



## Editing file

### OBJECTIVES:

1. Understand the hypothesis & explain the pathophysiology of IBS.
2. Common sign & symptoms.
3. Rome III criteria of diagnosis.
4. IBS management.

- **Important**
- **Original content**
- **Doctor's notes**
- **Extra**

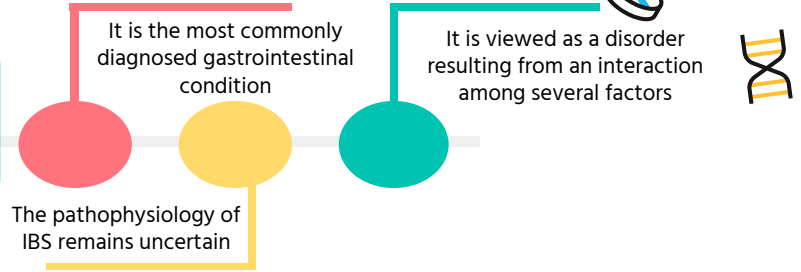




# Irritable bowel syndrome:

## Definition

is a gastrointestinal disorder characterized by chronic abdominal pain and altered bowel habits in the absence of any organic cause<sup>1</sup>



# Pathophysiology of IBS:

## 1 GASTROINTESTINAL MOTILITY<sup>2</sup>:

- motor abnormalities of the GI tract are detectable in **some** patients with IBS.
- Abnormalities observed include:
  - increased frequency and irregularity of luminal contractions.
  - prolonged transit time in constipation-predominant IBS.

## 2 VISCERAL HYPERSENSITIVITY<sup>3</sup>:

- Visceral hypersensitivity (increased sensation in response to stimuli) is a frequent finding in IBS patients.
- Perception in the gastrointestinal (GI) tract results from stimulation of various receptors in the gut wall. These receptors transmit signals via afferent neural pathways to the dorsal horn of the spinal cord and ultimately to the brain.

1.all the tests usually come back normal it is used to rule out other diseases

2.it can be fast leading to diarrhea it also can be slow leading to constipation predominant IBS

3.we mean that the patient will feel the distention more than the normal person

### 3 INTESTINAL INFLAMMATION:

- Increased numbers of lymphocytes have been reported in the colon and small intestine in patients with IBS.
- increase in lymphocyte infiltration in the myenteric plexus in nine patients and neuron degeneration in six patients.
- These cells release mediators (nitric oxide, histamine and proteases) capable of stimulating the enteric nervous system, leading to abnormal motor and visceral responses within the intestine.

### 5 FOOD SENSITIVITY

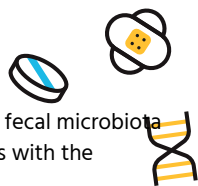
- **Distention:** Various studies have shown that in patients with IBS, awareness and pain caused by balloon distention in the intestine are experienced at lower balloon volumes compared with controls.
- **Bloating:** About half of patients with IBS (mainly those with constipation) have a measurable increase in abdominal girth associated with bloating (sensation of abdominal fullness).
- It is unclear whether heightened sensitivity of the intestines to normal sensations is mediated by the local GI nervous system, by central modulation from the brain, or by some combination of the two.

### 4 ALTERATION IN FECAL MICROFLORA:

- **Change in gut microbiota:** emerging data suggest that the fecal microbiota in individuals with IBS differ from healthy controls and varies with the predominant symptom.

- **Bacterial Overgrowth**

some have more bacteria that's why they have gasses inside their gut, and this is why if you remember *المصابي الكثيرة دعابة* when they ask people to eat activia three times a day for three days and then there distention and pain improves and this is actually about IBS, so you eat the yogurt with increased concentration of the good bacteria this will help your gut and help your gut and the pain



### 6 PSYCHOSOCIAL DYSFUNCTION

- Psychosocial factors may influence the expression of IBS.  
more pain during stress especially during exams

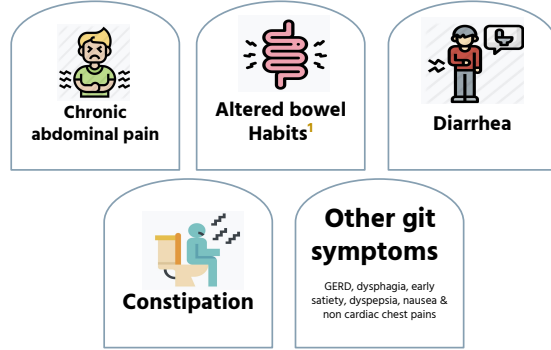
### 7 POSTINFECTIOUS

There was an E.Coli outbreak where people had severe gastroenteritis and a good percentage of the patients still had abdominal pain and IBS like symptoms after weeks of recovery, that's why maybe it is triggered by infections and the infection goes away and IBS develops.

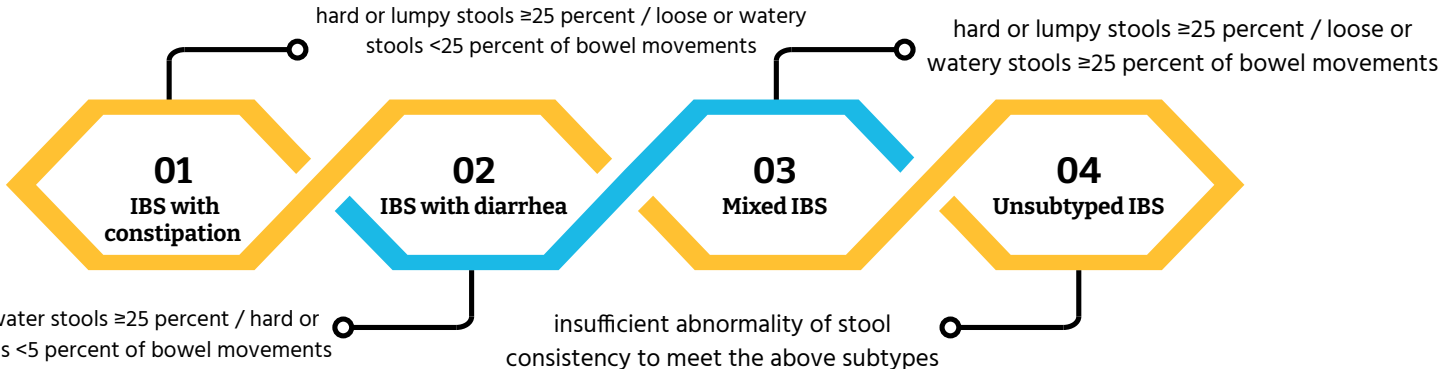
# Clinical Features

- Younger patients & women are more likely to be diagnosed with IBS.
- 2:1 female predominance in North America.
- In china males are more common to have IBS.

# Signs and Symptoms



# IBS Subtypes



# Diagnostic Criteria

## Rome III

Recurrent abdominal pain<sup>1</sup> or discomfort at least 3 days per month in the last 3 months associated with 2 or more of the following:

- Improvement with defecation
- Onset associated with a change in frequency of stool
- Onset associated with a change in form (appearance) of stool

## Rome IV

Recurrent abdominal pain, on average, at least 1 day/week in the last 3 months, associated with two or more of the following criteria:

- Related to defecation
- Associated with a change in frequency of stool
- Associated with a change in form (appearance) of stool

**Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis**

### Diagnostic approach<sup>2</sup>

- Patients are identified as having a symptom complex compatible with IBS based upon the Rome III criteria.
- Routine laboratory studies (complete blood count, chemistries) are normal in IBS.

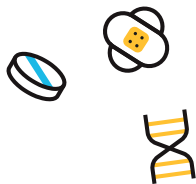
#### **NO red flag symptoms:**

- Rectal bleeding (we worry about malignancy, about polyps)
- Nocturnal or progressive abdominal pain (a patient with IBS will not be woken up by the pain, if the patient is woken up usually it is not IBS and you should do an investigation for other organic Causes)
- Weight loss (Significant, meaning they lose 10% of their weight in 6 months)

1.The pain will improve with defecation

2.we're not looking for any abnormality, we're looking if there is any other organic cause (anemia, high inflammatory markers) CT scan, abdominal X-Ray, colonoscopy is Normal Even if the patient is meeting the rome criteria if he/she has red flags, the patient should not be treated as a patient having IBS

## management



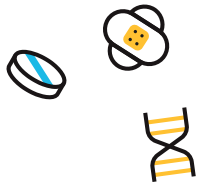
IBS is a **chronic condition** with **no known cure**. The focus of treatment should be on **relief of symptoms** and in **addressing the patient's concerns**.

- Therapeutic relationship
- Patient education
- Dietary modification (majority of my patients have a problem with البقول، الفول، العدس، fatty food, majority of mypatient improve a lot when they eat salad, alot of vegetable)
- Psychosocial therapies
- Medications: Antidepressant medication

### Physiological roles

<b>Mast cells</b>	Mast cells are effector cells of the immune system. An increased number of mast cells has been demonstrated in the terminal ileum, jejunum, and colon of IBS patients .Studies have demonstrated a correlation between abdominal pain in IBS and the presence of activated mast cells in proximity to colonic nerves.
<b>Proinflammatory cytokines</b>	Cytokines are proteins that are mediators of immune responses. Elevated levels of plasma proinflammatory interleukins have been observed in patients with IBS .In addition, peripheral blood mononuclear cells of IBS patients produce higher amounts of tumor necrosis factor than healthy control.

# QUIZ!



**Q1: Which of the following is correct about IBS with diarrhea?**

A- hard or lumpy stools  $\geq 25$  percent

B- loose or watery stools  $< 25$  percent of bowel movements

C- loose or water stools  $\geq 25$  percent

D- Both A & C

**Q2: Which of the following is NOT one of the red flag symptoms in IBS ?**

A- Rectal bleeding

B- Fever

C- Nocturnal or progressive abdominal pain

D- weight loss

**Q3: which criteria is associated with Recurrent abdominal pain, on average, at least 1 day/week in the last 3 month ?**

A- Rome I

B- Rome II

C- Rome III

D- Rome IV

**Q4: Which one of the following is the most commonly diagnosed gastrointestinal condition:**

A- IBD

B- IBS

C- Colitis

D- Pancreatitis

**Answers:**

- 1- C
- 2- B
- 3- D
- 4- B

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