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MJSCC

IRRITABLE BOWEL SYNDROME

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A definition of IBS

1. **Irritable bowel syndrome (IBS) is a chronic disorder characterized by recurrent abdominal pain associated with altered bowel habits** (changes in stool frequency or form). The condition is diagnosed using symptom-based criteria rather than a specific diagnostic test, as no biomarker or gold standard test currently exists.

Symptoms include recurrent abdominal pain, with onset more than 6 months earlier, occurring on average at least 1 day per week in the past 3 months, and associated with 2 or more of the following features.

Related to defecation (may be improved or worsened)
Associated with a change in the frequency of stool
Associated with a change in the form or appearance of stool

Additional symptoms support the diagnosis of IBS

Abnormal stool frequency (more than 3 times per day or less than 3 times per week)
Abnormal stool form (loose and watery or lumpy and hard)
Abnormal stool passage (urgency, straining, feeling of incomplete evacuation)
Passage of mucus (white material)
Abdominal bloating
Abdominal distention
Absence of nocturnal stools

SUBTYPES of IBS

IBS -d Predominant diarrhea: > 25% of bowel movements are Bristol Stool Scale type 1 or 2, and <25% are type 6 or 7.

IBS-c Predominant constipation: > 25% of bowel movements are BristolStool Scale type 1 or 2, and < 25% are type 6 or 7.

IBS-m Mixed symptoms of constipation and diarrhea: > 25% of bowel movements are Bristol Stool Scale type 1 or 2, and > 25% are type 6 or 7.

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IBS-u Unclassified IBS: bowel movements cannot be accurately categorized as one of the three subtypes.

2. What do you see as the frequency or prevalence of IBS

Prevalence of IBS in the United States estimated as **6.1%** using Rome IV criteria. Prevalence and Burden of Illness of Rome IV IBS in the United States : Results from a Nationwide Cross-Sectional Study.

Incidence data (new cases per year) is not well-documented in the literature, as most epidemiological studies focus on cross-sectional prevalence rather than tracking new diagnosis over time. The available literature primarily reports prevalence rather than incidence rates.

More recent evidence suggests that functional gastrointestinal disorders collectively account for approximately 40-45% of gastroenterology practice. Given that IBS is the most common functional disorder, it likely represents a significant portion of this percentage. The data suggest that IBS patients likely comprise 20-30% or more of a typical gastroenterology outpatient practice, making it one of the most common diagnoses encountered.

IBS represents a substantial proportion of gastroenterology practice. IBS is described as **"by far the largest subgroup seen in gastroenterology clinics"** and is **"the most prevalent of the functional gastrointestinal disorders."**

3. The prevalence in gender and age as you see in your practice

Demographics: IBS is more common in **women** (12% vs 8.6% in men) and individuals **under age 50**. Women are almost twice as likely as men to have IBS.

4. Approximate cost, per year of IBS in the healthcare field

Annual direct healthcare costs for IBS in the United States are estimated at **$1.5-10 billion** (excluding prescription and over-the-counter medications), with more recent estimates exceeding **$10 billion** when including all costs. **Total costs (direct plus indirect) exceed $10 billion annually** in the US. **Per-patient costs:** A 2024 US study found median annual all-cause healthcare costs of **$13,288** per IBS patient versus $5,999 for controls, with IBS-specific costs of

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$1,127 per patient annually. Costs vary by subtype, with IBS-C having the highest spending (median $16,005 all-cause; $2,222 IBS-specific).

5. What do you see as a loss of productivity in IBS patients, either in time or in dollars

Productivity loss from IBS is substantial, with indirect costs exceeding direct medical costs. Specifically, **63% of total IBS costs** come from productivity losses (versus 37% from direct medical costs), with **absenteeism**
accounting for 45% and **presenteeism for 42%** of indirect costs **Time Lost:**

- **Absenteeism:** IBS patients miss an average of **13.4 days** of work/school per year (versus 4.9 days for non-IBS patients)
- **Presenteeism: 87% report reduced productivity** at work, losing nearly **14 hours per week** of productivity
- **Weekly work loss:** Mean of **1.97 hours** of work per week lost due to IBS
- In the UK alone, an estimated **72-188 million hours** of work are lost annually
- **Prevalence of Work Impairment:** Among employed IBS patients, **24-29% report absenteeism** and **86-87% report presenteeism**. Overall, **82% experience overall work impairment**.
- **Contributing Factors:** Higher productivity losses are associated with IBS symptom severity, GI-specific anxiety, general fatigue, depression, and lower quality of life.

6. How has IBS affected in QOL (quality of life)

IBS has a profound impact on quality of life, comparable to or worse than many serious chronic diseases. Quality of life in IBS patients is **worse than in diabetes or end-stage renal disease** and **comparable to stroke, leg ulcers, or chronic obstructive pulmonary disease**. IBS affects quality of life **to the same degree as organic gastrointestinal disorders such as Crohn's disease**. **Magnitude of Impact: 97% of IBS patients** report reduced quality of life, with **90% experiencing impaired social life** and **69% reporting impaired sexual life**. The mean disease-specific quality of life score (IBS-QOL) is 48.4 out of 100, and the generic quality of life score (EQ-5D) is 0.570, both indicating substantial impairment. The severity of impact is underscored by striking patient perspectives: **patients would accept a 1% median risk of sudden death** for a 99% chance of cure, and a **majority would give up 10-15 years of life expectancy** for an instant cure.

Domains Most Affected:

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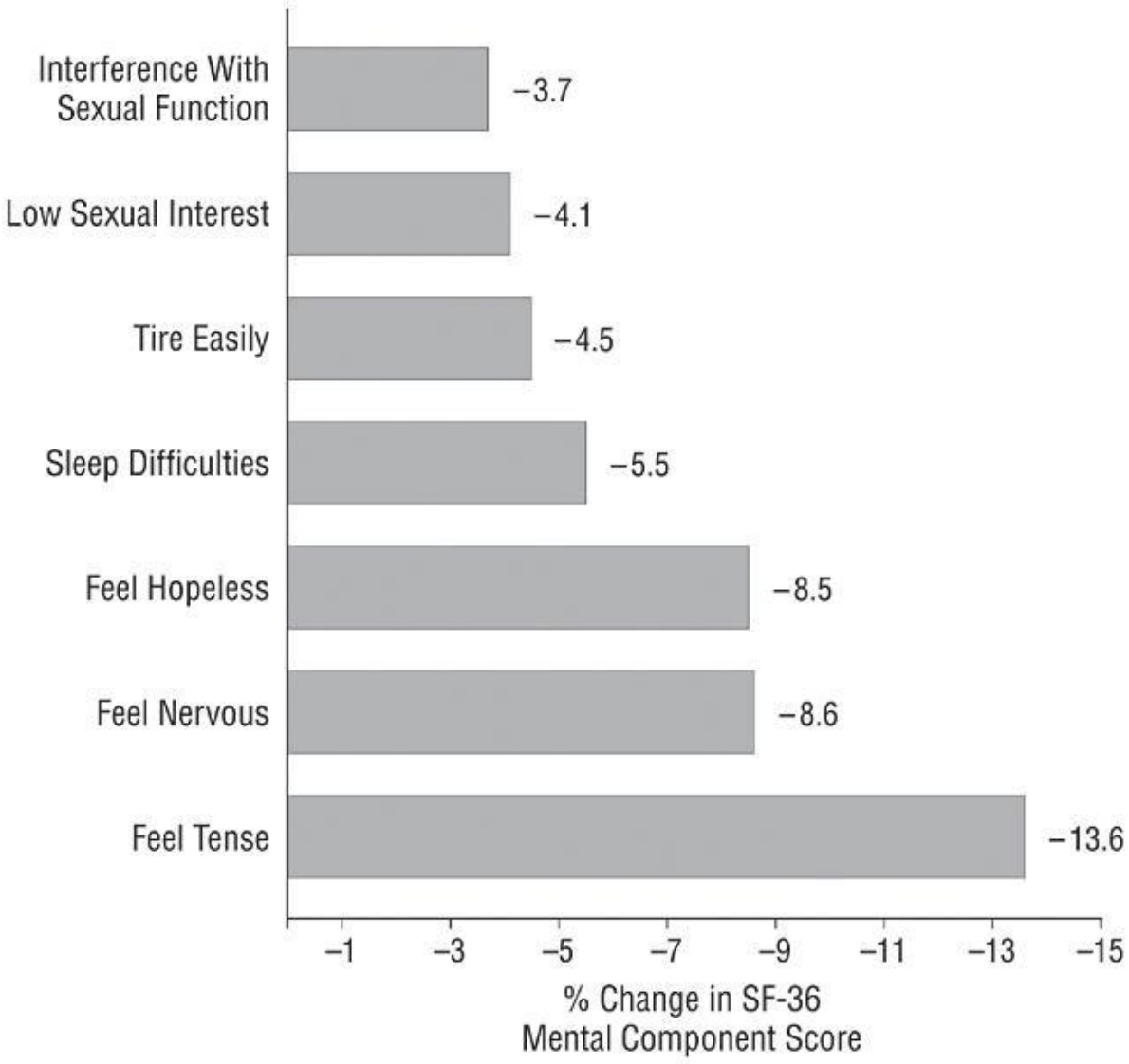
- **Social functioning:** IBS negatively impacts eating outside the home, going out with friends, traveling, and visiting new or unfamiliar places.
- Impairment in **social leisure activities, home management, and maintaining close relationships** are independently associated with lower quality of life.
- **Psychological well-being:** Mental health-related quality of life is predominantly determined by **psychological distress and symptoms of vital exhaustion** rather than traditional GI complaints.



Clinical Determinants of Health-Related Quality of Life in Patients With Irritable Bowel Syndrome.

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- **Subtype-specific patterns:** IBS-D patients avoid travel or leaving the house due to concerns about toilet access, while IBS-C patients avoid sexual intercourse and report difficulty concentrating.

7. How does IBS affect areas of abdominal pain, diarrhea, bloating, or constipation

Abdominal pain, diarrhea, bloating, and constipation are the cardinal symptoms that define IBS. According to the Rome IV criteria, IBS is diagnosed when recurrent abdominal pain occurs at least once weekly and is associated with defecation and/or changes in stool frequency or form. Abdominal pain is the **required symptom** for IBS diagnosis—it must be present to meet diagnostic criteria. Pain is thought to arise from **visceral hypersensitivity**, where normal gut stimuli (distension, contractions) are perceived as painful. Diarrhea and Constipation define the **IBS subtypes**:

- **IBS-D (diarrhea-predominant):** >25% of bowel movements are loose/watery (Bristol types 6-7), <25% are hard
- **IBS-C (constipation-predominant):** >25% of bowel movements are hard/lumpy (Bristol types 1-2), <25% are loose
- **IBS-M (mixed):** >25% are loose AND >25% are hard
- Bloating is **extremely common** in IBS (reported by >80% of patients) but is **not required** for diagnosis. It results from a combination of visceral hypersensitivity, abnormal gas handling, and altered abdominal muscle reflexes. Visible abdominal distension may accompany bloating in some patients.
- **Underlying Mechanism:** All four symptoms stem from the **gut-brain axis dysfunction** characteristic of IBS, involving altered motility, visceral hypersensitivity, intestinal permeability changes, immune activation, and microbiome alterations

8. Would you please give us a quick update on the Rome criteria for IBS

1. The Rome IV criteria (2016) are the current standard for diagnosing IBS, requiring recurrent abdominal pain at least 1 day per week for the last 3 months, associated with

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≥2 of the following: related to defecation, associated with a change in stool frequency, or associated with a change in stool form.

Rome IV (2016): Made two key changes—**excluded "discomfort"** (considered ambiguous with no equivalent in some languages) and **increased pain frequency** from 2-3 days/month to at least 1 day/week. 9 What other factors are considered in IBS, i.e.,does it run in families **Risk factors for IBS:**

- **Female sex** – ~1.5–2× higher prevalence in women
- **Age <50 years** – prevalence decreases with older age
- **Family history/Genetics** – first-degree relatives have ~2× increased risk; heritability ~48%
- **Prior GI infection** – post-infectious IBS develops in ~10% after acute gastroenteritis (4× risk)
- **Psychological comorbidities** – anxiety, depression, somatization
- **Antibiotic exposure** – associated with post-infectious IBS development
- **Low birth weight** – <1500g associated with 2.4× increased risk
- **Adverse early life events** – childhood trauma, abuse 10.Quick differential of IBS C, IBS M, IBS D, and IBS U

IBS Subtypes (Rome IV):

- **IBS-D:** Loose/watery stools ≥25%, hard stools <25%
- **IBS-C:** Hard/lumpy stools ≥25%, loose stools <25%
- **IBS-M:** Both hard and loose stools ≥25%
- **IBS-U:** Insufficient stool abnormality to subtype

11.lHow often is IBS mixed with C,U,M, and D

IBS subtype distribution based on a large US study (n=88,607) using Rome IV criteria:

- **IBS-M (mixed):** 33.9%
- **IBS-C (constipation):** 33.6%
- **IBS-D (diarrhea):** 28.1%
- **IBS-U (unsubtyped):** 4.4%

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Notably, **>50% of IBS patients change their predominant subtype over a 1-year period**, so subtype classification should be reassessed routinely.

Another term we need to be familiar with is CIC (chronic idiopathic constipation) is similar to IBS C except CIC usually has no pain.

!2. Management of IBS after correct diagnosis

IBS management:

- **Patient education & reassurance:** IBS is a functional disorder (no structural disease). It is chronic but not life-threatening. The symptoms often fluctuate ● **Lifestyle modification**: Adequate sleep, Exercise regularly, Stress reduction ● **Dietary modification**: Regular meals (avoid large/heavy meals). ○ Low FODMAP diet (Helps reduce bloating, gas, diarrhea)
    - Avoid**:**
        - Triggers (caffeine, alcohol, fatty or spicy foods)
        - Fermentable carbs (onions, garlic, beans)
        - Lactose-containing foods
        - Certain fruits (apples, pears)
        - Excess insoluble fiber (bran) ● **IBS-C**

(Constipation):

- *First-line:* Soluble fiber (psyllium), PEG 3350 (polyethylene glycol) MiraLax
- *Second-line:* Linaclotide, lubiprostone, plecanatide, tenapanor,etc ● **IBS-D**

(Diarrhea):

- *First-line:* Loperamide for urgency/frequency
- *Second-line:* **Rifaximin** (550 mg TID × 14 days, can repeat), eluxadoline, alosetron (severe IBS-D in women), ondansetron
- TCAs (amitriptyline 10–50 mg at bedtime) effective for pain and diarrhea

- **IBS-M (Mixed) and Pain-Predominant:**
    - Antispasmodics (dicyclomine, hyoscyamine, peppermint oil) for cramping
    - Neuromodulators (TCAs, SNRIs) for visceral pain
    - Probiotics (especially *Bifidobacterium infantis*) for bloating

13. Any leading questions I.e. open ended, that would help us in identifying IBS in our patients

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Questions for identifying IBS:

- *"Tell me about your abdominal pain—where is it located, and how often does it occur?"*
- *"How does your pain relate to bowel movements—does it get better or worse before, during, or after?"*
- *"Describe your typical bowel movements—are they usually hard, loose, or do they vary?"*
- *"Has there been a change in how often you have bowel movements?"*
- *"Do you experience bloating or abdominal distension?"*
- *"Have you noticed any connection between stress or anxiety and your symptoms?"*
- *"Did your symptoms start after a GI infection or food poisoning?"* ● *"How long have your symptoms been present?*

14.What are the "red flags" in IBS to look for

"Red flags" or alarm features in patients with IBS, include:

- New symptom onset after age 50 years
- Rectal bleeding not attributable to hemorrhoids or anal fissures
- Unintentional weight loss
- Iron deficiency anemia
- Nocturnal diarrhea
- Family history of colon cancer, inflammatory bowel disease (IBD), or celiac disease

When alarm features are present, **endoscopic evaluation should be considered** to exclude concomitant conditions such as IBD or colorectal cancer (CRC). A complete blood count and iron studies (in the presence of anemia) are important parts of the evaluation. On physical examination, an **abnormal finding such as lymphadenopathy or a palpable abdominal or rectal mass** strongly suggests additional diagnostic considerations beyond IBS.

15. The treatment options we have for IBS whether it be bloating or for abdominal pain or functional bowel disorder IBS Treatment options:

- **IBS-C (Constipation):**
    - *First-line:* Soluble fiber (psyllium), PEG 3350 (polyethylene glycol)
    - *Second-line:* Linaclotide, lubiprostone, plecanatide, tenapanor ● **IBS-D (Diarrhea):**
    - *First-line:* Loperamide for urgency/frequency

    - *Second-line:* **Rifaximin** (550 mg TID × 14 days, can repeat), eluxadoline, alosetron (severe IBS-D in women), ondansetron
    - TCAs (amitriptyline 10–50 mg at bedtime) effective for pain and diarrhea
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    - Neuromodulators (TCAs, SNRIs) for visceral pain
    - Probiotics (especially *Bifidobacterium infantis*) for bloating

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