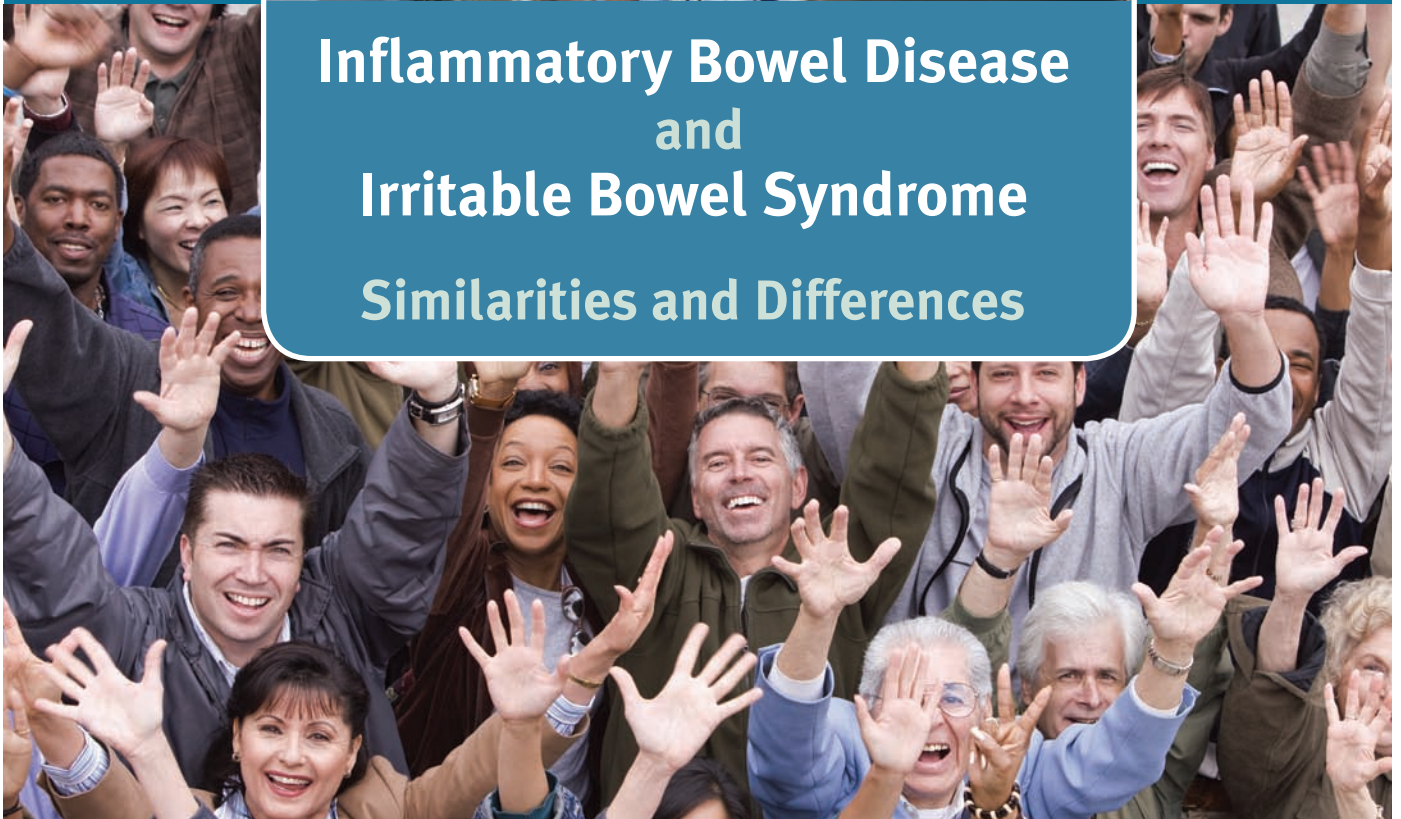




CROHN'S & COLITIS
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**Inflammatory Bowel Disease
and
Irritable Bowel Syndrome
Similarities and Differences**



Important Differences Between IBD and IBS

Many diseases and conditions can affect the gastrointestinal (GI) tract, which is part of the digestive system and includes the esophagus, stomach, small intestine and large intestine. These diseases and conditions include **inflammatory bowel disease (IBD)** and **irritable bowel syndrome (IBS)**.



Inflammatory bowel diseases are a group of inflammatory conditions in which the body's own immune system attacks parts of the digestive system.

Inflammatory Bowel Disease

Inflammatory bowel diseases are a group of inflammatory conditions in which the body's own immune system attacks parts of the digestive system. The two most common inflammatory bowel diseases are Crohn's disease (CD) and ulcerative colitis (UC). IBD affects as many as 1.4 million Americans, most of whom are diagnosed before age 35. There is no cure for IBD but there are treatments to reduce and control the symptoms of the disease.

CD and UC cause chronic inflammation of the GI tract. CD can affect any part of the GI tract, but frequently affects the end of the small intestine and the beginning of the large intestine. The inflammation in CD can affect all layers of the intestinal lining. Ulcerative colitis (UC) is characterized by inflammation in the large intestine (colon) and the rectum. The inflammation in UC occurs only in the innermost layer of the intestinal lining.

Symptoms

The symptoms of IBD vary from person to person, and may change over time. The most common symptoms for CD and UC are frequent and/or urgent bowel movements, diarrhea, bloody stool, abdominal pain and cramping.

People with IBD may also report symptoms such as fatigue, lack of appetite and weight loss. IBD is characterized by times of active disease (flares), when symptoms are present, and times of remission, when little or no symptoms are present.

Causes

The exact cause of IBD remains unknown. Researchers believe that a combination of four factors lead to IBD: a genetic component, an environmental trigger, an imbalance of intestinal bacteria and an inappropriate reaction from the immune system. Immune cells normally protect the body from infection, but in people with IBD, the immune system mistakes harmless substances in the intestine for foreign substances and launches an attack, resulting in inflammation.

Who Gets IBD?

As many as 60,000 new cases of IBD are diagnosed in the United States each year.

- **Age.** IBD can occur at any age, but often people are diagnosed between the ages of 15 and 35.
- **Gender.** In general, IBD affects men and women equally.
- **Ethnicity.** IBD is more common among Caucasians, but it can affect people of any racial or ethnic group.
- **Family history.** As many as one in five people with IBD have a first-degree relative (parent, child or sibling) with the disease.
- **Cigarette smoking.** Smokers are more likely to develop CD.

The exact cause of CD and UC remains unknown. Researchers believe that several factors, such as a family predisposition and a faulty immune system, play a role in their development.

Diagnostic Procedures

To help confirm a diagnosis of CD or UC, one or more of the following tests and diagnostic procedures may be performed.

- **Blood tests.** The presence of inflammation in the body can be identified by examining the levels of several factors in the blood, including red and white blood cells, platelets and C-reactive protein (CRP).

Tests may be performed to help health care providers differentiate IBD from non-IBD and CD from UC (ex., IBD sgi Diagnostic). In certain situations, blood tests may also be used to evaluate a patient's risk of developing disease complications, as well as to optimize treatment strategies (ex., Crohn's Prognostic test).

- **Stool tests.** Stool tests look for signs of inflammation in the GI tract as well as infections.

- **Endoscopic procedures.** This procedure utilizes a flexible tubular camera to look inside of the digestive tract by entering through the mouth or anus. The scope has other tools that may be used for additional purposes, including the collection of tissue samples or biopsies.

A capsule endoscopy may also be performed. This involves swallowing a capsule equipped with a camera (PillCam®, Endo Capsule®) that takes pictures as it travels through the intestine. The images are wirelessly sent to a receiver worn by the patient. The capsule is expelled during a bowel movement, usually within a day.

- **External imaging procedures.** These procedures utilize different technologies to generate images of the digestive organs and other soft tissue from outside the body, including computerized tomography (CT) scans and magnetic resonance imaging (MRI).

Complications

Some people with IBD may experience complications, including deep ulcerations, bowel obstructions, infections and malnutrition. Patients with IBD are also at an increased risk of colon cancer. However, many people with IBD find that with proper treatment and lifestyle changes, they can live normal, fulfilling lives.

To learn more about CD and UC, view:

- Living with Crohn's Disease at: online.ccfa.org/crohnsdisease
- Living with Ulcerative Colitis at: online.ccfa.org/ulcerativecolitis



Irritable bowel syndrome is not a disease, but rather a condition that affects the function and behavior of the intestines.

Irritable Bowel Syndrome

Irritable bowel syndrome is a condition that affects the function and behavior of the intestines. Normally, the muscles lining the intestines intermittently contract and relax to move food along the digestive tract. In IBS, this pattern is disturbed, resulting in uncomfortable symptoms. More than 40 million people are affected by IBS. It is important to remember that patients with IBD can also have IBS.

Symptoms

Many people experience only mild symptoms of IBS, but for some, symptoms can be severe. Symptoms can include cramping, abdominal pain, bloating, gas, mucus in the stool, diarrhea and/or constipation. Similar to IBD, IBS is characterized by times when symptoms are present and times when little or no symptoms are present. Unlike IBD, IBS does not cause inflammation, permanent damage to the GI tract or an increased risk of colorectal cancer.

Causes

The exact cause of IBS is unknown. Potential causes may include sensitivity of the GI tract to gas and bloating, alteration of the fecal flora (bacteria) within the intestines, or altered levels of specific compounds or chemicals within the body, such as serotonin. Having a recent GI track infection and having a history of IBD may also be a risk factor for IBS. Although stress does not cause IBS, many people with IBS indicate that stress does aggravate their symptoms. Hormones may also play a role. For example, many women often report more symptoms when they are menstruating. In addition, many people with IBS report more symptoms after eating specific foods and beverages, such as spicy foods, certain fruits and vegetables, foods containing wheat, coffee, alcohol and milk.

Who Gets IBS?

IBS affects an estimated 10–15% of adults in the United States.

- **Age.** The highest rates of IBS are seen in persons who are in middle adulthood, younger than 45.
- **Gender.** The majority of those diagnosed with IBS are female.
- **Family history.** Research shows that many people with IBS have a first-degree relative (parent, child or sibling) with the disorder.
- **Psychological history.** Some studies indicate that psychological distress, especially anxiety, depression and childhood adversity, may be a risk factor.

Diagnostic Procedures

Diagnosing IBS typically involves a physical exam and medical history, and often involves excluding other GI disorders first. If the person is experiencing more serious signs and symptoms or is not responding to treatment, additional testing may be performed, such as blood tests, stool samples, endoscopic procedures or external imaging procedures. Refer to “Diagnostic Procedures” on page 4 of this document for descriptions of these tests.

Complications

IBS is not associated with any serious conditions, such as colon cancer. The impact of IBS on overall quality of life may be its most significant complication.

Similarities and Differences Between IBD and IBS

	IBD	IBS
SYMPTOMS	<ul style="list-style-type: none"> • Frequent and/or urgent bowel movements • Diarrhea • Bloody stool • Abdominal pain and cramping • Fatigue • Lack of appetite • Weight loss • Joint, skin or eye problems 	<ul style="list-style-type: none"> • Abdominal pain and cramping • Bloating • Gas • Mucus in stool • Diarrhea and/or constipation
TREATMENT	<p>There are five main categories of medications used to manage the disease and its symptoms:</p> <p>Aminosalicylates, such as sulfasalazine, mesalamine, olsalazine and balsalazide, are medicines containing 5-aminosalicylic acid, an aspirin-like compound. They reduce inflammation in the lining of the intestine and are used in mild to moderate cases.</p> <p>Corticosteroids, including budesonide, prednisone and prednisolone, are steroids that are used as short-term treatment during flares. They act on the immune system and suppress its ability to begin and maintain inflammation.</p> <p>Immunomodulators, such as azathioprine, 6-MP, cyclosporine and methotrexate, affect the body's immune system so that it is unable to maintain an inflammatory response. Unlike steroids, however, they are a long-term treatment.</p> <p>Biologic therapies, including infliximab, adalimumab, certolizumab pegol, golimumab, vedolizumab and natalizumab, are antibodies grown in the laboratory that stop certain proteins in the body from causing inflammation.</p> <p>Antibiotics, such as metronidazole and ciprofloxacin, are used when infection occurs, either from the disease itself or from post-surgical procedures.</p>	<p>While there is no cure, medications are prescribed to treat IBS and specific symptoms:</p> <p>Medications FDA Approved</p> <p>The Food and Drug Administration approved specific medication for the treatment of IBS.</p> <p>Alosetron hydrochloride (Lotronex®) is a serotonin 5 HT₃ antagonist (blocker) indicated for treatment of women with severe diarrhea-predominant IBS (IBS-D)</p> <p>Lubiprostone (Amitiza) is a chloride channel activator indicated for treatment of IBS with constipation (IBS-C) in women 18 years or older.</p> <p>Treatment of Specific Symptoms</p> <p>Laxatives (anti-constipation medications), such as Milk of Magnesia, Lactulose, MiraLax and linaclotide, are used to treat constipation.</p> <p>Anti-diarrheal agents, such as loperamide, diphenoxylate and atropine, are used to treat diarrhea.</p> <p>Antispasmodics, such as belladonna alkaloids/phenobarbital, hyoscyamine, dicyclomine, propantheline and peppermint oil, are used to treat abdominal cramps and associated diarrhea.</p> <p>Antidepressants, such as fluoxetine, citalopram, sertraline, desipramine, amitriptyline, venlafaxine and duloxetine, are used to relieve gut pain and treat psychological distress (anxiety and depression). Other types of psychiatric medications can help in unmanageable cases.</p> <p>Probiotics, dietary supplements that contain certain beneficial bacteria, may help to balance the intestinal track. More research is needed in this area.</p> <p>Antibiotics, such as rifaximin, are used to treat small bowel bacterial overgrowth, which may occur concurrently with or contribute to IBS.</p> <p>Fiber supplements can ease the movement of bowel contents, preventing constipation.</p>
COMPLICATIONS	<ul style="list-style-type: none"> • CD – Stenosis, fistula, abscess, bowel obstruction and colon cancer (if the colon is involved) • UC – Colon cancer • Both CD and UC – ulcers, malnutrition, osteoporosis, anemia 	<p>Impaired quality of life.</p>

Treating IBD and IBS

Diet and Nutrition

IBD and IBS are not caused by diet. However, diet can affect symptoms. Once IBD and IBS have developed, paying special attention to what is eaten may go a long way toward reducing symptoms and promoting adequate nutrition.

There is no diet or eating plan that will result in improvement for everyone with IBD or IBS. Dietary recommendations must be individualized, depending on the disease and the part of the intestine that is affected. Furthermore, these diseases change over time, and eating patterns should change accordingly.

The key is to strive for a well-balanced, healthy diet. It is important to remember that it is not just the amount of food eaten that guarantees a healthy diet, but daily intake needs to include an adequate amount of calories and nutrients. A balanced diet should contain a variety of foods from all food groups. For a listing of sample foods and beverages to potentially try and avoid, see chart below.

It is also important for people with IBD or IBS to pay attention to fluid intake. When chronic diarrhea is present, it can lead to dehydration. Stay well hydrated to avoid complications.

During periods of disease flare-ups, eating may cause abdominal discomfort and cramping. Here are some ways to reduce these symptoms:

- **Eat smaller meals at more frequent intervals.** Eat five small meals a day, every three or four hours, rather than the traditional three large meals a day.
- **Reduce the amount of greasy or fried foods.** High-fat foods may cause diarrhea and gas if fat absorption is incomplete.
- **Watch dairy intake.** Persons who are lactose intolerant or who are experiencing IBD or IBS may need to limit the amount of milk or milk products they consume.
- **Restrict the intake of certain high-fiber foods.** If there is narrowing of the bowel, these foods may cause cramping. High-fiber foods also cause contractions once they enter the large intestine. Because they are not completely digested by the small intestine, these foods may also cause diarrhea.
- **Avoid problem (trigger) foods.** Eliminate any foods that make symptoms worse. These may include “gassy” food (such as beans, cabbage and broccoli), spicy food, popcorn and alcohol, as well as foods and drinks that contain caffeine, such as chocolate and soda.

During IBD or IBS Symptoms


Foods/Beverages to TRY

- Bananas, applesauce, canned varieties of fruit
- White bread, crackers made with white flour, plain cereals
- White rice, refined pastas
- Potatoes without the skin
- Cheese (if you're not lactose intolerant)
- Smooth peanut butter
- Bland soft foods
- Cooked vegetables
- Broth
- Broiled or steamed fish (e.g., herring, salmon, halibut, flounder, swordfish or pollack)
- Canola and olive oils
- Low-sugar sports drinks and Crystal Light® diluted with water

Food/Beverages to AVOID

- Fresh fruit (unless blended or juiced)
- Prunes, raisins or dried fruit
- Uncooked vegetables and raw foods
- High-fiber foods (such as fiber-rich breads, cereals, nuts and leafy greens)
- High-sugar foods
- Skins, seeds, popcorn
- High-fat foods
- Spicy foods
- Beans
- Some dairy products
- Large food portions
- Caffeine in coffee, tea and other beverages
- Ice-cold liquids (even water)

It is always important to keep a food journal to help understand which foods can be tolerated and not tolerated during the time of a flare.



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Daily Food Journal

There is not one single diet or eating plan that is appropriate for everyone with IBD. Writing down when, what, and how much you eat can help you determine which, if any, foods affect your symptoms. Make sure to write down any unusual symptoms you may experience after eating, and include the time they began. Remember to bring this journal with you to your next doctor's visit.

Date & Time	Food	Amount	Symptoms & Time of Occurrence

To access a copy of CCFA's Daily Food Journal, please visit:

online.cdfa.org/dailyfoodjournal

To learn more about diet and nutrition, view:

"Diet, Nutrition, and Inflammatory Bowel Disease" by visiting: online.cdfa.org/dietbrochure



Probiotics

Probiotics are live bacteria that are similar to beneficial (often called “good” or “friendly”) bacteria that normally reside in the intestines. Under normal circumstances, beneficial bacteria keep the growth of harmful bacteria in check. If the balance between good and bad bacteria is thrown off, causing harmful bacteria to overgrow, diarrhea and other digestive problems can occur. Probiotics can be

used to restore the balance of these “good” bacteria in the body. They are available in the form of dietary supplements (capsules, tablets and powders) or foods (yogurt, fermented and unfermented milk, miso, tempeh, and some juices and soy beverages).

There is no strong evidence to suggest that the use of probiotics may help people with IBD or IBS, but some people think it helps. More research is needed. Those interested in using probiotics should discuss this with their health care provider.

Medications

For a listing of medications used to treat IBD and/or IBS, please refer to the chart on page 6.

Pain Management

Pain can be a serious issue for patients. Two forms of psychotherapy — cognitive behavioral therapy (CBT) and hypnotherapy — have the most support in being clinically effective in reducing pain as well as the frequency, intensity and duration of IBD and IBS symptoms.

CBT has shown promise for patients with moderate to severe IBD and for those with IBS who also suffer from anxiety or mood disorders. CBT can help patients learn coping strategies to control the symptoms brought on by anxiety.

Hypnotherapy is one of the most successful treatment approaches for chronic IBS, both in the short term and the long term. Studies suggest that in addition to decreasing pain perception at the level of the brain, hypnosis may improve immune function in IBD and IBS, increase relaxation, reduce stress and ease feelings of anxiety.

Non-steroidal anti-inflammatory drugs (NSAIDs) are commonly used to treat abdominal pain and musculoskeletal symptoms associated with IBD. However, multiple studies have demonstrated that NSAIDs may increase the risk for IBD relapse, flares and an overall increase in disease activity.

Anxiety and Depression

For patients with IBD or IBS, anxiety and depression can play a role in making symptoms worse. Some people find it helpful to consult a psychologist or psychiatrist who is familiar with IBD and IBS, including the emotional difficulties associated with these conditions.



Although treating the physical symptoms of IBD and IBS may be more complicated in the setting of depression or anxiety, both are readily responsive to pharmacological or psychological treatment. Therefore, treating patients with these psychological disorders may make IBD and/or IBS care more effective.

Reducing and Managing Stress

Even in the absence of a psychiatric diagnosis, many people with IBD and IBS report that stress makes their symptoms worse. Relaxation techniques and mind/body exercises, such as yoga, tai chi and meditation may help, particularly when used with other forms of treatment. Other stress management options include relaxation training such as meditation, guided imagery or biofeedback.

To control stress, it helps to identify sources of stress. By organizing this list into stress that is controllable/modifiable and stress that is not (e.g., having a diagnosis of IBD or IBS), patients can adjust their behavior and thinking accordingly.

A stress journal may help identify the regular stressors in life and the ways to deal with them. Over time, patterns and common themes will emerge as well as strategies to successfully cope with them. Below are additional strategies to help manage stress:

- **Talk to a trusted friend or make an appointment with a therapist.** Expressing what you are going through can be very helpful, even if there is nothing you can do to change the stressful situation. This can also include spending time with positive people who enhance your

life and thus reduce stress. A strong support system will buffer you from the negative effects of stress.

- **Nurture yourself.** If you regularly make time for fun and relaxation, you will be in a better place to handle life's stressors when they inevitably come. Such activities can include hobbies, satisfying social interactions or yoga and meditation.
- **Engage in physical activity.** Physical activity plays a key role in reducing and preventing the effects of stress. Make time for at least 30 minutes of exercise, five times per week.
- **Eat a healthy diet.** Well-nourished bodies are better prepared to cope with stress, so be mindful of what you eat. Start your day with breakfast, and keep your energy up and your mind clear with balanced, nutritious meals throughout the day.
- **Get enough sleep.** Adequate sleep fuels your mind, as well as your body. Feeling tired will increase your stress because it may cause you to think irrationally. Utilizing various sleep techniques (e.g., waking up at the same time each morning or going to bed only when sleepy) can be very effective for insomnia.



If you have questions, call the Irwin M. and Suzanne R. Rosenthal IBD Resource Center (IBD Help Center) at 1-888-MY-GUT-PAIN (888-694-8872).

Frequently Asked Questions

Is it possible to have both IBD and IBS?

Yes, it is possible to be diagnosed with both conditions. Some symptoms are unique to IBD or IBS, while some are shared. Approximately 20% of patients with IBD can have concurrent IBS symptoms.

Can children get IBD or IBS?

IBD is most commonly diagnosed between the ages of 15 and 35, although it is possible to have the disease at a younger or older age. It is estimated that about 14% of high school-aged children and 6% of middle school-aged children report symptoms similar to IBS. In a subset of these youth, the symptoms are often linked to school- or social-related anxiety and can often resolve spontaneously or after psychological treatment.

Can IBS turn into Crohn's disease or another more serious condition?

There is no evidence that IBS progresses to any other disease or causes any complications outside of the regular symptoms. IBS is a syndrome, not a disease, that affects the function of the bowel.

How can I tell if the problem I have is IBS or something else?

A careful medical history and physical examination by a gastroenterologist or other physician are essential to rule out more serious disorders. Tests may include blood tests, stool tests, visual inspection of the inside of the colon with flexible sigmoidoscopy or colonoscopy and x-ray studies. Fever, anemia, rectal bleeding and unexplained weight loss are not symptoms of IBS and need to be evaluated by your physician.

How long does the treatment take to relieve symptoms of IBS?

Relief of IBS symptoms is often a slow process. It may take months for definite improvement to be achieved. Patience is extremely important in dealing with this problem. The tendency for the intestine to respond to stress will always be present. With attention to proper diet and use of appropriate medications (in some cases), the symptoms of IBS can be greatly improved or eliminated.

How can I find additional information?

Patients with IBD can visit the Crohn's and Colitis Foundation of America's website at www.ccfa.org for information and resources.



Resources and References

American Chronic Pain Association	http://theacpa.org
The American Academy of Pain Medicine	http://www.painmed.org/PatientCenter/Main.aspx
The American Academy of Clinical Psychology	http://www.aacpsy.org/directory
The American Psychological Association	http://locator.apa.org
American Society for Clinical Hypnosis	http://www.asch.net
Crohn's & Colitis Foundation of America (CCFA)	www.ccfa.org
Irritable Bowel Syndrome Self Help and Support Group	http://www.ibsgroup.org/ibsassociation
International Foundation for Functional Gastrointestinal Disorders	http://www.aboutibs.org
Mayo Clinic	http://www.mayoclinic.org/diseases-conditions/irritable-bowel-syndrome/basics/definition/con-20024578
National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health	http://www.digestive.niddk.nih.gov/ddiseases/pubs/ibs

About CCFA

Established in 1967, the Crohn's & Colitis Foundation of America (CCFA) is a private, national nonprofit organization dedicated to finding cures for IBD. Our mission is to cure Crohn's disease and ulcerative colitis, and to improve the quality of life of children and adults affected by these diseases.

Website: www.ccfa.org

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