minutes or less.

Visualization/Positive Imagery

This form of relaxation involves using your mind to imagine yourself in a calm, peaceful and relaxing place. By focusing on such a place, your attention is diverted away from worrisome thoughts.

- Begin by closing your eyes and imagining a peaceful, relaxing scene or place. You may imagine a sandy beach, a quiet meadow, a lush countryside, or other place.
- Take a few deep breaths and as you do so, imagine yourself in this very place. Take a look around. What do you see? What do you feel? Imagine the rich colors. Imagine the warmth of the sun or breeze of the wind. Notice any sounds that are present. Imagine yourself enjoying the beauty of what surrounds you. Make full use of your senses as you visualize yourself in this scene, feeling a sense of peace and calmness with your troubles out of sight.

- In addition to imagining a peaceful scene, you may also wish to visualize yourself feeling free from the pain and discomfort of your IBS symptoms.
 - Identify where your discomfort is predominant.
 - Take several long, slow, deep breaths and go to that area.
 - Imagine releasing the tension and discomfort there, feeling yourself relaxed and in control.
 - You may also wish to simply imagine your body as you would like it to feel... calm, relaxed and without pain.

Stay with this scene (or scenes) for as long as you need to and know that you can return to it at any time, when feeling tense, anxious, or stressed. As mentioned, you may also wish to imagine this scene when you are feeling any pain or discomfort.

This form of relaxation, while powerful, also takes practice, as our minds can become easily distracted with other thoughts. Realize this is normal and natural. Do not become upset with yourself. Instead, without judgment, gently bring yourself back to focusing on your peaceful scene and your breathing.

Summary

By taking the time to educate yourself about IBS, identifying possible triggers of your symptoms, and practicing the relaxation exercises discussed here, you will be taking positive and active steps to help better cope with and manage your symptoms. Furthermore, you will be giving your body and mind the personal time and attention it deserves to more productively deal with any stress or anxiety that may come your way. Be sure to have patience with yourself as learning these skills takes time.

Lastly, don't be afraid to ask for help. Dealing with IBS can be extremely frustrating and overwhelming. Seeking professional help does not in any way imply weakness. On the contrary, recognizing the need for help is both a sign of strength and your determination to live a productive and meaningful life – you certainly deserve it!

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