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# Irritable Bowel Syndrome in Saudi Adult Patient in King Khalid Hospital

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***Abstract:***

*Irritable bowel syndrome (IBS) is one of the most common syndromes seen by gastroenterologists and primary care providers. The purpose of the present study was to review records of Saudi adult patients who suffer from irritable bowel syndrome in King Khalid hospital, and to identify relationship between The Irritable bowel syndrome and age, gender, eating habits, psychological problems and education and family history. for my study research the Irritable bowel syndrome more conman in adult male more than adult female .there is no relationship between the Irritable bowel syndrome and family history. The Irritable bowel syndrome is not associated with psychological problems. The most common presentation abdominal pain (87.5%), bloating (81.2%), and diarrhea (56.2%). All Patients have problems with eating habits, and they need to education.*

***Keyword:*** ***IBS/ irritable bowel syndrome***

## Introduction:

**Definition:**

Irritable bowel syndrome (IBS) is a chronic (long-lasting) disorder of the large intestine (also called the colon or bowel). IBS is not a disease IBS is the most common intestinal disorder. It affects twice as many women as men and usually begins in early adult life.[1]

People with a functional GI disorder have frequent symptoms, but the GI tract does not become damaged. IBS is not a disease; it is a group of symptoms that occur together. The most common symptoms of IBS are abdominal pain or discomfort, often reported as cramping, along with diarrhea, constipation, or both. In the past, IBS was called colitis, mucous colitis, spastic colon, nervous colon, and spastic bowel. The name was changed to reflect the understanding that the disorder has both physical and mental causes and is not a product of a person's imagination.

IBS is diagnosed when a person has abdominal pain or discomfort at least three times per month for the last 3 months without other disease or injury that could explain the pain. The pain or discomfort of IBS may occur with a change in stool frequency or consistency or may be relieved by a bowel movement.

IBS is often classified into four subtypes based on a person's usual stool consistency. These subtypes are important because they affect the types of treatment that are most likely to improve the person's symptoms. The four subtypes of IBS are

- **IBS with constipation (IBS-C)**
  - Hard or lumpy stools at least 25 percent of the time
  - Loose or watery stools less than 25 percent of the time
- **IBS with diarrhea (IBS-D)**
  - Loose or watery stools at least 25 percent of the time
  - Hard or lumpy stools less than 25 percent of the time
- **Mixed IBS (IBS-M)**
  - Hard or lumpy stools at least 25 percent of the time
  - Loose or watery stools at least 25 percent of the time

## Statement and analysis:

Irritable bowel syndrome affects adult male and female, but the Young women are affected 2-3 times more often than men. Associations between psychiatric disturbances and irritable bowel syndrome pathogenesis are not clearly defined, but Patients with psychological disturbances relate more frequent and debilitating illness than control populations. Patients who seek medical care have a higher incidence of panic disorder, major depression, anxiety disorder, and hypochondriasis than control populations. The most common presentation is that of recurrent abdominal pain. This is usually colicky or 'cramping', is felt in the lower abdomen and relieved by defecation. Abdominal bloating worsens throughout the day; the cause is unknown but it is not due to excessive intestinal gas. The bowel habit is variable. Most patients alternate between episodes of diarrhea and constipation but it is useful to classify patients as having predominantly constipation or predominantly


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diarrhea. Patient education remains the cornerstone of successful treatment of irritable bowel syndrome. Teach the patient to acknowledge stressors and to develop avoidance techniques. Fiber supplementation may improve symptoms of constipation and diarrhea. Individualize the treatment because a few patients experience exacerbated bloating and distention with high-fiber diets. Polycarbophil compounds (e.g., Citrucel, Fibercon) may produce less flatulence than psyllium compounds (e.g., Metamucil).

## Background information:

Irritable bowel syndrome (IBS) is a functional GI disorder characterized by abdominal pain and altered bowel habits in the absence of specific and unique organic pathology. Osler coined the term *mucous colitis* in 1892 when he wrote of a disorder of mucorrhea and abdominal colic with a high incidence in patients with coincident psychopathology. Since that time, the syndrome has been referred to by sundry terms, including spastic colon, irritable colon, and nervous colon.[3]

Approximately 20% of the general populations fulfil diagnostic criteria for IBS but only 10% of these consult their doctors because of gastrointestinal symptoms. Nevertheless, IBS is the most common cause of gastrointestinal referral and accounts for frequent absenteeism from work and impaired quality of life. Young women are affected 2-3 times more often than men. There is wide overlap with non-ulcer dyspepsia, chronic fatigue syndrome, dysmenorrhoea and urinary frequency. A significant proportion of these patients have a history of physical or sexual abuse.

IBS encompasses a wide range of symptoms and a single cause is unlikely. It is generally believed that most patients develop symptoms in response to psychosocial factors, altered gastrointestinal motility, altered visceral sensation or luminal factors.[4]

IBS is very common condition across the globe and it is estimated that around 20% of people suffer from this condition some time during their life time.. It is the single most common reason for which people seek gastroenterologist's opinion. The statistics state that people miss work for IBS and related disorders more than for anything else, except colds. IBS though affect people of all ages and both the sexes; it is more common in young people; usually in late adolescence or early adulthood. The condition is almost two to three times common in females as compared to males.[5]

In the past, irritable bowel syndrome has been considered a diagnosis of exclusion; however, it is no longer considered a diagnosis of exclusion, but it does have a broad differential diagnosis. No specific motility or structural correlates have been consistently demonstrated; however, experts suggest the use of available guidelines can minimize testing and aid in diagnosis. IBS affects 5-11% of the population of most countries. Prevalence peaks in the third and fourth decades, with a female predominant Approximately 20% of the general population fulfill diagnostic criteria for IBS but only 10% of these consult their doctors because of gastrointestinal symptoms. Nevertheless, IBS is the most common cause of gastrointestinal referral and accounts for frequent absenteeism from work and impaired quality of life. Young women are affected 2-3 times more often than men.[6]

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Most people with IBS find that symptoms improve as they learn to control their condition. Only a small number of people with irritable bowel syndrome have disabling signs and symptoms. Fortunately, unlike more-serious intestinal diseases such as ulcerative colitis and Crohn's disease, irritable bowel syndrome doesn't cause inflammation or changes in bowel tissue or increase your risk of colorectal cancer. In many cases, you can control irritable bowel syndrome by managing your diet, lifestyle and stress.[7]

## Objectives:

**Main objective:**
To review records of Saudi adult patients who suffer from irritable bowel syndrome in king Khalid hospital from the period 2012 to 2013 to identify predisposing factors.

**Specific objectives:**

- To describe the relationship between gender and irritable bowel syndrome.
- To describe the relationship between age and irritable bowel syndrome
- To measure the prevalence of irritable bowel syndrome in King Khalid hospital.
- To define the relationship between anxiety, and depression, and neurosis and irritable bowel syndrome.
- To describe criteria upon which diagnosis was based irritable bowel syndrome.
- To describe the relationship between level of education and irritable bowel syndrome.
- To identify relationship between dietary fibers, eating habits and irritable bowel syndrome.

## Literature review:


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In the past, irritable bowel syndrome has been considered a diagnosis of exclusion; however, it is no longer considered a diagnosis of exclusion, but it does have a broad differential diagnosis.[1] No specific motility or structural correlates have been consistently demonstrated; however, experts suggest the use of available guidelines can minimize testing and aid in diagnosis.

## Pathphysiology:

Traditional theories regarding path physiology may be visualized as a 3-part complex of altered GI motility, visceral hyperalgesia, and psychopathology. A unifying mechanism is still unproven.

### Altered GI motility

Altered GI motility includes distinct aberrations in small and large bowel motility.

My electric activity of the colon is composed of background slow waves with superimposed spike potentials. Colonic dysmotility in irritable bowel syndrome manifests as variations in slow-wave frequency and a blunted, late-peaking, postprandial response of spike potentials. Patients who are prone to diarrhea demonstrate this disparity to a greater degree than patients who are prone to constipation.

Small bowel dysmotility manifests in delayed meal transit in patients prone to constipation and in accelerated meal transit in patients prone to diarrhea. In addition, patients exhibit shorter intervals between migratory motor complexes (the predominant interdigestive small bowel motor patterns).

Current theories integrate these widespread motility aberrations and hypothesize a generalized smooth muscle hyperresponsiveness. They describe increased urinary symptoms, including frequency, urgency, nocturia, and hyperresponsiveness to methacholine challenge.

### Visceral hyperalgesia

Visceral hyperalgesia is the second part of the traditional 3-part complex that characterizes irritable bowel syndrome.

Enhanced perception of normal motility and visceral pain characterizes irritable bowel syndrome. Rectosigmoid and small bowel balloon inflation produces pain at lower volumes in patients than in controls. Notably, hypersensitivity appears with rapid but not with gradual distention.

Patients who are affected describe widened dermatomal distributions of referred pain. Sensitization of the intestinal afferent nociceptive pathways that synapse in the dorsal horn of the spinal cord provides a unifying mechanism.

## Psychopathology:

Psychopathology is the third aspect. Associations between psychiatric disturbances and irritable bowel syndrome pathogenesis are not clearly defined.

Patients with psychological disturbances relate more frequent and debilitating illness than control populations. Patients who seek medical care have a higher incidence of panic disorder, major depression, anxiety disorder, and hypochondriasis than control populations. A study has suggested that patients with irritable bowel syndrome may have suicidal ideation and/or suicide attempts strictly as a result of their bowel symptoms.[7] Clinical alertness to depression and hopelessness is mandatory. This is underscored by another study that revealed that patient complaints that relate to functional bowel disorders may be trivialized.

An Axis I disorder coincides with the onset of GI symptoms in as many as 77% of patients. A higher prevalence of physical and sexual abuse has been demonstrated in patients with irritable bowel syndrome. Whether psychopathology incites development of irritable bowel syndrome or vice versa remains unclear.

### Microscopic inflammation

Microscopic inflammation has been documented in some patients.[2] This concept is groundbreaking in that irritable bowel syndrome had previously been considered to have no demonstrable pathologic alterations.

Both colonic inflammation and small bowel inflammation have been discovered in a subset of patients with irritable bowel syndrome, as well as in patients with inception of irritable bowel syndrome after infectious enteritis (post infectious irritable bowel syndrome). Risk factors for developing post infectious irritable bowel syndrome include longer duration of illness, the type of pathogen involved, smoking, female gender, an absence of vomiting during the infectious illness, and young age.[8]

Laparoscopic full-thickness jejunal biopsy samples revealed infiltration of lymphocytes into the myenteric plexus and intraepithelial lymphocytes in a subset of patients in one study.[9] Neuronal degeneration of the myenteric plexus was also present in some patients.


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Patients with post infectious irritable bowel syndrome may have increased numbers of colonic mucosal lymphocytes and enter endocrine cells. Enteroendocrine cells in postinfectious irritable bowel syndrome appear to secrete high levels of serotonin, increasing colonic secretion and possibly leading to diarrhea.

Small bowel bacterial overgrowth has been heralded as a unifying mechanism for the symptoms of bloating and distention common to patients with irritable bowel syndrome. This has led to proposed treatments with probiotics and antibiotics.

The fecal microflora also differs among patients with irritable bowel syndrome versus controls. A sophisticated molecular analysis suggested an alteration in the patterns and the contents of gut bacteria.[10]

## Etiology:

The causes of irritable bowel syndrome remain poorly defined, but they are being avidly researched.

**Postulated etiologies of irritable bowel syndrome**

Abnormal transit profiles and an enhanced perception of normal motility may exist. Up to one third of patients with irritable bowel syndrome may have altered colonic transit. Delayed colonic motility may be more common in patients with constipation-predominant irritable bowel syndrome than in healthy controls. Similarly, accelerated colonic transit may be more common in patients with diarrhea-predominant disease than in healthy controls.[11] Local histamine sensitization of the afferent neuron causing earlier depolarization may occur.

**Causes related to enteric infection**

Colonic muscle hyperreactivity and neural and immunologic alterations of the colon and small bowel may persist after gastroenteritis. Psychological co morbidity independently predisposes the patient to the development of post infectious irritable bowel syndrome. Psychological illness may create a proinflammatory cytokine milieu, leading to irritable bowel syndrome through an undefined mechanism after acute infection.

Infection with *Giardia lamblia* has been shown to lead to an increased prevalence of irritable bowel syndrome, as well as chronic fatigue syndrome. In a historic cohort study of patients with *G lamblia* infection as detected by stool cysts, the prevalence of irritable bowel syndrome was 46.1% as long as 3 years after exposure, compared with 14% in controls.[12]

**Central neurohormonal mechanisms**

Abnormal glutamate activation of N- methyl-D- aspartate (NMDA) receptors, activation of nitric oxide synthetase, activation of neurokinin receptors, and induction of calcitonin gene-related peptide have been observed.

The limbic system mediation of emotion and autonomic response enhances bowel motility and reduces gastric motility to a greater degree in patients who are affected than in controls. Limbic system abnormalities, as demonstrated by positron emission tomography, have been described in patients with irritable bowel syndrome and in those with major depression.

The hypothalamic-pituitary axis may be intimately involved in the origin. Motility disturbances correspond to an increase in hypothalamic corticotropin-releasing factor (CRF) production in response to stress. CRF antagonists eliminate these changes.

**Additional etiologic factors**

As discussed in Pathophysiology, Pimentel and colleagues have proposed that small bowel bacterial overgrowth provides a unifying mechanism for the common symptoms of bloating and gaseous distention in patients with irritable bowel syndrome.[13]

Bloating and distention may also occur from intolerance to dietary fats. Reflex-mediated small bowel gas clearance is more impaired by ingestion of lipids in patients with irritable bowel syndrome than in patients without the disorder.

Studies of elimination and challenge diets have suggested that poorly absorbed short-chain carbohydrates, in the form of fructose and fructans, may create symptoms among patients with irritable bowel syndrome, as measured by a visual analogue scale.[14]

Research suggests that neuronal degeneration and my enteric plexus lymphocytosis may exist in the proximal jejunum. Additionally, colonic lymphocytosis and enteroendocrine cell hyperplasia have been demonstrated in some patients.

## Epidemiology:

Population-based studies estimate the prevalence of irritable bowel syndrome at 10-20% and the incidence of irritable bowel syndrome at 1-2% per year. Of people with irritable bowel syndrome, approximately 10-20% seek medical care. An estimated 20-50% of gastroenterology referrals relate to this symptom complex. The incidence is markedly different among countries.

American and European cultures demonstrate similar frequencies of irritable bowel syndrome across racial and ethnic lines. However, within the United States, survey questionnaires indicate a lower prevalence of irritable bowel syndrome in Hispanics in Texas and Asians in California.


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Populations of Asia and Africa may have a lower prevalence of irritable bowel syndrome. The role of different cultural influences and varying health care–seeking behaviors is unclear.

In Western countries, women are 2-3 times more likely to develop irritable bowel syndrome than men, although males represent 70-80% of patients with irritable bowel syndrome in the Indian subcontinent. Women seek health care more often, but the irritable bowel syndrome–specific influence of this occurrence remains unknown. Other factors, such as a probably greater incidence of abuse in women, may confound interpretation of this statistic.

Patients often retrospectively note the onset of abdominal pain and altered bowel habits in childhood. Approximately 50% of people with irritable bowel syndrome report symptoms beginning before they were aged 35 years. The development of symptoms in people older than 40 years does not exclude irritable bowel syndrome but should prompt a closer search for an underlying organic etiology.

## Clinical presentation:

**Altered bowel habits**
Constipation variably results in complaints of hard stools of narrow caliber, painful or infrequent defecation, and intractability to laxatives. Diarrhea usually is described as small volumes of loose stool, with evacuation preceded by urgency or frequent defecation. Postprandial urgency is common, as is alternation between constipation and diarrhea. Characteristically, one feature predominates in a single patient, but significant variability exists among patients.

**Abdominal pain**
Descriptions are protean. Pain frequently is diffuse without radiation. Common sites of pain include the lower abdomen, specifically the left lower quadrant. Acute episodes of sharp pain are often superimposed on a more constant dull ache. Meals may precipitate pain, and defecation commonly improves pain. Defecation may not fully relieve pain, however.

Pain from presumed gas pockets in the splenic flexure may masquerade as anterior chest pain or left upper quadrant abdominal pain. This splenic flexure syndrome is demonstrable by balloon inflation in the splenic flexure and should be considered in the differential of chest or left upper quadrant abdominal pain.

**Abdominal distention**
Patients frequently report increased amounts of bloating and gas. Quantitative measurements fail to support this claim. People with irritable bowel syndrome may manifest increasing abdominal circumference throughout the day, as assessed by CT scan. They may also demonstrate intolerance to otherwise normal amounts of abdominal distention.

**Additional symptoms consistent with irritable bowel syndrome**
Clear or white menorrhea of a no inflammatory etiology is commonly reported. Epidemiologic associations with dyspepsia, heartburn, nausea, vomiting, sexual dysfunction (including dyspareunia and poor libido), and urinary frequency and urgency have been noted. Symptoms may worsen in the premenstrual period, and fibromyalgia is common co morbidity. Stressor-related symptoms may be revealed with careful questioning (emphasize avoidance of stressors).

**Symptoms inconsistent with irritable bowel syndrome**
Symptoms not consistent with irritable bowel syndrome should alert the clinician to the possibility of an organic pathology. Inconsistent symptoms include the following:

- Onset in middle age or older
- Acute symptoms (irritable bowel syndrome is defined by chronicity)
- Progressive symptoms
- Nocturnal symptoms
- Anorexia or weight loss
- Fever
- Rectal bleeding
- Painless diarrhea
- Steatorrhea
- Lactose and/or fructose intolerance
- Gluten intolerance

## Physical Examination:

The patient with irritable bowel syndrome has an overall healthy appearance but may be tense or anxious. The patient may present with sigmoid tenderness or a palpable sigmoid cord.

## Criteria for Diagnosis:

A consensus panel created and then updated the Rome criteria to provide a standardized diagnosis for research and clinical practice. The Rome III criteria for the diagnosis of irritable bowel syndrome[4] require that patients have had recurrent abdominal pain or discomfort at least 3 days per month during the previous 3 months that is associated with 2 or more of the following:

- Relieved by defecation
- Onset associated with a change in stool frequency
- Onset associated with a change in stool form or appearance


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Supporting symptoms include the following:

- Altered stool frequency
- Altered stool form
- Altered stool passage (straining and/or urgency)
- Mucorrhea
- Abdominal bloating or subjective distention

Four bowel patterns may be seen with irritable bowel syndrome. These patterns include the following:

- IBS-D (diarrhea predominant)
- IBS-C (constipation predominant)
- IBS-M (mixed diarrhea and constipation)
- IBS-A (alternating diarrhea and constipation)

The usefulness of these subtypes is debatable. Notably, within 1 year, 75% of patients change subtypes, and 29% switch between constipation-predominant IBS and diarrhea-predominant IBS.

## Differential Diagnoses

- Abdominal Angina
- Anxiety Disorders
- Bacterial Overgrowth Syndrome
- Biliary Colic
- Biliary Disease
- Celiac Sprue
- Chronic Mesenteric Ischemia
- Collagenous and Lymphocytic Colitis
- Colon Cancer, Adenocarcinoma
- Endometriosis
- Food Allergies
- Gastroenteritis, Bacterial
- Gastroenteritis, Viral
- Giardiasis
- Hypercalcemia
- Hyperthyroidism
- Hypothyroidism
- Inflammatory Bowel Disease
- Lactose Intolerance
- Malignant Neoplasms of the Small Intestine
- Mesenteric Artery Thrombosis
- Mesenteric Venous Thrombosis
- Pancreatic Cancer
- Pancreatitis, Chronic
- Pheochromocytoma
- Porphyria, Acute Intermittent
- Somatostatinomas
- Toxicity, Lead
- Ulcerative Colitis

## Lab investigation:

1. Blood Studies: A CBC count with differential to screen for anemia, inflammation, and infection is indicated. A comprehensive metabolic panel to evaluate for metabolic disorders and to rule out dehydration/ electrolyte abnormalities in patients with diarrhea is also indicated.
2. Stool Examinations: Microbiologic studies to consider include the following stool examinations:
   - Ova and parasites (consider obtaining specimens for *Giardia* antigen as well)
   - Enteric pathogens
   - Leukocytes
   - Clostridium *difficile* toxin
3. History-Specific Examinations: Hydrogen breath testing to exclude bacterial overgrowth may be considered in patients with diarrhea to screen for lactose and/or fructose intolerance. Tissue transglutaminase antibody testing and small bowel biopsy are used especially in diarrhea-predominant irritable bowel syndrome to diagnose celiac disease.
   Thyroid function tests are used to screen for hyperthyroidism or hypothyroidism. Serum calcium testing is used to screen for hyperparathyroidism.
   Erythrocyte sedimentation rate and C-reactive protein measurement are nonspecific screening tests for inflammation.
4. History-Specific Imaging Studies: Upper GI barium study with small bowel follow-through is used to screen for tumor, inflammation, obstruction, and Crohn disease. Double-contrast barium enema is used to screen for colorectal neoplasm and inflammation. Gallbladder ultrasonography should be considered if the patient has recurrent dyspepsia or characteristic postprandial pain.
   Abdominal CT scan is appropriate to screen for tumors, obstruction, and pancreatic disease.
5. Dietary Studies: Direct a lactose-free diet for 1 week in conjunction with lactase supplements. Improvement incriminates lactose intolerance, although the patient's clinical history and response to a trial may be unreliable. Therefore, some gastroenterologists recommend a formal hydrogen breath test. Fructose intolerance must also be considered.
   Direct a 48-hour fast. Persistent diarrhea suggests a secretory etiology.
6. History-Specific Procedures: Anal manometry may reveal a spastic response to rectal distention or other problems. For many patients with irritable bowel syndrome, endoscopy appropriately includes flexible sigmoidoscopy to assess for inflammation or distal obstruction.
   Esophagogastroduodenoscopy with possible biopsy is indicated in patients with persistent dyspepsia, if weight


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loss or symptoms suggest malabsorption, or if celiac disease is a concern. Colonoscopy is indicated for patients with warning signs, such as bleeding; anemia; chronic diarrhea; older age; history of colon polyps; cancer in the patient or first-degree relatives; or constitutional symptoms, such as weight loss or anorexia. A screening colonoscopy should be performed according to published guidelines.

## Treatments

Because it's not clear what causes irritable bowel syndrome, treatment focuses on the relief of symptoms so that you can live as normally as possible.

In most cases, you can successfully control mild signs and symptoms of irritable bowel syndrome by learning to manage stress and making changes in your diet and lifestyle. But if your problems are moderate or severe, you may need to do more. Your doctor may suggest:

- **Fiber supplements.** Taking fiber supplements, such as psyllium (Metamucil) or methylcellulose (Citrucel), with fluids may help control constipation.
- **Anti-diarrheal medications.** Over-the-counter medications, such as loperamide (Imodium), can help control diarrhea.
- **Eliminating high-gas foods.** If you have bothersome bloating or are passing considerable amounts of gas, your doctor may suggest that you avoid such items as carbonated beverages, salads, raw fruits and vegetables - especially cabbage, broccoli and cauliflower.
- **Anticholinergic medications.** Some people need medications that affect certain activities of the autonomic nervous system (anticholinergics) to relieve painful bowel spasms. These may be helpful for people who have bouts of diarrhea, but can worsen constipation.
- **Antidepressant medications.** If your symptoms include pain or depression, your doctor may recommend a tricyclic antidepressant or a selective serotonin reuptake inhibitor (SSRI). These medications help relieve depression as well as inhibit the activity of neurons that control the intestines. If you have diarrhea and abdominal pain without depression, your doctor may suggest a lower than usual dose of tricyclic antidepressants, such as imipramine (Tofranil) and amitriptyline. Side effects of these drugs include drowsiness and constipation. SSRIs, such as fluoxetine (Prozac, Sarafem) or paroxetine (Paxil), may be helpful if you're depressed and have pain and constipation. These medications can worsen diarrhea, however.
- **Antibiotics.** It's unclear what role, if any, antibiotics might play in treating IBS. Some people whose symptoms are due to an overgrowth of bacteria in their intestines may benefit from antibiotic treatment. But more research is needed.
- **Counseling.** If antidepressant medications don't work, you may have better results from counseling if stress tends to worsen your symptoms.

## Medication specifically for IBS

Two medications are currently approved for specific cases of IBS:

- **Alosetron (Lotronex).** Alosetron is a nerve receptor antagonist that's designed to relax the colon and slow the movement of waste through the lower bowel. The drug was removed from the market soon after its original approval because it was linked to serious complications. The Food and Drug Administration (FDA) has since allowed alosetron to be used again-with restrictions. The drug can be prescribed only by doctors enrolled in a special program and is intended for severe cases of diarrhea-predominant IBS in women who haven't responded to other treatments. Alosetron is not approved for use by men.
  Generally, alosetron should only be used if usual therapy for IBS has failed. Additionally, it should only be prescribed by a gastroenterologist with expertise in IBS because of the potential side effects.
- **Lubiprostone (Amitiza).** Lubiprostone is approved for adult women and men who have IBS with constipation. Lubiprostone is a chloride channel activator that you take twice a day. It works by increasing fluid secretion in your small intestine to help with the passage of stool. Common side effects include nausea, diarrhea and abdominal pain. More research is needed to fully understand the effectiveness and safety of lubiprostone. Currently, the drug is generally prescribed only for those with IBS and severe constipation for whom other treatments have failed.

## Lifestyle and home remedies:

In many cases, simple changes in your diet and lifestyle can provide relief from irritable bowel syndrome. Although your body may not respond immediately to these changes, your goal is to find long-term, not temporary, solutions:

- **Incorporate fiber into your diet, if possible.** When you have irritable bowel syndrome, dietary fiber can have mixed results. Although it helps reduce constipation, it can also make gas and


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cramping worse. The best approach is to gradually increase the amount of fiber in your diet over a period of weeks. Examples of foods that contain fiber are whole grains, fruits, vegetables and beans. If your signs and symptoms remain the same or worse, tell your doctor. You may also want to talk to a dietitian.

Some people do better limiting dietary fiber and instead take a fiber supplement that causes less gas and bloating. If you take a fiber supplement, such as Metamucil or Citrucel, be sure to introduce it gradually and drink plenty of water every day to minimize gas, bloating and constipation. If you find that taking fiber helps your IBS, use it on a regular basis for best results.

- **Avoid problem foods.** If certain foods make your signs and symptoms worse, don't eat them. Common culprits include alcohol, chocolate, caffeinated beverages such as coffee and sodas, medications that contain caffeine, dairy products, and sugar-free sweeteners such as sorbitol or mannitol. If gas is a problem for you, foods that might make symptoms worse include beans, cabbage, cauliflower and broccoli. Fatty foods may also be a problem for some people. Chewing gum or drinking through a straw can both lead to swallowing air, causing more gas.
- **Eat smaller meals.** If you have diarrhea, you may find that eating small, frequent meals makes you feel better.
- **Take care with dairy products.** If you're lactose intolerant, try substituting yogurt for milk. Or use an enzyme product to help break down lactose. Consuming small amounts of milk products or combining them with other foods also may help. In some cases, though, you may need to eliminate dairy foods completely. If so, be sure to get enough protein and calcium from other sources. A dietitian can help you analyze what you're eating to make sure you're getting adequate nutrition.
- **Drink plenty of liquids.** Try to drink plenty of fluids every day. Water is best. Alcohol and beverages that contain caffeine stimulate your intestines and can make diarrhea worse, and carbonated drinks can produce gas.
- **Exercise regularly.** Exercise helps relieve depression and stress, stimulates normal contractions of your intestines and can help you feel better about yourself. If you've been inactive, start slowly and gradually increase the amount of time you exercise. If you have other medical problems, check with your doctor before starting an exercise program.
- **Use anti-diarrheal medications and laxatives with caution.** If you try over-the-counter anti-diarrheal medications, such as Imodium or Kaopectate, use the lowest dose that helps. Imodium may be helpful if taken 20 to 30 minutes before eating, especially if the food planned for your meal is likely to cause diarrhea. In the long run, these medications can cause problems if you don't use them appropriately. The same is true of laxatives. If you have any questions about them, check with your doctor or pharmacist.

## Alternative medicine:

The following nontraditional therapies may help relieve symptoms of irritable bowel syndrome:

- **Acupuncture.** Although study results on the effects of acupuncture on symptoms of irritable bowel syndrome have been mixed, some people use acupuncture to help relax muscle spasms and improve bowel function.
- **Herbs.** Peppermint is a natural antispasmodic that relaxes smooth muscles in the intestines. Peppermint may provide short-term relief of IBS symptoms, but study results have been inconsistent. If you'd like to try peppermint, be sure to use enteric-coated capsules. Peppermint may aggravate heartburn. Before taking any herbs, check with your doctor to be sure they won't interact or interfere with other medications you may be taking.
- **Hypnosis.** Hypnosis may reduce abdominal pain and bloating. A trained professional teaches you how to enter a relaxed state and then guides you in relaxing your abdominal muscles.
- **Probiotics.** Probiotics are "good" bacteria that normally live in your intestines and are found in certain foods, such as yogurt, and in dietary supplements. It's been suggested that people with irritable bowel syndrome may not have enough good bacteria, and that adding probiotics to the diet may help ease symptoms. Some studies have found that probiotics may relieve symptoms of IBS, such as abdominal pain and bloating, but more research is needed.
- **Regular exercise, yoga, massage or meditation.** These can all be effective ways to relieve stress. You can take classes in yoga and meditation or practice at home using books or videos.

## Coping and support:

Living with irritable bowel syndrome presents daily challenges. IBS may be painful or embarrassing and can seriously affect the quality of your life. These suggestions may help you cope more easily:


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- **Learn as much about IBS as you can. Talk to your doctor,** look for information on the Internet from reputable sources such as the National Institutes of Health, and read books and pamphlets. Being informed about your condition can help you take better charge of it.
- **Identify the factors that trigger IBS.** This is a key step both in managing your condition and in helping you feel you have control of your life.
- **Seek out others with IBS.** Talking to people who know what you're going through can be reassuring. Try IBS support groups on the Internet or in your community.

## Prevention:

Anyone may experience digestive upset from worry or anxiety. But if you have irritable bowel syndrome, stress-related problems such as abdominal pain and diarrhea tend to occur with greater frequency and intensity. Finding ways to deal with stress may be helpful in preventing or alleviating symptoms:

- **Counseling.** In some cases, a psychologist or psychiatrist may help you learn to reduce stress by looking at how you respond to events and then working with you to modify or change your response.
- **Biofeedback.** This stress-reduction technique helps you reduce muscle tension and slow your heart rate with the feedback help of a machine. You're then taught how to produce these changes yourself. The goal is to help you enter a relaxed state so that you can cope more easily with stress.
- **Progressive relaxation exercises.** These help you relax muscles in your body, one by one. Start by tightening the muscles in your feet, then concentrate on slowly letting all of the tension go. Next, tighten and relax your calves. Continue until the muscles in your body, including those in your face and scalp, are relaxed.
- **Deep breathing.** Most adults breathe from their chests. But you become calmer when you breathe from your diaphragm, the muscle that separates your chest from your abdomen. When you inhale, allow your belly to expand. When you exhale, your belly naturally contracts. Deep breathing can also help relax your abdominal muscles, which may lead to more-normal bowel activity.

## Methods & materials:

**Approach:**
The research well Quantitative and Qualitative.

**1) Study design:**
The research will Descriptive case study to describe relationship between risk factors and irritable bowel syndrome.

**2) Study population:**
The research will be quantitative, Qualitative, and facility based. It is concentrated on Saudis' adults (male & female) in King Khalid hospital.

**3) Study area:**
The study is a facility based which will be done in Najran, Kingdom of Saudi Arabia.. It is located in the south of the country along the border with Yemen .The area of Najran is 119,000 km². The estimated population of the region of Najran is about 600,000 person.

**The hospitals in Najran:**

A. King Khalid Hospital
B. Najran General Hospital
C. Sharurah General Hospital
D. Maternity and Children Hospital
E. Najran Armed Forces Hospital
F. Sharfa general hospital (new)

And the study will help be in King Khalid Hospital. It was established at 1984 AD under the control of ministry of health. There is a 265 beds and 360 thousand patient. The hospital is compatible with international quality standards according to study in 2008. Its location in Al-Khalideya district. It is bounded by the king abdulaziz street north where the street separate it from Al- Mokhatat district, while to the south it is bounded by king Abdullah street which separate it from Al-shorfah district. The climate is hot during the summer months with an average degree of 30 degree and cold during winter months. And mild during spring months.

**4) Study variables:**
The variables are Quantitative and Qualitative.

The Dependent variable is Irritable bowel syndrome In Saudi adult patient.

The independent variable are gender, Family history, signs and symptoms, morbidity education, Life style (fibers and food intake), and psychological (neurosis .depression, and anxiety).

**5) Sampling:**
The research will be study in King Khalid hospital. This area is a desert area and located in the center of the Najran city. This research will be concentrated on the Saudi adult male and female, because they are the most affected group. The patients will be counted and taking by the probability


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method (simple random sampling), then the sample tachneic will be using the check list.

**6) Method of data collection:**
It will be structured interview, check list.

| Age | Gender | Family History | Abdomen Pain | Diarrhea | Constipation | Mixed |
|---|---|---|---|---|---|---|
| | | | | | | |

| Neurosis | Depression | Anxiety | Family Education | Regular Diet |
|---|---|---|---|---|
| | | | | |

**7) Method of data analysis:**
It depend on biostatical methods according to the SPSS program

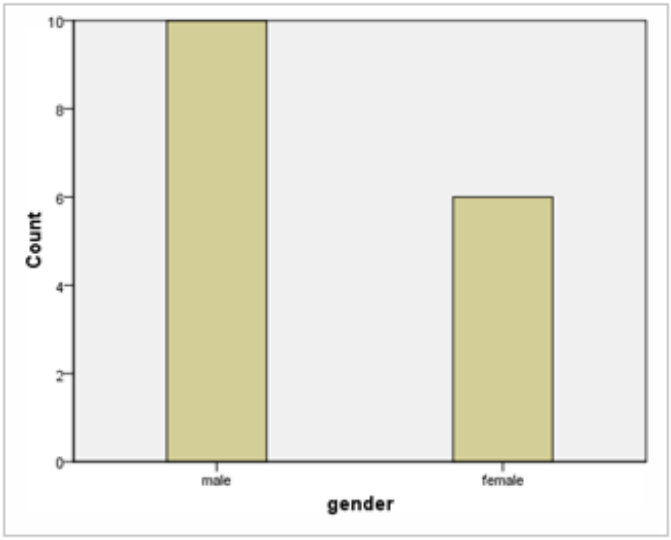
## Result:

**Table 1:**

| | Abdomen Pain | Diarrhea | Constipation | Mixed | Bloating |
|---|---|---|---|---|---|
| positive | **14** | **9** | **4** | **4** | **13** |
| percentage | **87.5%** | **56.2%** | **25.0%** | **25.0%** | **81.2%** |

| | Neurosis | Anxiety | Depression | Regular Diet |
|---|---|---|---|---|
| Positive | **0** | **0** | **0** | **0** |
| Negative | **16** | **16** | **16** | **16** |
| Percentage | **0.0%** | **0.0%** | **0.0%** | **0.0%** |

| | |
|---|---|
| **Median** | **22** |
| Mean | **21.58** |
| Minimum | **15** |
| Maximum | **26** |





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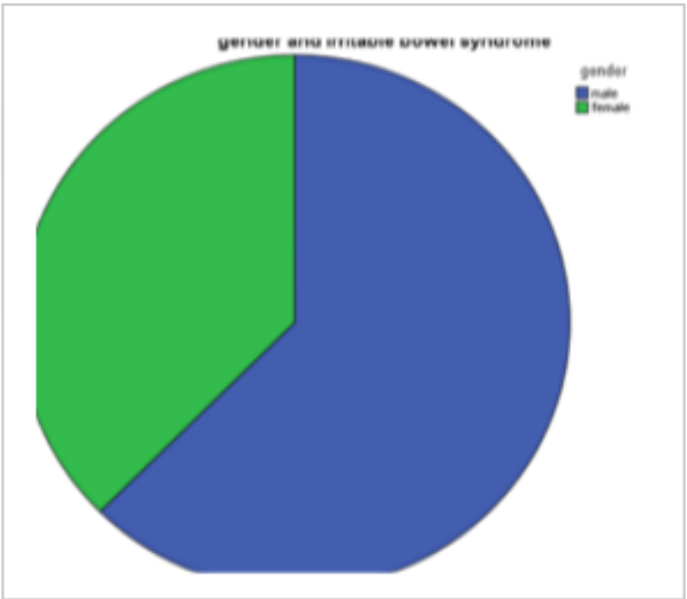


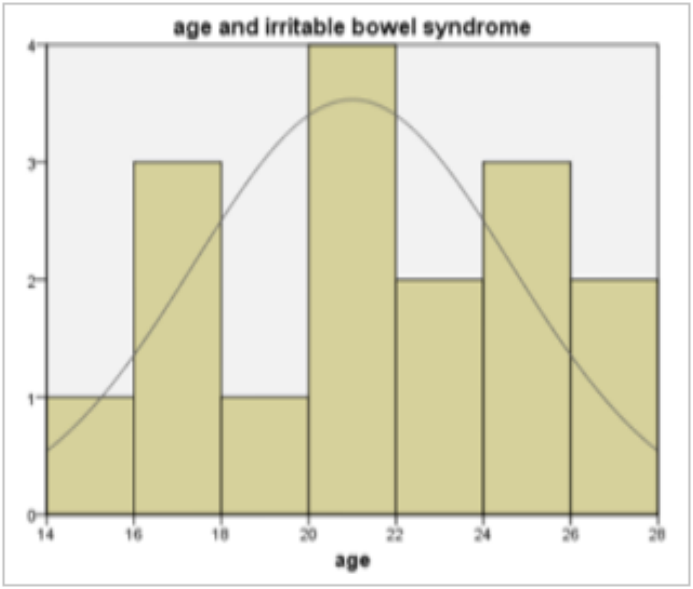


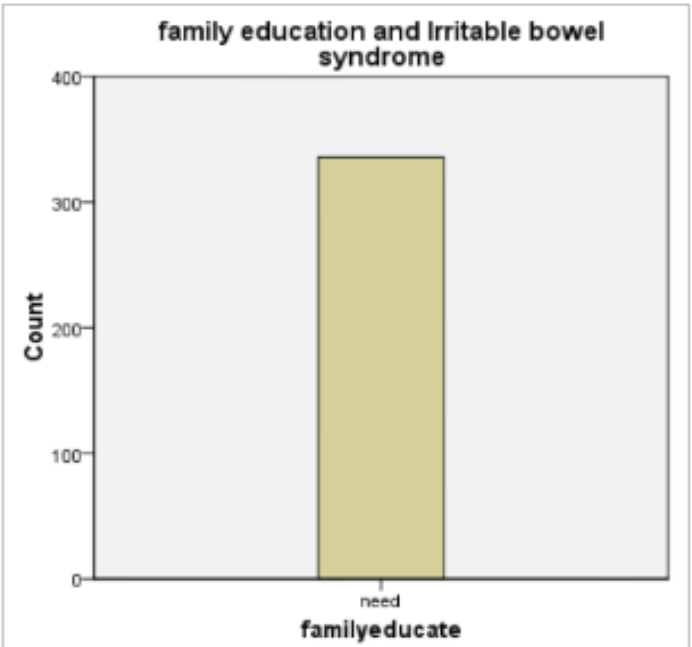



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**2. Texts:**

The irritable bowel syndrome more common in adult male more than adult male. The most common symptoms abdominal pain (87.5%), bloating (81.2%), and diarrhea (56.2%). All patients have no psychological problems. All patients have problems with eating habits, and they need family education.

## Discussion:

Irritable bowel syndrome (IBS) is one of the most common syndromes seen by gastroenterologists and primary care providers. The irritable bowel syndrome is more common in adult male more than female. There is no relationship between the Irritable bowel syndrome and family history. The irritable bowel syndrome is not associated with psychological problems likes depression , neurosis and anxiety. The patients usually suffering from abdominal pain, bloating, and diarrhea. The patients with irritable bowel syndrome have problems with eating habits, and all them need to education.

## Conclusion:

In my study research about irritable bowel syndrome in King Khalid hospital in najran city the irritable bowel syndrome more common in male than female. The irritable bowel syndrome is not associated with psychological problems and family history. The patients usually suffering from abdominal pain .bloating, and diarrhea .The patients have problems with eating habits and all them need education.

## Recommendation:

1. People with Irritable bowel syndrome should be given information that explains the importance of self-help in effectively managing their Irritable bowel syndrome. This should include information on general lifestyle, physical activity, diet and symptom-targeted medication.
2. Healthcare professionals and hospitals should review the fiber intake of people with irritable bowel syndrome, adjusting (usually reducing) it while monitoring the effect on symptoms. People with Irritable bowel syndrome should be discouraged from eating insoluble fiber (for example, bran). If an increase in dietary fiber is advised, it should be soluble fiber such as ispaghula powder or foods high in soluble fiber (for example, oats).
3. People with Irritable bowel syndrome should be advised how to adjust their doses of laxative or ant motility agent according to the clinical response. The dose should be titrated according to stool consistency, with the aim of achieving a soft, well-formed stool.
4. If diet continues to be considered a major factor in a person's symptoms and they are following general lifestyle/dietary advice, they should be referred to a dietitian for advice and treatment, including single food avoidance and exclusion diets. Such advice should only be given by a dietitian.
5. Diet and nutrition should be assessed for people with Irritable bowel syndrome and the following general advice given:

- Have regular meals and take time to eat.
- Avoid missing meals or leaving long gaps between eating.
- Drink at least eight cups of fluid per day, especially water or other non-caffeinated drinks, for example herbal teas.
- Restrict tea and coffee to three cups per day.
- Reduce intake of alcohol and fizzy drinks.
- It may be helpful to limit intake of high-fiber food (such as whole meal or high-fiber flour and breads, cereals high in bran, and whole grains such as brown rice).
- Reduce intake of 'resistant starch' (starch that resists digestion in the small intestine and reaches the colon intact), which is often found in processed or re-cooked foods.
- Limit fresh fruit to three portions per day (a portion should be approximately 80 g).
- People with diarrhea should avoid sorbitol, an artificial sweetener found in sugar-free sweets (including chewing gum) and drinks, and in some diabetic and slimming products.
- People with wind and bloating may find it helpful to eat oats (such as oat-based breakfast cereal or porridge) and linseeds (up to one tablespoon per day).

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**Annexes:**

| Age | gender | Family history | Abdomen pain | diarrhea | constipation | mixed |
|---|---|---|---|---|---|---|
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| neurosis | depression | anxiety | Family education | Regular diet |
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