

Diagnosis and Management of Irritable Bowel Syndrome (IBS) For the Primary Care Provider

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UT Health San Antonio or the US
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Learning Objectives

- Recognize symptoms that should prompt the clinician to consider a diagnosis of irritable bowel syndrome (IBS)
- Briefly review a proposed diagnostic workup of a patient suspected to have IBS
- Discuss current available treatment approaches for IBS by subtype

What is irritable bowel syndrome?

- Chronic functional bowel disorder presents with symptoms of:
 - Abdominal pain
 - Bloating
 - Altered bowel habits
- Maybe associated with food

IBS is common

- Functional gastrointestinal disorders account for 40% of all referrals to gastroenterologists
 - IBS is the most common
 - Greatly impacts quality of life
 - Many cared for by their primary care provider
- Estimated that 12 % of patients worldwide have IBS
- Young patients
- Female

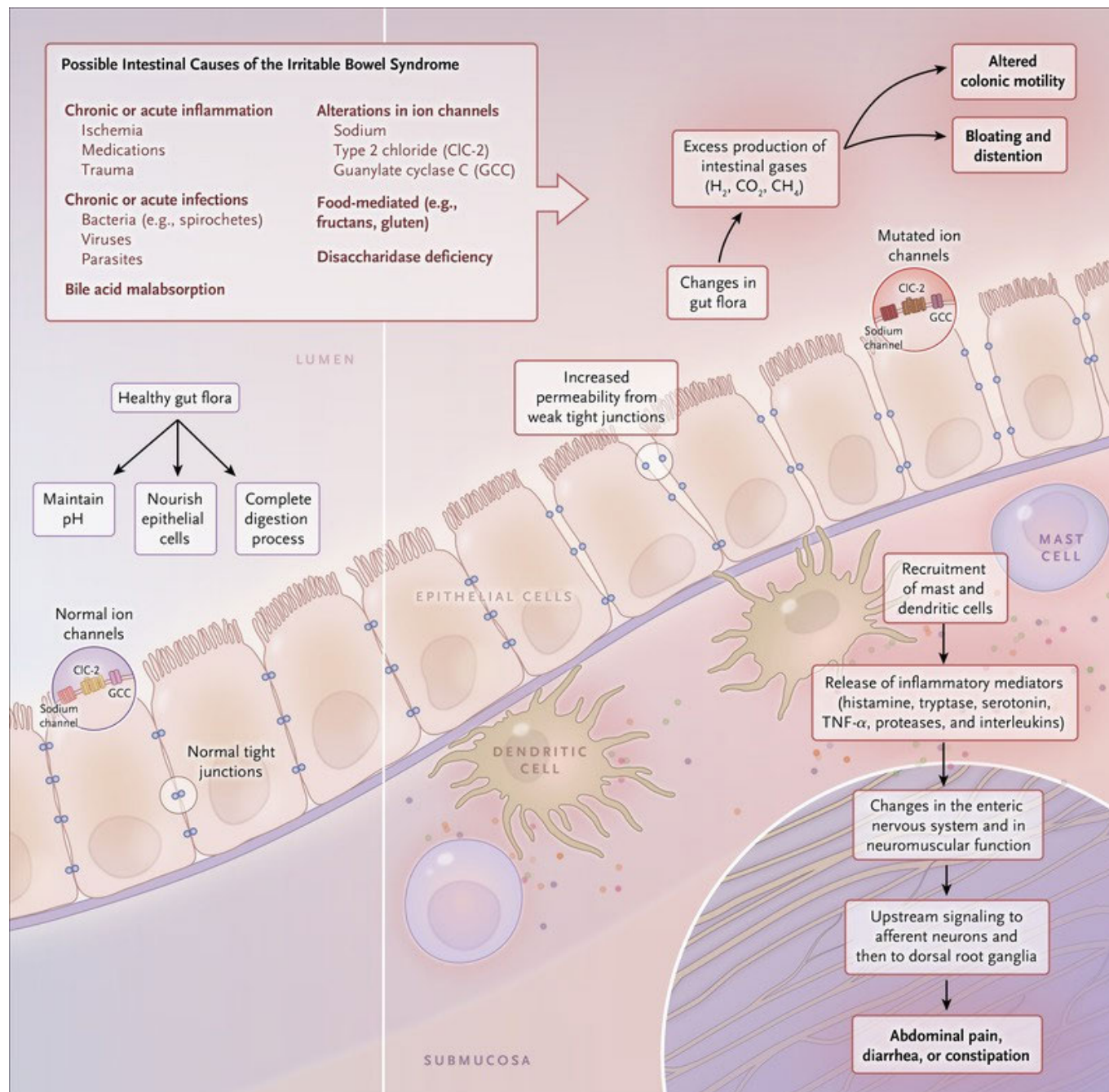
IBS subtypes

IBS subtype based on the patients predominant bowel habits on days with abnormal bowel movements

- IBS with constipation (IBS-C)
- IBS with diarrhea (IBS-D)
- IBS with mixed symptoms of constipation and diarrhea (IBS-M)
- Unsubtyped (IBS-U)



| Bristol Stool Chart | | |
|---------------------|--|---|
| Type 1 | | Separate hard lumps, like nuts (hard to pass) |
| Type 2 | | Sausage-shaped but lumpy |
| Type 3 | | Like a sausage but with cracks on the surface |
| Type 4 | | Like a sausage or snake, smooth and soft |
| Type 5 | | Soft blobs with clear-cut edges |
| Type 6 | | Fluffy pieces with ragged edges, a mushy stool |
| Type 7 | | Watery, no solid pieces. Entirely Liquid |



Case

- 31 yo WF symptoms of recurrent abdominal pain and loose stools
- Symptoms have been present since she was in high school, waxed and wane
- Present for 2 years, worse within the last 6 months
- She reports occasional bloating
- Pain is related to defecation improved with defecation , happens at least 2-3 x per week
- Loose stools, 2-3 BMs per day

To diagnose IBS, apply the Rome IV criteria

Table 1. Rome IV Criteria for the Irritable Bowel Syndrome.*

Patient has recurrent abdominal pain (≥ 1 day per week, on average, in the previous 3 mo), with an onset ≥ 6 mo before diagnosis

Abdominal pain is associated with at least two of the following three symptoms:

Pain related to defecation

Change in frequency of stool

Change in form (appearance) of stool

Patient has none of the following warning signs:

Age ≥ 50 yr, no previous colon cancer screening, and presence of symptoms

Recent change in bowel habit

Evidence of overt GI bleeding (i.e., melena or hematochezia)

Nocturnal pain or passage of stools

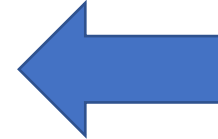
Unintentional weight loss

Family history of colorectal cancer or inflammatory bowel disease

Palpable abdominal mass or lymphadenopathy

Evidence of iron-deficiency anemia on blood testing

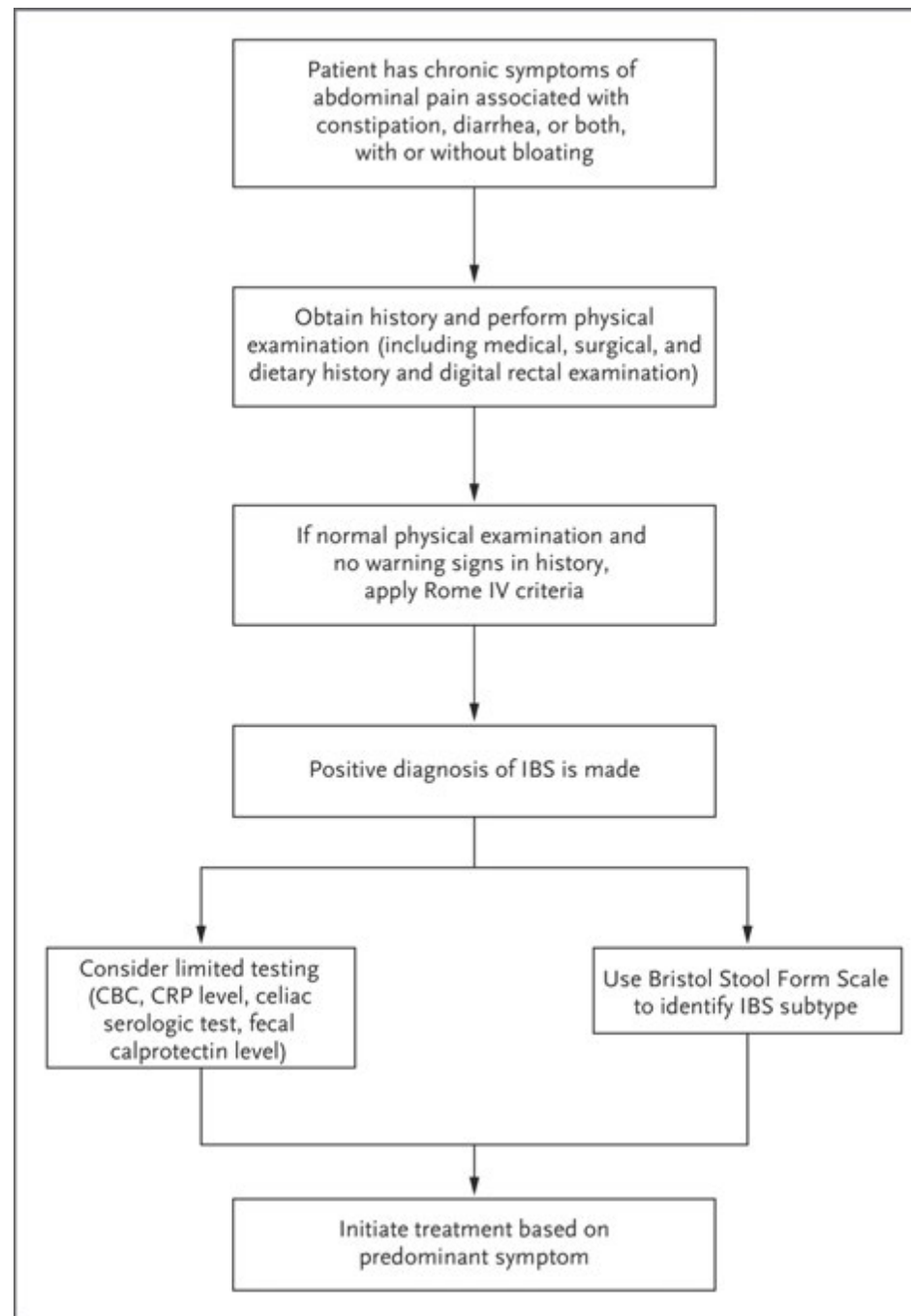
Positive test for fecal occult blood

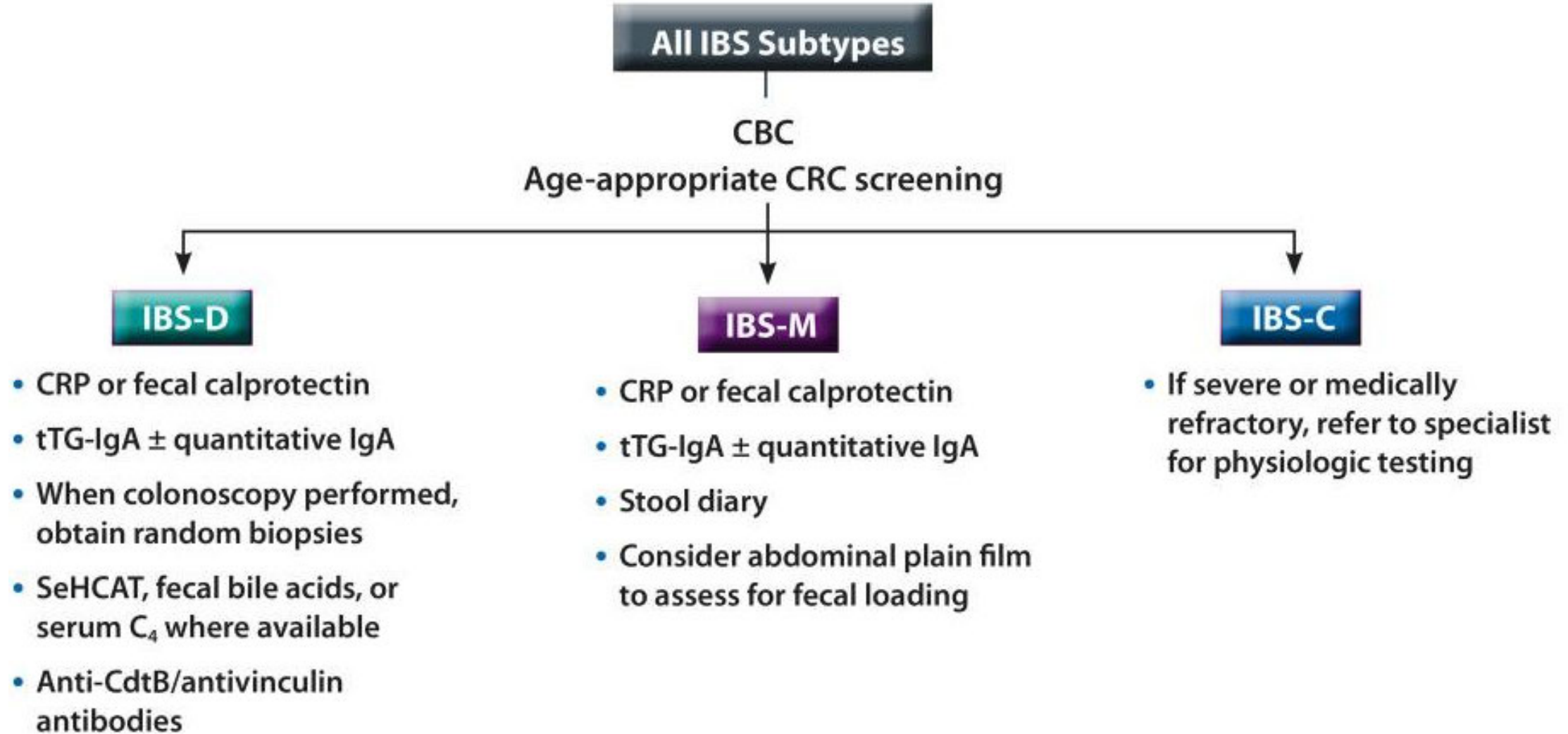


- Must have abdominal pain
- Frequently associated with bloating

* The information is from Mearin et al.¹ GI denotes gastrointestinal.

Diagnostic algorithm












Back to our case

- Rest of the history is unremarkable
- Vital signs and physical exam normal
- Normal CBC
- Normal CRP
- Normal fecal calprotectin
- Negative celiac serologies

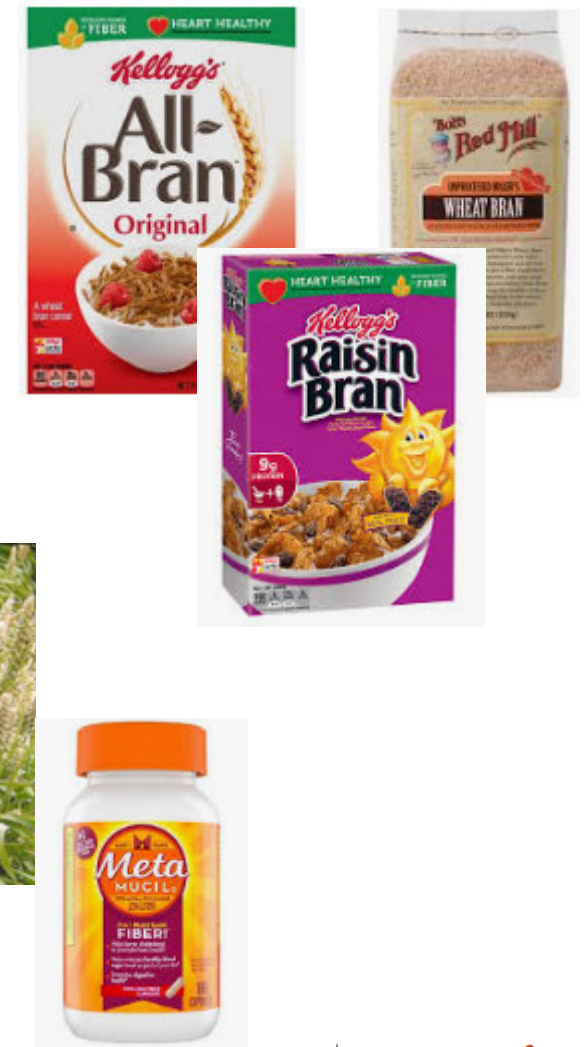
What Next???

- Bristol stool scale
- Initiate treatment based on symptom

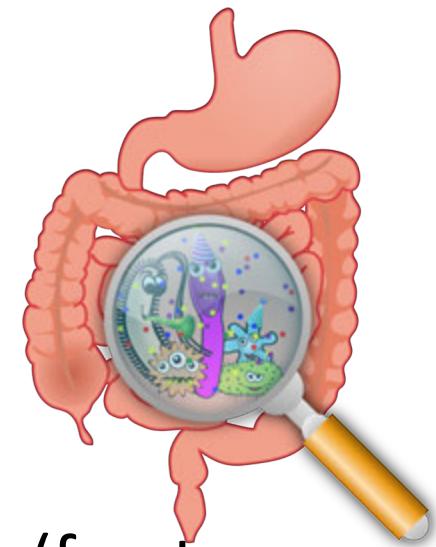
| Rome IV Criteria for IBS | IBS Subtypes Based on Bristol Stool Forms | | |
|--|--|---|---|
| <p>Recurrent abdominal pain, on average, ≥ 1 day per week in the last 3 months, associated with ≥ 2 of the following:</p> <ul style="list-style-type: none">• Related to defecation• Change in frequency of stool• Change in form (appearance) of stool <p><i>Criteria should be fulfilled for the last 3 months, with symptom onset ≥ 6 months before diagnosis</i></p> | IBS-C |  | 1 |
| | Hard/lumpy stools $\geq 25\%$ Loose/watery stools $< 25\%$ |  | 2 |
| | |  | 3 |
| | IBS-M |  | 4 |
| | Hard/lumpy stools $\geq 25\%$ Loose/watery stools $\geq 25\%$ |  | 5 |
| | |  | 6 |
| | IBS-D |  | 7 |

Dietary and lifestyle modifications first line treatment for IBS

- Reassurance
- Fiber
 - Traditional first line treatment
 - Insoluble fiber (bran) exacerbate pain and bloating
- Dietary modifications
 - Low FodMap diet
 - Gluten free diet
- Others
 - Cognitive behavioral therapy
 - Hypnotherapy
 - Acupuncture
 - Yoga



FODMAPs



Fermentable

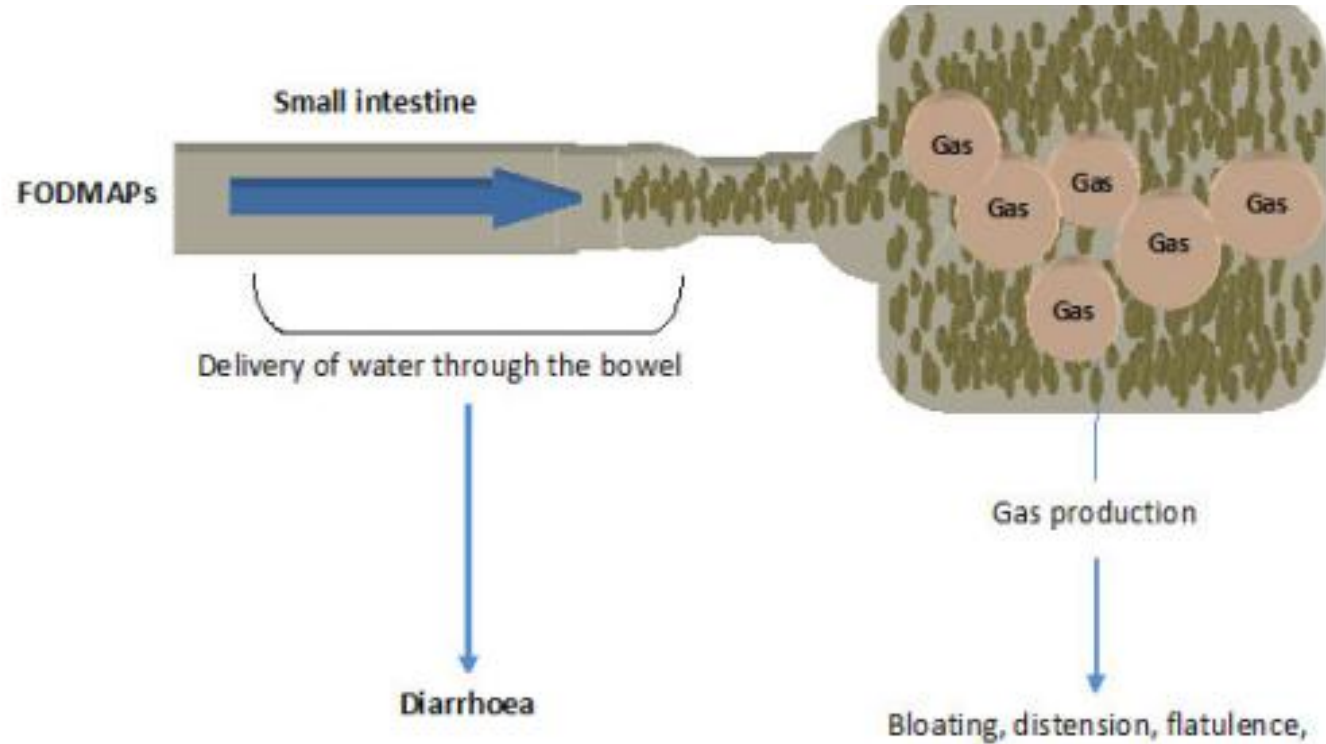
Oligosaccharides – few simple sugars linked together (fructans, galactans)

Disaccharides – double sugar (lactose)

Monosaccharides – single sugar (fructose)




And

Polyols – sugar alcohols (sorbitol, mannitol, isomalt, xylitol, glycerol)



- Short chain carbohydrates
- Poorly absorbed in the small intestine & delivered to the colon
- **Rapidly fermentable** by gut bacteria resulting in gas and SCFA
- Small, **osmotically active** molecules increasing water load to the colon
- Cumulative effect of FODMAPs produces symptoms in IBS patients

Foods suitable on a low-fodmap diet

| fruit | vegetables | grain foods | milk products | other |
|---|---|---|--|--|
| fruit banana, blueberry, boysenberry, canteloupe, cranberry, durian, grape, grapefruit, honeydew melon, kiwifruit, lemon, lime, mandarin, orange, passionfruit, pawpaw, raspberry, rhubarb, rockmelon, star anise, strawberry, tangelo <small>Note: if fruit is dried, eat in small quantities</small>  | vegetables alfalfa, bamboo shoots, bean shoots, bok choy, carrot, celery, choko, choy sum, endive, ginger, green beans, lettuce, olives, parsnip, potato, pumpkin, red capsicum (bell pepper), silver beet, spinach, squash, swede, sweet potato, taro, tomato, turnip, yam, zucchini herbs basil, chili, coriander, ginger, lemongrass, marjoram, mint, oregano, parsley, rosemary, thyme | cereals gluten-free bread or cereal products bread 100% spelt bread rice oats polenta other arrowroot, millet, psyllium, quinoa, sorgum, tapioca  | milk lactose-free milk*, oat milk*, rice milk*, soy milk* <small>*check for additives</small> cheeses hard cheeses, and brie and camembert yoghurt lactose-free varieties ice-cream substitutes gelati, sorbet butter substitutes olive oil | tofu sweeteners sugar* (sucrose), glucose, artificial sweeteners not ending in '-ol' honey substitutes golden syrup*, maple syrup*, molasses, treacle <small>*small quantities</small>  |

- 2 stage diet likely explained best by a dietitian

Eliminate foods containing fodmaps

| excess fructose | lactose | fructans | galactans | polyols |
|---|---|---|--|--|
| fruit apple, mango, nashi, pear, tinned fruit in natural juice, watermelon sweeteners fructose, high fructose corn syrup large total fructose dose concentrated fruit sources, large serves of fruit, dried fruit, fruit juice honey corn syrup, fruisana  | milk milk from cows, goats or sheep, custard, ice cream, yoghurt cheeses soft unripened cheeses eg. cottage, cream, mascarpone, ricotta  | vegetables artichoke, asparagus, beetroot, broccoli, brussels sprouts, cabbage, eggplant, fennel, garlic, leek, okra, onion (all), shallots, spring onion cereals wheat and rye, in large amounts eg. bread, crackers, cookies, couscous, pasta fruit custard apple, persimmon, watermelon miscellaneous chicory, dandelion, inulin, pistachio | legumes baked beans, chickpeas, kidney beans, lentils, soy beans  | fruit apple, apricot, avocado, blackberry, cherry, longan, lychee, nashi, nectarine, peach, pear, plum, prune, watermelon vegetables cauliflower, green capsicum (bell pepper), mushroom, sweet corn sweeteners sorbitol (420), mannitol (421), isomalt (953), maltitol (965), xylitol (967)  |

← → http://myginutrition.com/ myginutrition.com

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IN THE NEWS

INTRO SYMPTOMS THE DIET TOOLS FAQs

Welcome to My Nutrition Health

This site will help you answer all of your questions about FODMAPs. Since FODMAPs can be difficult to understand, we've made animations to help you. They really help!

What about probiotics?

- Growing evidence about the role of dysbiosis of the gut flora and its role in IBS
- As a class, possible benefits for global symptoms, bloating, gas
- Unable to recommend a specific strain/species or formulation

Medications for treating pain in IBS

- Peppermint Oil
- Antispasmodic Drugs
- Antidepressants
- Drugs acting on opioid receptor



Mayo Clinic Proceedings, 2018-12-01, Volume 93, Issue 12, Pages 1858-1872
Gastroenterol Hepatol (N Y). 2018 May; 14(5 Suppl 3): 3–15
Am J Gastroenterol. 2018 Jun;113(Suppl 2):1-18
Aliment Pharmacol Ther. 2018 Nov;48(10):1044-1060

Table 2.Overview of Pharmacologic Therapies for IBS-D^{8,20,36}

| | Agent(s) | Quality of Evidence | Treatment Benefits | Most Common Adverse Events |
|-------------------------------------|----------------|---------------------|--|--|
| Antispasmodics | Various | Low | Some agents improve global symptoms and pain | Dry eyes/mouth, sedation, constipation |
| | Peppermint oil | Moderate | Improves global symptoms and cramping | Heartburn, dyspepsia, constipation |
| Antidepressants | TCAs | High | Improve global symptoms and pain | Dry eyes/mouth, sedation, constipation |
| 5-HT₃ Antagonists | Alosetron | Moderate | Improves global, abdominal, and diarrhea symptoms in women with severe IBS-D | Constipation, rare ischemic colitis |
| Opioid Receptor Modulators | Loperamide | Very low | Beneficial for diarrhea, but not for global symptoms or pain | Constipation |
| | Eluxadoline | High | Improves global symptoms | Constipation, nausea |
| Antibiotics | Rifaximin | Moderate | Improves global symptoms, pain, and bloating | Similar to placebo |
| Probiotics | Various | Low | As a class, possible benefits for global symptoms, bloating, and gas, but unable to recommend specific probiotic strains or formulations | Similar to placebo |

IBS-D, diarrhea-predominant irritable bowel syndrome; TCAs, tricyclic antidepressants.

But what if the predominant symptom is constipation?

Table 3:

Overview of Pharmacologic Therapies for CIC and IBS-C^{8,20,36}

| | Agent(s) | Quality of Evidence | | Treatment Benefits | Most Common Adverse Events |
|----------------------------|--------------|---------------------|----------|--|--------------------------------------|
| | | CIC | IBS-C | | |
| Fiber | Psyllium | Low | Moderate | Improves stool consistency and frequency, and provides overall symptom relief in IBS-C | Bloating, gas, cramping |
| Laxatives | Stimulants | Moderate | No RCTs | Sodium picosulfate and bisacodyl are effective in CIC | Cramping, diarrhea |
| | PEG | High | Very low | Improves constipation, but not global symptoms or pain in IBS-C | Bloating, cramping, diarrhea |
| Antidepressants | SSRIs | High | — | Improve global symptoms and pain; appropriate for patients with prominent anxiety | Nausea, diarrhea, sexual dysfunction |
| Prosecretory Agents | Lubiprostone | Moderate | High | Improves global, abdominal, and constipation symptoms | Nausea, diarrhea |
| | Linaclotide | High | High | Improves global, abdominal, and constipation symptoms | Diarrhea |
| | Plecanatide | High | High | Improves global, abdominal, and constipation symptoms | Diarrhea |

CIC, chronic idiopathic constipation; IBS-C, constipation-predominant irritable bowel syndrome; PEG, polyethylene glycol; RCTs, randomized controlled trials; SSRIs, selective serotonin reuptake inhibitors.

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- Briefly review a proposed diagnostic workup of a patient suspected to have IBS
- Discuss current available treatment approaches for IBS

Thank you!



References

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