

# Research and Reviews: Journal of Medical and Health Sciences

## A Short Review on Gastrointestinal Disorders

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### Review Article

**Received:** 05/07/2016  
**Accepted:** 05/08/2016  
**Published:** 08/08/2016

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**Keywords:** Gastrointestinal disorders, Colitis, Constipation, Anal fissures, Diverticular Disease.

### ABSTRACT

Knowledge about the psychosocial aspects of the gastrointestinal disorders is fundamental and critical to the understanding of the gastrointestinal disorders and their effective treatment. Gastrointestinal disorders occurs most frequently which are seen in gastroenterology practice in which symptoms may include bloating, stomach cramps, stomach pain, gas, diarrhea etc. These gastrointestinal disorders may be functional or structural. In case of Functional disorders bowel looks like normal but function is improper whereas in structural disorders bowel looks abnormal and doesn't work properly. Its treatment includes both medication and life style changes.

### INTRODUCTION

Gastrointestinal diseases are the diseases of gastrointestinal tract, namely the esophagus, stomach, small intestine, large intestine and rectum, and the accessory organs of digestion, the liver, gallbladder, and pancreas. Reports showed that at least 1 among 4 people in the U.S. have stomach or intestinal problems which are extremely severe which are interfering with the person's daily scheduled activities and quality of their life. Gastrointestinal disorders (GI) may be of functional or structural [1-4]. In this review we had made an attempt to summarize both types of GI disorders, and illustrates some of the gastrointestinal disorders reasons for their occurrence, and how to treat (and/or prevent) them.

#### Types of Gastrointestinal Disorders

Gastrointestinal diseases can be divided in to two broad categories mainly Functional Gastrointestinal Disorders (FGIDs) and Structural Gastrointestinal Disorders.

Functional Gastrointestinal Disorders are mainly the disorders of gastrointestinal tract by the result of abnormal functioning of it (which is the system of digestive organs that starts at mouth and ends at the anus). In these disorders bowel looks normal but it is improper in its function. These functional gastrointestinal disorders are often difficult to diagnose as there is no noticeable damage to the GI tract even though they produce very frequent symptoms.

1. Functional disorders are:

- Constipation
- Irritable Bowel Syndrome

In case of Structural disorders, the bowel itself looks abnormal and is also improper in its function. Sometimes, the treatment for this is removing the structural abnormality surgically as they are easy to diagnose. The common structural disorders mostly affect the anus and also diverticulum and causes cancer [5-10].

2. Structural disorders are:

1. Anal disorders  
Hemorrhoids

- a. Internal
  - b. External
- Anal fissures  
Perianal abscesses  
Anal fistula
2. Diverticular Disease
  3. Colitis

## Constipation

Constipation is just a condition with difficulty in bowel emptying causing painful defecation. Everyone deal with occasional constipation which exactly means a condition in which a person is having 3-4 bowel movements per week [11-15]. When the symptoms exist for months or years instead of days, it becomes Chronic Constipation. The below chart illustrates the differences between occasional and chronic constipation [16].

## Symptoms

Bowel movements are not frequent and are very difficult in having bowel movements as well as swollen abdomen or abdominal pain straining during bowel movements and also having hard stools.

## Causes and Risk Factors

- Not taking enough fiber through diet
- Intake of too much dairy products
- Ignoring the urgency in case of a bowel movement
- Not taking enough water or liquids
- Lack of proper physical activity
- Medications (that are mainly used for pain) and also usage of some kinds of antacids with aluminum and calcium
- Changes in daily activities
- More usage of laxatives and stool softeners.

## Diagnosis and Treatment

If anyone suffers from constipation, their healthcare provider treat it depending on their symptoms its causes, how serious they are, and how long they are having them [17-23].

Treatment mainly includes the following:

- Change in diet- especially, eating more fiber, less dairy products, and drinking adequate water.
- Doing exercise and changing lifestyle.
- Taking prescribed medication, this may include laxatives, enemas, or stool softeners, and approved IBS agents.

## Irritable Bowel Syndrome

Irritable bowel syndrome is also a Functional Gastrointestinal Disorders mainly affects the large intestine. It troubles people at any age and is most common in women of age 30-50. IBS is results in stomach discomfort or pain and problem with bowel habits: either going more or less often than normal (diarrhea or constipation) and they may result different kind of stool (thin, hard, or soft and liquid). It's not life-threatening, and it usually doesn't results other colon conditions, such as ulcerative colitis, Crohn's disease, or colon cancer. However IBS is a chronic condition that changes how you live your life [24-26].

## Symptoms

Not all people with IBS have exactly the same symptoms they might vary for different persons. For few, the symptoms can be manageable, while for others, they are not. The most common symptoms include abdominal pain or cramping, a bloated feeling, Diarrhea or constipation - sometimes constipation and diarrhea for a short period, gas, Mucus in the stool [26-30].

In addition, there are several symptoms that are not related to intestine they are Fatigue, Muscle or low-back pain, Headaches etc.

## Causes and Risk Factors

Like other GI disorders, the exact cause behind IBS is not known exactly but there are various factors that results in GI disorders. The muscles that lines intestine contract and relax in a coordinated rhythm <sup>[31,32]</sup>. In case of IBS there is lack of coordination and these contractions may be stronger and last longer causing gas, bloating and diarrhea.

Abnormalities in gastrointestinal nervous system also play a role in poor coordination of signals between brain and intestines may result in overreaction of body to the changes that normally occur in the digestion process resulting in diarrhea or constipation and pain also. Other causes include stress, hormonal changes etc <sup>[33-37]</sup>.

## Diagnosis and Treatment

It is very hard to cure IBS without knowing the exact cause. But there are number of tips one can follow which may relieve from symptoms or at least to keep in control. IBS is also called as diagnosis of exclusion, in which a doctor first has to take into consideration all the other alternatives and then some tests to rule out some other medical problems. The tests include few laboratory studies and imaging studies like CT scan, endoscopy etc. These tests along with Patient's medical history, physical examination will help in diagnosing irritable bowel syndrome. Blood test or X-ray study doesn't confirm the diagnosis of IBS <sup>[38-43]</sup>.

Treatment of IBS mainly includes dietary changes, exercise and some medications help. Dietary changes like preferring high fiber diet, avoiding dairy products, fatty foods, soda, alcohol, chocolate, and caffeine will help in reducing the discomfort caused by symptoms. Prescribed medications like laxatives, antidepressants and antispasmodics (to regularize contractions in colon), or any other approved agents will reduce stress levels. Reduced stress will lead to less cramping as well as less pain. IBS is known as long lasting condition; however symptoms may change or reappear over time <sup>[44,45]</sup>.

## Anal Disorders

**Hemorrhoids:** The clumps of blood vessels that are lined at anal opening (rectum) are known as hemorrhoids. The pressure from strain during a bowel movement, persistent diarrhea, pregnancy and some other causes make these hemorrhoids swollen. There are two types of hemorrhoids namely; internal and external.

**Internal hemorrhoids:** These are normal structures of the lower rectum and protecting from damage caused by stool <sup>[46-52]</sup>. They will become irritated to the straining during bowel movement and they will fall down into the anus and start to bleed. And at the end, those internal hemorrhoids will fall down enough to prolapse outside of the anal sphincter.

Treatment includes improvement in bowel habits (mainly avoiding constipation, do not strain during bowel movements, and defecation in case of urgency), usage of elastic bands for pulling the internal hemorrhoids to rectum, or their surgical abortion. Surgery is necessary only for few patients with very big, painful, and persistent hemorrhoids <sup>[53,54]</sup>.

**External hemorrhoids:** External hemorrhoids occurs under the skin outside and around the anus, which are sometimes more painful. After straining during the bowel movement, veins at external hemorrhoids burst and a blood clot forms beneath the skin and is very painful. This condition is called pile.

Treatment is removing that clot or the protruded vein under local anesthesia if the pain is unbearable <sup>[55-58]</sup>.

## Anal fissures

The splits or cracks with in the lining of anal opening are called Anal fissures. The foremost common reason for this condition is passage of very terribly laborious or liquid stools. The crack with within the anal lining exposes the underlying muscle mass that keep watch over the passage of stool by way of the anus and out of the body. An anal fissure is one in all the main painful issues therefore of the uncovered muscle groups emerge as annoyed from exposure to stool or air, main to severe burning, anguish, bleeding, or spasm after bowel actions.

Foremost treatment includes usage of analgesics, intake of fiber to deminish the incidence of enormous, bulky stools, and sitz baths (sitting in warm water) for anal fissures. If these treatments don't relieve pain, surgery could also require decreasing spasm within the sphincter muscle <sup>[58-66]</sup>.

## Perianal abscesses

Blockage of tiny anal glands within the anus at which existence of bacterium resulting in an infection, at this condition there will be development of pus this severe condition is called perianal abscesses. In this case the patient is anaesthetized and draining of the abscess is the main treatment [67].

## Anal fistula

A little tunnel developed between the tip of the gut and at which the skin close to the anus is nothing but the anal fistula. Wastage of the body passes through the tiny anal canal are diverted through this tiny channel and out through the skin, inflicting itching and irritation. As a result of Fistulas there will be pain, and bleeding. They not often heal via themselves and in most cases want surgical procedure to empty the abscess and "shut off" the fistula [68,69].

## Diverticular disease

The formation of small outpouchings (diverticula) or numerous tiny sockets in the wall of the large intestine most of the time in the weakened areas of bowel this severe condition is termed as Diverticulosis. They quite often happen within the high-strain area of the intestine that's sigmoid colon [69,70].

Diverticular sickness is incredibly usual and occurs in 10 percent of people over age forty and in 50 percentages of people over age 60 in Western cultures. It's on the whole caused by means of too little roughage (fiber) within the weight-reduction plan. People struggling with diverticulosis not often or commonly does not have any signs or symptoms [71].

Issues of diverticular disease arise in about 10 percent of people with outpouchings. It results in infection or inflammation (diverticulitis), obstruction and bleeding. Remedy of diverticulitis quite often entails usage of antibiotics, expanded intake of fluids, and a particular food regimen. Surgical procedure is needed in about 1/2 of the circumstances who have issues to dispose of the concerned phase of the colon [72-75].

## Ulcerative Colitis

In case of Inflammatory Bowel Diseases (IBD) ulcerative Colitis is one of the major disorders. This condition arises as a result of abnormal response of the immune system. In case of ulcerative colitis the immune system misidentifies harmless Gut flora as a threat [76]. Thus the immune system starts working against it. When the immune system gets switched on, it's hard to get it to show off again. Ulcerative colitis occurs when the lining of large intestine and rectum gets inflammation.

Ulcerative colitis occurs only at the lining of the colon which is also called as large intestine whereas in case of Crohn's disease it can affect any part of the intestine. Ulcerative colitis results in inflammation developing small ulcers bring out mucous or pus [77-81].

Unfortunately, the causes of ulcerative colitis are not known till date. Some researchers suspect that it is the outcome of blend of several reasons, which includes the genes of the person who has the ailment, his immune system, and coming into contact with specific resources within the atmosphere [82-85].

**Symptoms:** In most cases the patients suffering from ulcerative colitis experience mild symptoms. The symptoms mainly include belly discomfort, Urgent bowel movement, Blood in the stool, Anemia, Weight loss, Rectal bleeding, Loss of appetite etc.

In case of younger children growth and development may delay due to the presence of ulcerative colitis [86-89].

**Diagnosis and treatment:** The diagnosis of ulcerative colitis is mainly based on the symptoms that occur. This disorder is sometimes confused with the other intestinal disorders like crohn's disease. There are several tests to diagnose ulcerative colitis [89-97]. They mainly include

**Stool test:** examining stool for the presence of blood, bacteria, and parasites

**Endoscopy:** usage of flexible tube to examine the stomach, esophagus, and small intestine

**Colonoscopy:** this involves insertion of a long, flexible tube into the rectum to examine the inside of the colon

**Biopsy:** tissue sample from the colon is examined

**Barium enema:** X-rays are taken of colon and rectum, using barium to provide contrast

Sometimes blood test also helps in the diagnosis of ulcerative colitis.

## Preventing GI Tract Disorders

Keeping Your Intestines Healthy

Constipation and other digestive problems are highly complicated, mainly for the individuals who undergo from them probably. They cause disruption in our day-to-day existence. Luckily, these diseases are almost always manageable- and mostly even preventable through small changes in diet and lifestyle [98-103]. Listed here are some treatments with the intention to support and keep your gut and digestive process healthful:

1. Consume to beat disease. This means a healthful eating regimen with plenty of fruits, excessive fiber foods, green leafy vegetables and yellow vegetables.
2. Less intake of fat. Extra fat slows digestion and results in heartburn, bloating, and constipation and also in addition raises the risk of heart disease, diabetes, and even colon cancer.
3. Hydrate your body. Drinking lots of water. Intake of around 6 to 8 glasses of water daily will aid in maintaining natural digestive process.
4. Physical activity and regular exercise is essential and is good for healthy digestion and also reduces the risk of many diseases.
5. Quit drinking alcohol and tobacco. More than one or two alcoholic drinks per day, or chewing or smoking tobacco can results in critical digestive disorders.
6. Taking medications as prescribed by your health care professional. Nonsteroidal anti-inflammatory drugs such as aspirin, ibuprofen and naproxen may harm intestine and digestive system. If it is necessary take it with food.

### CONCLUSION

Gastrointestinal disorders as well as diseases of the colon and rectum are common in society and also in clinical practice. There exist established diagnostic criteria when these are symptomatically defined. These GIDs can be prevented or minimized by practicing good bowel habits and maintaining a healthy lifestyle.

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