When pain becomes moderate or severe it is common to prescribe antidepressants. These are used to reduce the firing of nerves from the intestines, to block the transmission of pain from the gut to the brain and to improve the brain’s regulating capability to reduce the pain. Because they act on different pathways these medications can be taken at a lower dose for treating pain than when used to treat depression and still be effective. However if depression or other emotional difficulties co-exist higher dosages may be needed. Generally either the tricyclic antidepressants (TCA’s) like desipramine, amitriptyline and nortriptyline or the serotonin norepinephrine reuptake inhibitors (SNRI’s) like duloxetine, venlafaxine, desvenlafaxine or milnacipran are given. When the pain does not respond our usually employs combinations of treatments (called augmentation treatment), which could mean either of these agents along with other antidepressants like the serotonin reuptake inhibitors such as citalopram, escitalopram, paroxetine, fluoxetine, or medications of other types like mirtazapine, buspirone, quetiapine, and others. Our center specializes in finding the right combination of treatments to achieve clinical improvement.

THE ROLE OF THE PSYCHOLOGIST

The UNC Center for Functional GI & Motility Disorders has psychologists working as part of the clinical team. This is because psychological treatments can enhance the effect of all the other treatments (psychological augmentation) to optimize the clinical response. As previously mentioned, it is common for IBS symptoms to be worsened by stress, anxiety, or other psychological factors, including feelings of inability to cope. In addition psychological treatments can be helpful for symptom control even in the absence of psychological distress. Therefore of the symptoms are severe or difficult to manage, it may help to see one of our psychologists for stress management, relaxation training, hypnosis cognitive-behavioral therapy, or other coping strategies.

HOW OFTEN SHOULD I CONTACT MY DOCTOR?

IBS may be a chronic or recurrent problem, but not all days are bad. Management of symptoms is the key. To do this most effectively, it is important for you to take charge of your health and general well-being, find ways to reduce the symptoms, and at times seek the advice of your doctor, this is a decision that is negotiated between you and your doctor as your treatment progresses.

NEW RESEARCH STUDIES FOR THE TREATMENT OF FUNCTIONAL GI DISORDERS

UNC is conducting research studies of new drugs and treatments for IBS and other functional GI and motility disorders. You may be eligible for one of our studies:

- The treatment and related study medications are free
- Most all studies offer payment for participation
- To qualify, you must be at least 18 years of age
- Some studies may require one or more clinic visits and are conducted at the University of North Carolina at Chapel Hill
- Please talk with your health care provider at the Center or call our research assistant at 919-843-7902 if you would like to find out more about participating in a research study.

Our Center

The Functional GI and Motility Clinic at UNC has a multidisciplinary team that is prepared to deal with all aspects of diagnosis, from motility testing and endoscopy to specialized studies such as breath hydrogen testing for bacterial overgrowth and lactose intolerance, anorectal motility and biofeedback for constipation or fecal incontinence, and electromyography (EMG) for nerve function.

The UNC Center for Functional GI & Motility Disorders

For further information about IBS and other functional GI and motility disorders, please visit our website at www.med.unc.edu/ibs.

Our website also provides information regarding opportunities to participate in on-going research studies at UNC.

What is Irritable Bowel Syndrome (IBS)?

IBS is one of more than twenty functional gastrointestinal disorders (FGD). These are disorders in which the gastrointestinal (GI) tract not functioning normally. IBS is characterized by a combination of persistent and recurrent abdominal pain that is associated with abnormal bowel habit (diarrhea, constipation or both). The pain often begins after eating and typically is relieved after a bowel movement. Other possible symptoms include bloating, passage of mucus, and a feeling of incomplete emptying.

What Causes IBS Symptoms?

The symptoms of IBS are not associated with structural findings (such as ulcers or other abnormalities revealed through x-ray or endoscopy), or biochemical abnormalities as found with biopsy studies. Instead, IBS is considered a disorder of regulation of GI function, which produces dysmotility (increased or irregular
movements of the muscles of the gut) and increased sensitivity to intestinal sensations (visceral hypersensitivity). In addition, there is dysregulation of brain-gut function (i.e., the ability of the brain to influence gut functions), and in some cases, alteration of bacteria in the bowel.

The dysmotility causes diarrhea (increased rate of passage of stool through the colon), constipation (decreased rate of passage of stool through the colon), or a combination of diarrhea and constipation at different times. Therefore, an individual may have diarrhea-predominant IBS (IBS-D), constipation-predominant IBS (IBS-C), or a mixed stool pattern (IBS-M).

Visceral hypersensitivity is increased symptoms of urgency and discomfort or pain when the bowel is stimulated or stretched such as after eating or in relation to bowel habit. This discomfort or pain is similar to that produced in someone with a bowel obstruction where the intestinal wall is stretched. This is why many patients believe they have a "blockage" or obstruction. Visceral hypersensitivity can occur and persist after someone has a GI infection. What is different for IBS is that the nerves are so sensitive that normal contractions, even when resulting from a normal meal, bring on pain or discomfort. Similarly, patients with IBS may have more discomfort after others after a GI infection, or develop worse symptoms after a colonicopy or abdominal or gynecological surgical procedure. This discomfort does not mean the bowel is damaged, only that it is more sensitive to these stimuli for some reason.

Brain-gut dysfunctions are evidenced by the bowel overriding to psychological stress, such as getting pain and diarrhea before an examination or constipation with travelling. Also, the brain's normal ability to "turn down" pain is impaired in persons with IBS.

Altered bacteria in the bowel can occur in IBS when "good" bacteria are replaced by "bad" bacteria. This can produce visceral hypersensitivity, along with symptoms of bloating, gas, and diarrhea.

HOW COMMON IS IBS?

• Ten to twenty percent of all adults experience symptoms like IBS. Only half of them see a doctor for these symptoms.

• The frequency of IBS is the same worldwide.

• IBS is the second most common cause of work and school absenteeism, the first being the common cold.

WHAT FACTORS CONTRIBUTE TO THE DEVELOPMENT OF IBS OR MAKE IBS WORSE?

• Women are at greater risk than men of developing IBS; it occurs in almost twice as many women as men. In Western cultures, women are more likely than men to see physicians for this problem.

• Increased stress can make IBS symptoms worse. Stress can affect bowel function in any way, but the effect is greater in people with IBS due to changes in the brain-gut axis that affect the brain's ability to influence the bowel to react to stress. It has also been shown that many people with IBS have a history of physical or sexual abuse. This can cause a person to be more sensitive and vulnerable to body sensations.

• IBS symptoms can create psychological distress. From a broad perspective, patients can show symptoms of depression and anxiety. However, such symptoms are not necessarily functional disorders, as the distress at the time of the infection. It seems that the brain in many patients believe they have IBS. Only half of them see a doctor for these symptoms.

HOW IS IBS DIAGNOSED?

A careful medical history and obtaining a thorough physical exam are the most important factors for making a diagnosis of IBS. The key to diagnosis is having the correct symptoms, in the correct pattern of occurrence, and in the correct absence of findings on x-ray or endoscopy. Most that further diagnostic studies are needed to find the cause of the problem. On the contrary, the use of the symptom-based Rome III Criteria along with a series of basic studies to exclude other conditions has enabled the ability to make a diagnosis of IBS with confidence. Key features of the Rome III criteria for IBS include episodes of abdominal discomfort or pain that are associated with an increased frequency and/or prolonged bowel movement (IBS-D) or decreased frequency and/or prolonged bowel movement (IBS-C), or altered bowel habits (IBS-M). They also include the presence of certain "alarm signals" or "red flags", which are findings from the medical history or routine examination of the patient that suggest the possibility of another disease. Examples of red flags would include blood in the stool, a significant amount of weight loss and an abnormal physical examination or blood test, etc. The patient may be an older patient, or a family history of cancer or inflammatory bowel disease. In other words, if the patient fulfills Rome III criteria for IBS and does not have any "alarm signals", then the diagnosis of IBS can be made with reasonable confidence and with further tests. Furthermore, prospective studies over years that follow patients properly diagnosed with IBS show that the likelihood of another diagnosis being found to explain the initial diagnosis is very low.

Depending on age, symptoms and general health, some patients will require diagnostic testing to exclude the possibility of other medical conditions. Some of these additional tests include a flexible sigmoidoscopy (a small, lighted, flexible tube that visualizes the inside of the colon) and blood tests to check for anemia or low calcium. Additional diagnostic tests that involve the use of a small, lighted, flexible tube that visualizes the inside of the colon. The tests include stool cultures or other tests that may add to the presence of certain "alarm signals" or "red flags", which are findings from the medical history or routine examination of the patient that suggest the possibility of another disease. Examples of red flags would include blood in the stool, a significant amount of weight loss and an abnormal physical examination or blood test, etc. The patient may be an older patient, or a family history of cancer or inflammatory bowel disease. In other words, if the patient fulfills Rome III criteria for IBS and does not have any "alarm signals", then the diagnosis of IBS can be made with reasonable confidence and with further tests. Furthermore, prospective studies over years that follow patients properly diagnosed with IBS show that the likelihood of another diagnosis being found to explain the initial diagnosis is very low.

Having a diagnosis of IBS does not mean the symptoms are any worse than for patients with other functional or organic conditions. Since IBS is a disorder of abnormal gut functioning, there are no abnormalities that would show up on various diagnostic tests. Possibly the consistent pain is the reason for this. In fact, a recent research at our UMC Center has shown that the severity of the symptoms and the degree of disability for many IBS patients are even greater than for patients with ulcers, esophageal reflux, other bacterial or viral conditions.

WHAT CAN I DO?

In general, it is useful to look closely at your IBS symptoms in association with your eating patterns, your lifestyle and emotional state, and any other situation that might affect your symptoms. The best way to keep track is to maintain a diary for a few weeks. If you notice any patterns, try to avoid or modify any factors that may make the symptoms worse.

However, when symptoms occur more than occasionally it is important for them to be treated. If you are experiencing diarrhea, it may help to take loperamide (over-the-counter Imodium®). Loperamide can be taken as soon as possible after a meal or for occasional diarrhea. In some patients, it is helpful to retrain the bowel by using the same bathroom at the same time every day, usually after a meal, staying no longer than 10-15 minutes at a time. For more severe symptoms of diarrhea and pain, my doctor should be present for about 3-6 months to be confident in an IBS diagnosis.

Patients may believe they have IBS. Only half of them see a doctor for these symptoms. The key to diagnosis is having the correct symptoms, in the correct pattern of occurrence, and in the correct absence of findings on x-ray or endoscopy. Most that further diagnostic studies are needed to find the cause of the problem. On the contrary, the use of the symptom-based Rome III Criteria along with a series of basic studies to exclude other conditions has enabled the ability to make a diagnosis of IBS with confidence. Key features of the Rome III criteria for IBS include episodes of abdominal discomfort or pain that are associated with an increased frequency and/or prolonged bowel movement (IBS-D) or decreased frequency and/or prolonged bowel movement (IBS-C), or altered bowel habits (IBS-M). They also include the presence of certain "alarm signals" or "red flags", which are findings from the medical history or routine examination of the patient that suggest the possibility of another disease. Examples of red flags would include blood in the stool, a significant amount of weight loss and an abnormal physical examination or blood test, etc. The patient may be an older patient, or a family history of cancer or inflammatory bowel disease. In other words, if the patient fulfills Rome III criteria for IBS and does not have any "alarm signals", then the diagnosis of IBS can be made with reasonable confidence and with further tests. Furthermore, prospective studies over years that follow patients properly diagnosed with IBS show that the likelihood of another diagnosis being found to explain the initial diagnosis is very low.

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WHAT CAN DOCTORS DO?

Doctors are able to prescribe medications targeted to treat specific symptoms of IBS based on the severity of the symptoms. For patients with milder forms of IBS prescription hypotensives (Levitan®) or bicalutamide (Bentyl®) can be used to relieve abdominal cramping or spasm and diarrhea particularly after a meal. When pain with diarrhea is more severe Aldongon (Altonon®) can be prescribed, and symptoms need to be carefully monitored for possible side effects. Patients may also benefit from non-drug therapies such as Rifaximin (Xiloxal®), particularly if bloating is present.

When constipation with IBS is moderate or severe, fiber products may actually increase bloating and abdominal discomfort, so these treatments should be avoided. In this situation osmotic laxatives such as PEG solution Miralax® (also known as magnesium citrate), Lactulose (Realox®) can be prescribed, and symptoms need to be carefully monitored for possible side effects. Patients may also benefit from non-drug therapies such as Rifaximin (Xiloxal®), particularly if bloating is present.

If you notice any patterns, try to avoid or modify any factors that may make the symptoms worse.