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## **IRRITABLE BOWEL SYNDROME**

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Irritable bowel syndrome (IBS) is a common disorder of the intestines that leads to crampy pain, gas, bloating, and changes in bowel habits. Some people with IBS have constipation (difficult or infrequent bowel movements), others have diarrhea (frequent loose stools, often with an urgent need to move the bowels), and some people experience both. Sometimes the person with IBS has a crampy urge to move the bowels but cannot do so. Irritable bowel syndrome affects at least 10-15% of adults. It is not usually associated with hospitalization, and does not lead to surgery. However, it can severely compromise a person's quality of life. Up to 20% of patients diagnosed as having IBS may report symptoms of fecal soiling. IBS is second only to the common cold as a cause of absenteeism from work. Through the years, IBS has been called by many names – colitis, mucous colitis, spastic colon, spastic bowel, and functional bowel disease. Most of these terms are inaccurate. Colitis, for instance, means inflammation of the large intestine (colon). IBS, however, does not cause inflammation and should not be confused with ulcerative colitis, which is a more serious disorder.

The cause of IBS is not known, and as yet there is no cure. Doctors call it a functional disorder because there is no sign of disease when the colon is examined. IBS causes a great deal of discomfort and distress, but it does not cause permanent harm to the intestines and does not lead to intestinal bleeding of the bowel or to a serious disease such as cancer. Often IBS is just a mild annoyance, but for some people it can be disabling. They may be afraid to go to social events, to go out to a job, or to travel even short distances. Most people with IBS, however, are able to control their symptoms through diet, stress management, and sometimes with medications prescribed by their physicians.

### **WHAT DOES "IRRITABLE" MEAN?**

Irritable means that the nerve endings in the lining of the bowel are unusually sensitive, and that the nerves that control the muscles of the gut are unusually active. The result is that the bowel is unduly responsive to what may be quite normal events such as the passage of gas or fluid along its length, and this leads to inappropriate muscular activity that may momentarily stop a bowel movement, or result in untimely efforts to expel material from the bowel. Similar events can occur in some diseases of the bowel, or following bowel surgery, but in IBS there is no evidence of intrinsic disease in the bowel.

### **IS IBS COLITIS?**

Many physicians and lay people have mistakenly used the term "colitis" to mean "IBS", which has led to much confusion. Colitis is a medical term which refers to an inflammation of the lining of the large bowel (the colonic mucosa). Infections are a common cause of colitis. Inflammatory bowel disease, such as Crohn's disease or ulcerative colitis, can also involve the colon and produce colitis. This does not happen in IBS, where there is no infection or inflammation of any kind.

### **WHAT ARE COMMON SYMPTOMS OF IBS?**

IBS can present as chronic diarrhea (diarrhea predominant IBS) or constipation (constipation predominant IBS). A pattern of alternating constipation and diarrhea is also very common. IBS patients may feel a sensation of not being able to fully empty their bowels after a movement. Abdominal pain and spasm are among the most common symptoms and many patients will feel significant relief of pain and discomfort after a bowel movement or the passage of gas. IBS patients can also experience symptoms of nausea. Remember, anemia, bleeding, weight loss or fever are not symptoms of IBS and a physician should be contacted immediately in any of these occur.

### **HOW IS IBS DIAGNOSED?**

IBS is usually diagnosed after doctors exclude more serious organic disease. The doctor will take a complete medical history that includes a careful description of symptoms. A physical examination and laboratory tests will be done. A stool sample will be tested for evidence of bleeding. The doctor also may do diagnostic procedures such as X-rays or endoscopy (viewing the colon through a flexible tube inserted through the anus) to find out if there is organic disease.

### **WHAT CAUSES IBS?**

The cause of IBS is not completely understood. We do know that people with IBS have altered patterns of colonic motility (muscle contraction). Symptoms appear to be the result of increased sensitivity to distension of the gastrointestinal tract by gas or fecal material and a tendency for the bowel to be overly reactive to almost anything: eating, stress, emotional arousal, or gaseous distension. Individuals with irritable bowel syndrome commonly react to these events by developing more pronounced contractions in the bowel, and it is these contractions that seem to be responsible for the sensation of bloating, discomfort, and urgency.

IBS is not caused by an infectious agent. Lactose (mild sugar) intolerance can have similar symptoms to IBS, and while lactose intolerance and irritable bowel can occur concurrently in a person, they are different problems. IBS has no relation to cancer.

The colon, which is about 6 feet long, connects the small intestine with the rectum and anus. The major function of the colon is to absorb water and salts from digestive products that enter from the small intestine. Two quarts of liquid matter enter the colon from the small intestine each day. This material may remain there for several days until most of the fluid and salts are absorbed into the body. The stool then passes through the colon by a pattern of movements to the left side of the colon, where it is stored until a bowel movement occurs.

Colon motility (contraction of intestinal muscles and movement of its contents) is controlled by nerves and hormones and by electrical activity in the colon muscle. The electrical activity serves as a "pacemaker" similar to the mechanism that controls heart function.

Movements of the colon propel the contents slowly back and forth but mainly toward the rectum. A few times each day strong muscle contractions move down the colon pushing fecal material ahead of them. Some of these strong contractions result in a bowel movement.

Because doctors have been unable to find an organic cause, IBS often has been thought to be caused by emotional conflict or stress. While stress may worsen IBS symptoms, research suggests that other factors also are important. Researchers have found that the colon muscle of a person with IBS begins to spasm after only mild stimulation. The person with IBS seems to have a colon that is more sensitive and reactive than usual, so it responds strongly to stimuli that would not bother most people.

### **WHAT CAUSES BLOATING AND GAS?**

The mechanism of bloating is not well understood. Many factors may be involved, such as reflex relaxation of the smooth muscle of the bowel, flaccid abdominal wall, and an unusual sensitivity to both painful and non-painful sensations arising from the gut.

When tested, people with irritable bowel do not actually produce more gas than those who do not have irritable bowel symptoms. IBS patients do appear to be more sensitive to normal amounts of gas. They may also be less able to pass the gas which is present.

### **WHAT IS THE EFFECT OF DIET ON IRRITABLE BOWEL?**

The effect of diet on irritable bowel varies from person to person. Ordinary events such as eating and distention from gas or other material in the colon can cause an overreaction in the person with IBS. Certain medicines and foods may trigger spasms in some people. Sometimes the spasm delays the passage of stool, leading to constipation. Chocolate, milk products, or large amounts of alcohol are frequent offenders. Caffeine causes loose stools in many people, but it is more likely to affect those with IBS. Dietary fats are also known to be common triggering factors. Corn, wheat and even fiber will trigger symptoms in certain people. Monosodium glutamate, a common food additive, can also be a cause of severe irritable symptoms. In general, almost any food item or food additive may cause irritable bowel symptoms in one particular person. In those cases, the symptoms are very reproducible – each time the person consumes that one particular food item, he or she experiences the same symptoms. Maintaining a food and symptoms diary for a minimum of one week can help identify triggering foods.

About 17% of people (a much larger proportion of African-Americans) are unable to digest milk or milk products. It is thought that the enzyme which breaks down the milk sugar is missing or reduced in their digestive tracts. It has also been suggested that it may be the protein, rather than the sugar, in milk that causes the problem. These people may experience symptoms similar to IBS when they drink milk. Once this has been identified, the treatment is to avoid milk in the diet as much as possible. Using skimmed milk does not help because the product still contains the sugar and protein. Butter can often be tolerated because the water soluble portion of the milk has been largely removed. The use of artificial sources of the enzyme lactase may control the symptoms for some people. Certain artificial sweeteners (such as sorbitol) are also indigestible and, if taken in large amounts, can cause bloating, discomfort, and diarrhea.

### **WHAT IS THE RELATIONSHIP OF STRESS TO IBS?**

Emotional distress can significantly influence IBS. It is incorrect and unfair for patients or caregivers to characterize IBS as "all in one's head" or IBS patients as "emotionally disturbed". IBS results from a complex interaction between the nerves and muscles of the bowel and an individuals

emotional state. To understand IBS, one must understand that the disorder represents an unusual sensitivity of the bowel to external stresses.

### **CAN STRESS AND ANXIETY CAUSE OR AGGRAVATE IRRITABLE BOWEL?**

Irritable bowel is not caused by these, but the symptoms are greatly aggravated by stress and anxiety. If a person who has an irritable bowel also suffers from depression, panic, or anxiety, their bowel symptoms may worsen during periods of emotional upset.

Not uncommonly, IBS patients may develop symptoms while eating at restaurants and social gatherings. In severe cases, the thought of getting dressed to go out may trigger an "attack" of IBS symptoms.

In a significant number of female patients affected with irritable bowel with severe constipation or other functional bowel disorders, a history of sexual or physical abuse during childhood has been elicited. Such experiences may make individuals unusually sensitive and vulnerable to their bodily sensations.

Many people experience abdominal pain and constipation or diarrhea without any evidence of anxiety, depression, or other psychological symptoms. Stressful events like losing a job or becoming embroiled in an argument are events which can cause a change in bowel habits and even abdominal pain for most people. People with irritable bowel syndrome are more reactive to these events and therefore more likely to experience an exacerbation of their symptoms when they are exposed to stress.

### **WHY SHOULD STRESS UPSET THE BOWEL?**

Although it is commonly assumed that the brain alone controls all activity in the body, this is not true. The gut has its own independent nervous system that regulates the processes of digesting food and eliminating solid waste. The gut nervous system does not depend on the brain for its minute to minute function but responds to its inputs under various conditions. Under stress that brain sends conflicting messages to the gut that exaggerate the irritability of the gut nervous system. IBS symptoms are often most severe at the beginning of a working day, when stress levels are high. In contrast, IBS symptoms do not normally wake patients during the night.

### **GUT-BRAIN CONNECTION:**

The gut and the brain develop from the same part of the human embryo. So it is not surprising that the intestinal tract has such a rich nerve supply that it is sometimes referred to as "the little brain." The gut shares many of the same kinds of nerve endings and chemical transmitters as the brain to which it remains linked through a large nucleus (the locus ceruleus). This collection of nerve cells is partly responsible for controlling anxiety and fear which explains why these emotions can sometimes be associated with bowel function.

### **ARE YOU A GUT RESPONDER?**

The linkage between the brain and the body is easily demonstrated. When people are asked to imagine an anxiety provoking situation (such as taking a test, speaking in public, or disagreeing with the boss), everybody experiences both an emotional and a physical response. This is the nervous system's way of gearing up to meet a challenge. Emotional feelings can include fear,

anxiety, stress, apprehension or doubt. The physical sensations may include muscle tension, sweating, palpitations breathlessness or abdominal cramps. Every individual differs in which emotions or sensations they experience and also in whether they are more aware of what is happening in their mind or their body. For some people, their "target organ" is the gut. This may be partly hereditary – irritable bowel does run in some families. Furthermore, certain individuals are more "symptom sensitive" than others; it is as if an amplifier were turned up so they are more tuned in to their bodies. Why this is so is unclear. People vary in how much they communicate distress verbally or by body language. This may be partly learned. Abdominal pain is a very common response to worry in children which may be unintentionally reinforced by parental attention or avoidance of stressful situations – for example, staying away from school. Another possibility is that people who are "symptom sensitive" may have been emotionally deprived or even physically abused as children and are consequently more tuned in and easily alarmed by their bodies as well as less able to express their emotions. Whatever the reason for it, anybody who is either or both a "gut responder" and "symptom sensitive" is at risk for experiencing irritable bowel symptoms under stressful circumstances.

#### **IRRITABLE BOWEL: CAUSE, CONSEQUENCE, OR COINCIDENCE?**

Because the bowel and the brain are so closely linked, it is often difficult to separate cause from effect. Life's daily hassles as well as more prolonged predicaments (a difficult job, a tense relationship) may provoke an irritable bowel. But, it is equally true that the symptoms this produces such as diarrhea, urgency, incontinence or pain, are stressful themselves. This creates a "chicken and egg" situation in which it may be impossible to separate cause from effect. What complicates matters more is the fact that digestive and emotional disorders are both common. Irritable bowel, depression, panic and anxiety each, by themselves, occur in at least one in ten people. Since common things commonly coincide it is hardly surprising that emotional symptoms and bowel dysfunction often occur together in the same person-irrespective of cause and effect.

If a person does suffer from an episode of depression, anxiety, or panic and happens to be a gut responder, they will almost certainly experience a worsening of irritable bowel symptoms while their emotional disorder persists.

#### **CAN THE MENSTRUAL CYCLE AFFECT IRRITABLE BOWEL SYMPTOMS?**

The gastrointestinal tract does respond to changes in the level of the female hormones, and symptoms can become worse at certain times of the cycle. This occurrence can sometimes make it difficult for the patient, as well as the physician, to ascertain whether she is having a gynecological problem or a gastrointestinal problem. It is important for the patient, as well as the physician, to realize that sometimes both avenues must be explored.

#### **IS IBS A "SERIOUS ILLNESS"?**

The impact of IBS varies with each individual. For some people, it may severely compromise their quality of life. IBS can cause enough discomfort to alter daily activities and performance. However, it is a benign disorder in that there are no long-term organic complications. Some patients have a more severe form of IBS, and the fear of pain and diarrhea may cause them to withdraw from normal activities. In such cases, doctors may recommend mental health counseling.

## **HOW IS IBS LINKED TO MORE SERIOUS PROBLEMS?**

IBS has not been shown to lead to any serious, organic diseases. No link has been established between IBS and inflammatory bowel diseases such as Crohn's disease or ulcerative colitis. IBS does not lead to cancer and people with IBS are no more likely to develop cancer than other individuals and have no greater need of preventive checkups than other people.

## **HOW IS IBS TREATED?**

The first line of treatment for IBS is a personal evaluation of stress level and diet. Sources of stress may include overwork, poor sleep habits and excessive use of caffeine, alcohol and tobacco. Proper rest and exercise can help reduce stress levels and positively influence IBS. A diet high in fiber can also help many people with IBS. However, a diet excessively high in fiber may itself cause diarrhea, particularly in people with diarrhea predominant IBS. Laxatives should be avoided.

When these measures fail, consultation with a physician is advised. A number of medications can be helpful. Antispasmodics, antidepressants and anti-anxiety medications can be helpful for specific IBS groups. However, the effectiveness of these agents differs between individuals, and a medication regimen must be carefully chosen by the patient and his or her physician.

People who have not responded to lifestyle changes and careful use of medications should consider being evaluated by a physician who specializes in motility and stress-related gastrointestinal disorders. Biofeedback, more complex medication regimens and specialized motility and psychological screening can reveal specific conditions which may respond to treatment.

The key to achieving relief for IBS is for patients to embrace the understanding that IBS is a complex motility disorder with physical and stress-related dimensions. A strong partnership between a knowledgeable patient and an empathic, knowledgeable physician can produce significant improvement for people with IBS.

## **CAN MEDICINES RELIEVE IBS SYMPTOMS?**

There is no standard way of treating IBS. Your doctor may prescribe fiber supplements or occasional laxatives if you are constipated. Some doctors prescribe antispasmodic drugs or tranquilizers, which may relieve symptoms. Antidepressant drugs also are used sometimes in patients who are depressed.

The major concerns with drug therapy of IBS are the potential for drug dependency and the effects the disorder can have on lifestyle. In an effort to control their bowels or reduce stress, some people become dependent on laxatives or tranquilizers. If this happens, doctors try to withdraw the drugs slowly.

## **CAN SPECIAL DIET HELP WITH IBS?**

For many people, eating a proper diet lessens IBS symptoms. For example, adding bulk to the diet, such as bran or a psyllium preparation, can often help regulate the bowel dysfunction. Before changing your diet, it is a good idea to keep a journal noting which foods seem to cause distress. Discuss your findings with your doctor. You also may want to consult a registered dietitian, who can help you make changes in your diet. For instance, if dairy products cause your symptoms to flare up, you can try eating less of those foods. Yogurt might be tolerated better because it contains

organisms that supply lactase, the enzyme needed to digest lactose, the sugar found in milk products. Because dairy products are an important source of calcium and other nutrients that your body needs, be sure to get adequate nutrients in the foods that you substitute.

Dietary fiber may lessen IBS symptoms in many cases. Whole grain breads and cereals, beans, fruits, and vegetables are good sources of fiber. Consult your doctor before using an over-the-counter fiber supplement. High-fiber diets keep the colon mildly distended, which may help to prevent spasms from developing. Some forms of fiber also keep water in the stools, thereby preventing hard stools that are difficult to pass. Doctors usually recommend that you eat just enough fiber so that you have soft, easily passed, and painless bowel movements. High-fiber diets may cause gas and bloating, but within a few weeks, these symptoms often go away as your body adjusts to the diet.

Large meals can cause cramping and diarrhea in people with IBS. Symptoms may be eased if you eat smaller meals more often or just eat smaller portions. This should help, especially if your meals are low in fat and high in carbohydrates such as pasta, rice, whole-grain breads and cereals, fruits and vegetables.

### **IS IBS FOREVER?**

Probably not. It has been established that each year, approximately 10% of IBS patients get better. What this suggests is that most people with IBS will eventually get better, but this is not true for every patient. In cases where life stress is an important factor, sometimes a change in life style, or job, or personal relationships may lead to complete recovery. In many cases, however, stress does not seem to be a contributory factor.

### **EVERYDAY LIVING AND IRRITABLE BOWEL**

Living with an irritable bowel is not easy. Unpredictable, painful or frequent bowel movements and fluid, smelly or constipated stools can disrupt everyday living, induce stigma and create embarrassment. Loss of control, loss of dignity, altered body image, reduced physical activity and dietary restrictions may all be problems to contend with. These can interfere with work and social functions in both obvious and subtle ways including leisure and sexual activities.

Any or all of these considerable adjustment issues may create fatigue, depression, anxiety or sleep disturbance. People who deal with their tiredness by drinking coffee or cola, or their anxiety by consuming junk food, alcohol or by smoking create still further insults to their already sensitive bowel.

### **YOU AND YOUR DOCTOR**

Another difference that distinguishes people is the degree to which they worry about or brood over bodily sensations and their tendency to seek help from doctors. This can be influenced by fear of disease brought on either by personal experience or sickness in family members and friends. In medical school, many future doctors develop "sophomore's disease" when they are taking examinations and dealing with serious illnesses for the first time. This heightened sense of vulnerability in some individuals may drive people to seek reassurance in repeated visits to doctors and requests for multiple tests or medications. The therapeutic or investigative zeal of some physicians may seduce a few individuals down a slippery slope into doctor shopping, dependency

on drugs, invalidism and the sick role. This may be contributed to because irritable bowel symptoms are often chronic, intermittent and uncertain concerning a cause. A doctor who understands your condition and one in whom you have confidence is obviously important.

### **WHAT CAN BE DONE ABOUT STRESS?**

Minimizing stress is, for many but not all IBS patients, an important part of coping with the problem. It is important to try to analyze the source of stress in one's life – and professional help may be needed to do that. Of particular importance seem to be decisions that are deferred because of fear of the consequences. Replacing a feeling of being trapped by taking action to deal with the problem can be beneficial.

### **IS THERAPY APPROPRIATE TREATMENT?**

Although psychological symptoms or personality traits do not cause irritable bowel syndrome, they may make one more vulnerable to stress. Psychological treatments which help people learn to cope with stress more effectively have been found to be helpful; they reduce the frequency and severity of episodes of pain and diarrhea.

Psychotherapy or skilled counseling may help with self understanding, and with identifying personal traits or problems that can be dealt with. Talking to a stranger, particularly someone who is trained to do this, allows discussions of relationships, ambitions, and frustrations without fear of recrimination or blame (which is what can happen when talking to family, friends, or colleagues), and often helps to devise a program for change.

### **HOW SHOULD I SEEK COUNSELING?**

There are no rules. In general, a physician should be able to offer advice. However, not all physicians have an understanding of how to treat patients with IBS. If your physician is not meeting your needs, find one who can meet your needs. IBS is very common, and talking with friends or colleagues may help you in finding a physician. You should have a physician who is interested in you and has helped you to identify problems in your life that seem to be contributing to IBS. After explaining to your physician that professional help is wanted in dealing with these problems, an appropriate referral should be forthcoming

### **HINTS ON HOW TO COPE WITH IBS:**

1. Use medication to avoid crises; for example, take an anti-diarrheal before leaving home if you are worried about needing to use the bathroom when facilities are absent. Avoid constipation with bulking agents (provided they don't upset you). There are also effective medications available which relieve the pain and improve the changes in bowel habit. Talk to your physician to discuss which medication may be appropriate for your symptoms.



2. Limit diagnostic tests to those necessary to convince you and your doctor that your irritable bowel is not a progressive or serious condition. If your physician has made a definite diagnosis, stop worrying about whether it is "something else" (like early cancer): it isn't.
3. Learn to recognize your unique emotional and bodily responses to stress. Close your eyes and imagine a stressful situation. Are you symptoms sensitive, or a gut responder?
4. Look for the sources of stress in your life, and see if you can do something about them. Keep a daily diary for a month or two to help identify situations that provoke your stress response. If possible, try to avoid these situations.
5. Learn new coping skills that lessen your vulnerability to stressful situations. This might involve assertiveness training to deal more effectively with people who intimidate you, learning new test taking strategies or practicing public speaking. Most bookstores have self-help manuals to deal with these kinds of problems.
6. Learn to relax – you probably do not know how. Various strategies from exercise to yoga, through acupuncture to medication may be useful, but nothing is as useful as a better understanding of yourself.
7. Join a support group to problem solve and share solutions. IFBD is beginning to sponsor such groups on a national scale.
8. Find a caring physician and then don't doctor shop. Other people with irritable bowel may help you find a physician familiar with this condition.
9. If you believe you have an emotional disorder (such as depression, panic or anxiety) they may be making your irritable bowel worse, ask for help. Because of their shared chemistry, medications that calm the mind often soothe the bowel.
10. If you need help developing new coping techniques or a better understanding of your own gut-brain connections, ask your gastroenterologist to suggest a mental health professional who can help you. This might be a counselor, psychologist or psychiatrist, preferably one who knows about irritable bowel syndrome and who has a working relationship with your physician.
11. Above all, make up your mind who is running your life: you or your bowel. Life is much easier once you make up your mind that you're in charge.