

Irritable Bowel Syndrome IBS

متلازمة القولون العصبي

IBS is

- **One of the most common disorders**
- With basically **2 main** features (**symptoms**):
 - **Abdominal pain**, and
 - **Changed bowel habit**.
- A **chronic condition** **although** its signs and symptoms:
 - **Sometimes get worse** and
 - **Sometimes** they **improve** or
 - **Even disappear** completely

Bowel Movement

- **Normally:**
 - Walls of the intestines are lined with layers of muscle which:
 - ✓ Contract and relax in a coordinated rhythm as they move food from the stomach through the intestinal tract to the rectum.

- **In IBS** (irritable bowel syndrome)
 - Contractions **may be** shorter & weaker than normal.
 - Or
 - Contractions **may be** longer & stronger than normal.

Pathophysiology of IBS Patients

- Because of the shorter and weaker contractions:
 - Food is forced through the intestines more slowly, stools become dry and hard causing gas, bloating and constipation
- In some cases, the opposite occurs (Contractions are stronger and last longer).
 - Food passes more quickly, and stools become loose causing gas, bloating and diarrhea
- Abnormalities in the nerves in the digestive system also may play a role:
 - Poorly coordinated signals between the brain and the intestines.
 - Causing more than normal discomfort when intestinal walls stretch from gas.

Causes of IBS

- Are not known exactly
- **Wheat** is a culprit.
- In some cases IBS can occur after an illness involving:
 - Fever
 - Vomiting or
 - Diarrhea

Risk Factors

- **Young age**: IBS tends to occur in people under age 45.
- **Female**: Overall, about twice as many women as men have the condition.
- **Family history of IBS**: increases the **↑risk** as studies suggest.
 - The influence of family history on IBS risk may be related to: genes, shared factors in a family's environment or both.
- People with **mental health problems**:
 - **Suffering from**: Anxiety, depression, a personality disorder, and
- A history of **childhood sexual abuse**
- **Domestically abused women**

Signs & Symptoms

- Abdominal pain or cramping
- A bloated feeling (flatulence) because of gas.
- Constipation Or Diarrhea
- Sometimes even alternating bouts of sudden onset of diarrhea to constipation
- Possibly Mucus in the stool.
- These symptoms are usually relieved after a bowel movement.

Symptoms that Need Medical Attention

- Weight loss,
- Diarrhea at night,
- Rectal **bleeding**,
- Iron deficiency anemia,
- Unexplained vomiting,
- Difficulty swallowing,
- **Persistent pain** that **is not relieved** by **passing gas** or a **bowel movement**.

Triggers

- Affect some people, but not others.
- Foods
 - Many people find that their signs and symptoms worsen when they eat certain foods
- Stress
 - Most people with IBS, signs and symptoms get worse or more frequent during stressful events,
 - Stress may aggravate symptoms, it doesn't cause them.

Triggers Cont'd.

- Hormones.

- Because women are more likely to have IBS, researchers believe that hormonal changes play a role in this condition.
- ✓ Many women find that signs and symptoms are worse during or around their menstrual periods.

- Other illnesses can trigger IBS such as:

- An acute episode of infectious diarrhea (gastroenteritis)
or
- Too many bacteria (bacterial overgrowth) in the intestines.

Complications

- IBS does not cause permanent damage to the colon.
- IBS is not associated with serious conditions, such as colon cancer
- But
 - Constipation and diarrhea, both signs of IBS aggravate or even cause hemorrhoids
- If a whole food group is avoided, one might not get enough of certain nutrients leading to some nutrient deficiencies
- The impact of IBS on the quality of life may be its most significant complication

Nutritional Management of IBS

Fiber intake in IBS

- Non Starch Polysaccharides (NSPs) help in the management of constipation-predominant IBS
- Increase \uparrow fiber intake if appropriate because
 - Dietary fiber can have mixed results
 - Helps reduce constipation.
 - Can worsen gas and cramping.
 - Fiber supplements cause less \downarrow gas and \downarrow bloating for some people
 - Fiber supplements such as Metamucil or Citrucel should be consumed with plenty of water.



Whole Psyllium Seeds



Citrucel: its main ingredient is **Methylcellulose** (a plant fiber which is non-allergenic and soluble).



Psyllium husk

Fiber intake in IBS Cont'd.

- **Always** increase **↑ water intake** **with** increased **↑ fiber intake** (dietary or supplemental)
- In order **to minimize**:
 - **Gas**
 - **Bloating** and
 - **Possible obstruction** → constipation

Avoid Problem Foods.

- **Avoid foods** that **worsen signs** and **symptoms** of IBS
- **Common culprits** include:
 - **Wheat, barely, and rye**
 - **Dairy** products **especially milk**
 - **Alcohol**
 - **Chocolate**
 - **Caffeinated beverages** such as coffee and sodas.
 - **Medications** that contain **caffeine**
 - **Sugar-free sweeteners** such as **sorbitol or mannitol** (laxative effect)

Avoid Problem Foods.

- If gas is a problem, avoid foods that might increase gas production including 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.

Low FODMAP Diet for IBS

FODMAPs

- **Stands for:** fermentable oligo-, di-, monosaccharides and polyols
(Polyols are **low calorie sugar** replacers such as: **maltitol, mannitol, sorbitol**)
 - Such as: **fructans**, lactose, fructose, and others,
- **Fructans are:** 3-9 sugar units, **non-digestible** polymers of **fructose + a sucrose** unit such as inulin,
 - **Are found in** certain
 - **Grains:** such as **barley** , **rye**, and **wheat**
 - **Vegetables:** such as **garlic**, **onions**, and **artichokes**
- **Often** people are **not bothered by every FODMAP food**
- **Some people** may be able to **get relief** from IBS symptoms **on a strict low FODMAP diet** and **then reintroduce foods one at time**.

Eat at Regular Times.

- **Don't skip meals:**
 - Eating at about the same time each day may help regulate bowel function.
- **If diarrhea is a problem:**
 - Eating smaller frequent meals may help in making the sufferer feel better
- **If constipation is a problem:**
 - Eating larger amounts of ↑ high-fiber foods may help move food through the intestines.

Dairy Products

- If lactose intolerant, try to:
 - Substitute yogurt for milk
 - Use an enzyme product to help break down lactose.
 - Consume small amounts of milk products or combine them with other foods also may help
- If dairy products are not at all tolerated
 - Eliminate them completely
 - Make sure to get enough protein and calcium from other sources.
- Dietitians can analyze and plan diets for IBS sufferers to ensure adequate nutrition.

Fluids

- Drink plenty of fluids every day.
 - ✓ Water is the best.
 - ✓ Alcohol and beverages that contain caffeine stimulate the intestines and can make diarrhea worse
 - ✓ Carbonated drinks can produce gas.

Exercise Regularly

- Exercise helps
 - **Relieve** depression and stress
 - **Stimulates** normal contractions of your intestines and
 - Can **help in feeling better** about self
- Inactive people should
 - Increase ↑ activity slowly and gradually
- People with other medical problems should
 - Check with their healthcare provider before starting an exercise program.
- ❖ The **best way** to deal with IBS is: **proper diet**, **plenty of water**, and **exercise**
- ❖ **Medicine** is prescribed **only when** additional help **is needed**.

Anti-Diarrheal Medications and Laxatives IF needed

- Both anti-diarrheal medications and laxatives should be used with caution
- Both should be used in the lowest dose that can help
 - ✓ Their long term use can cause problems if used inappropriately.
- Take anti-diarrheal medications 20-30 minutes before the meal especially if the **food** is known to cause diarrhea for the person with **IBS**.
- Consult with a health care provider: doctor or pharmacist

Types of Oral Laxatives

Bulk-forming

Not digested but Absorb liquid in the intestines and swell to form a soft, bulky stool

➤ Help both constipation and diarrhea

Examples: Psyllium husk

Psyllium



Psyllium seeds

Psyllium

- Is a soluble fiber used primarily as a gentle bulk-forming laxative.
- It comes from a shrub-like herb called *Plantago ovata* that grows worldwide but is most common in India.
- Each plant can produce up to 15,000 tiny, gel-coated seeds, from which psyllium husk is derived.

Examples: (brand names)

1. Fiberall,
2. Genifiber
3. Metamucil

Types of Oral Laxatives


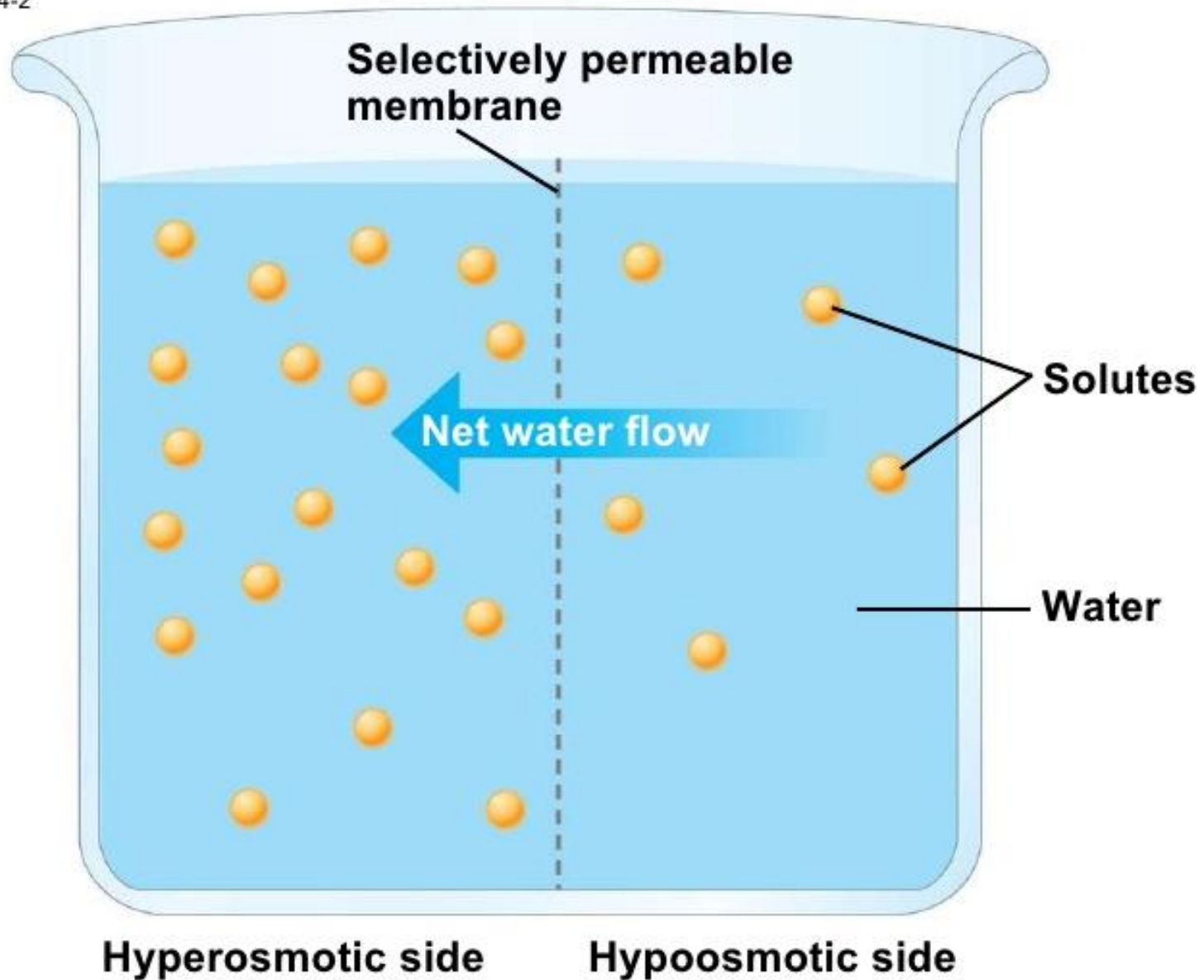
<u>Hyperosmotic</u>  (3 types)	<u>Contain a high concentration of salts or other dissolved materials</u> than normal tissues	Examples
➤ The <u>saline type</u> is often called " <u>salts</u> ."	<u>Draw</u> water <u>into the bowel</u> from surrounding body tissues. They are <u>salts of Mg^{++}</u> such as MgCitrate	<u>Epsom Salt</u> $MgSO_4$ (magnesium sulfate)
➤ The <u>sugar-based</u>	<u>Draw</u> water into the bowel from surrounding body tissues; works <u>more slowly than the salt based</u> laxative	Lactulose (generic name) GlycoLax (brand name)
➤ The <u>polymer type</u> molecules with large number of similar units bonded together.	<u>Retain</u> water in the stool; Prevent the extraction of water from feces.	Macrogol, Movicol, Polyethylene glycol 3350, SoftLax, MiraLAX

Fig. 44-2



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Epsom Salt



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Types of Oral Laxatives

Lubricants

Coat the bowel and the stool mass with a waterproof film

- This keeps moisture in the stool.
- They lubricate the rectum [terminal section of the intestine, ending in the anus]
- Increasing urgency while reducing one's ability to resist

Examples:

- Mineral oil mostly from petroleum
- Flaxseed oil
- Olive oil ?? may work for some people (not proven effect)



Colorless, tasteless, odorless petroleum product

Types of Oral Laxatives

<u>Stimulants</u>	<u>They increase the muscle contractions</u> that move along the stool mass.	Examples: <u>Senna (a herbal laxative)</u> <u>Castor oil</u>
<u>Stool softeners</u> (emollients)	<u>Help liquids mix into the stool</u> and prevent dry, hard stool masses	Examples: Fleet Sof-Lax Modane Soft
<u>Combinations</u>	<u>Contain more than one type of laxative</u>	Example: <u>Stool softener + Stimulant laxative</u>

Senna Laxative



Castor Oil Plant Seeds

is a vegetable **oil** obtained by pressing the seeds
of the **castor oil plant**



Other Laxatives

Suppositories:

➤ Glycerol suppositories

Two types



Are applied to the anus

They are mild irritants

They stimulate the bowel muscles to contract

➤ Natural glycerin



Derived from oils and fats from sources such as coconuts and oil palms

➤ Synthetic glycerin



Derived from petroleum

Prevention of IBS

- Anyone may experience digestive upset from worry or anxiety.
- But if somebody suffers from IBS then:
 - 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 patient learn to reduce stress by:

- Looking at how patient responds to events,

- And then work with the patient to:

- Modify or change patient response.

Alternative Medicine

- The following nontraditional therapies may help relieve symptoms of IBS:
 - **Acupuncture:**
According to research findings:
May help improve symptoms of IBS
 - **Hypnosis:**
Enter a relaxed state and then relaxed abdominal muscles
May reduce abdominal pain and bloating
 - **Herbs: some herbs (such as peppermint)**
Are antispasmodic that relax smooth muscles in the intestines
May provide short-term relief of IBS symptoms

Acupuncture for IBS



Hypnosis





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Peppermint

Peppermint Tea

Peppermint:

- **Indigenous** to **Europe** and the **Middle East**
- The plant is **now widespread** in cultivation in **many regions of the world**.

Alternative Medicine Cont'd.

- **Yoga**

- A Hindu spiritual and ascetic discipline,
- Includes breath control, simple meditation, adoption of specific bodily postures,
- Is widely practiced for health and relaxation,

- **Massage**

- **Meditation**

- **Regular exercise**

- Relax abdominal muscles and may relieve stress.

Yoga Class



Meditation



Alternative Medicine Cont'd.

Probiotics:

- Are "good" bacteria that normally live in the intestines,
- Are found in foods, such as: yogurt, and in dietary supplements,
- May relieve symptoms of IBS,
- Additional investigation is needed.

