



Reducing the Revolving Door of IBS referrals: *More than just* **FODMAPS**

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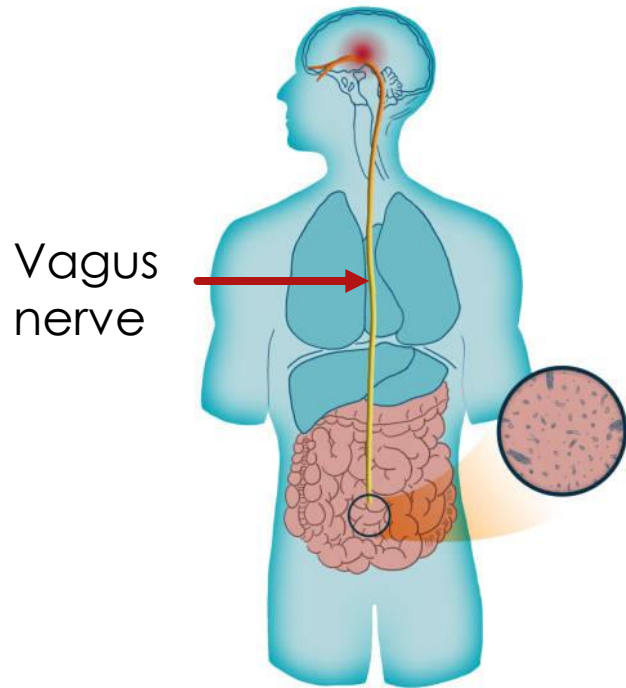
CLINICAL AND SPORTS DIETITIAN

What is IBS (Irritable Bowel Syndrome)?

- ▶ Prevalent gut disorder that affects *1 in 5 adults* and up to *10-20% of the UK population*
- ▶ Costs to health service are substantial; estimated to be *>1 billion per year in the UK*
- ▶ Characterised by recurrent abdominal pain or discomfort (for at least 1 day/ week in last 3 months) associated with a change in bowel habits (diarrhoea and/ or constipation) (Rome IV criteria)
 - other associated bowel symptoms incl. bloating, flatulence, straining, urgency, dyspepsia, nausea, fatigue, among others.
- ▶ No structural changes or disease; symptoms are functional in nature and is a result of the way the gut functions

IBS: A Disorder of the Gut Brain Interaction

The gut and brain are connected via the vagus nerve – a superhighway of nerve fibers that provide two-way connection and sends messages from the brain to the gut and vice versa. Also referred to as the gut brain axis.



When stressed/ anxious, body transitions to 'fight or flight' mode, inhibiting the vagus nerve, causing a 'malfunction' in this gut brain link, which can *inhibit our digestive system and lead to painful symptoms*.

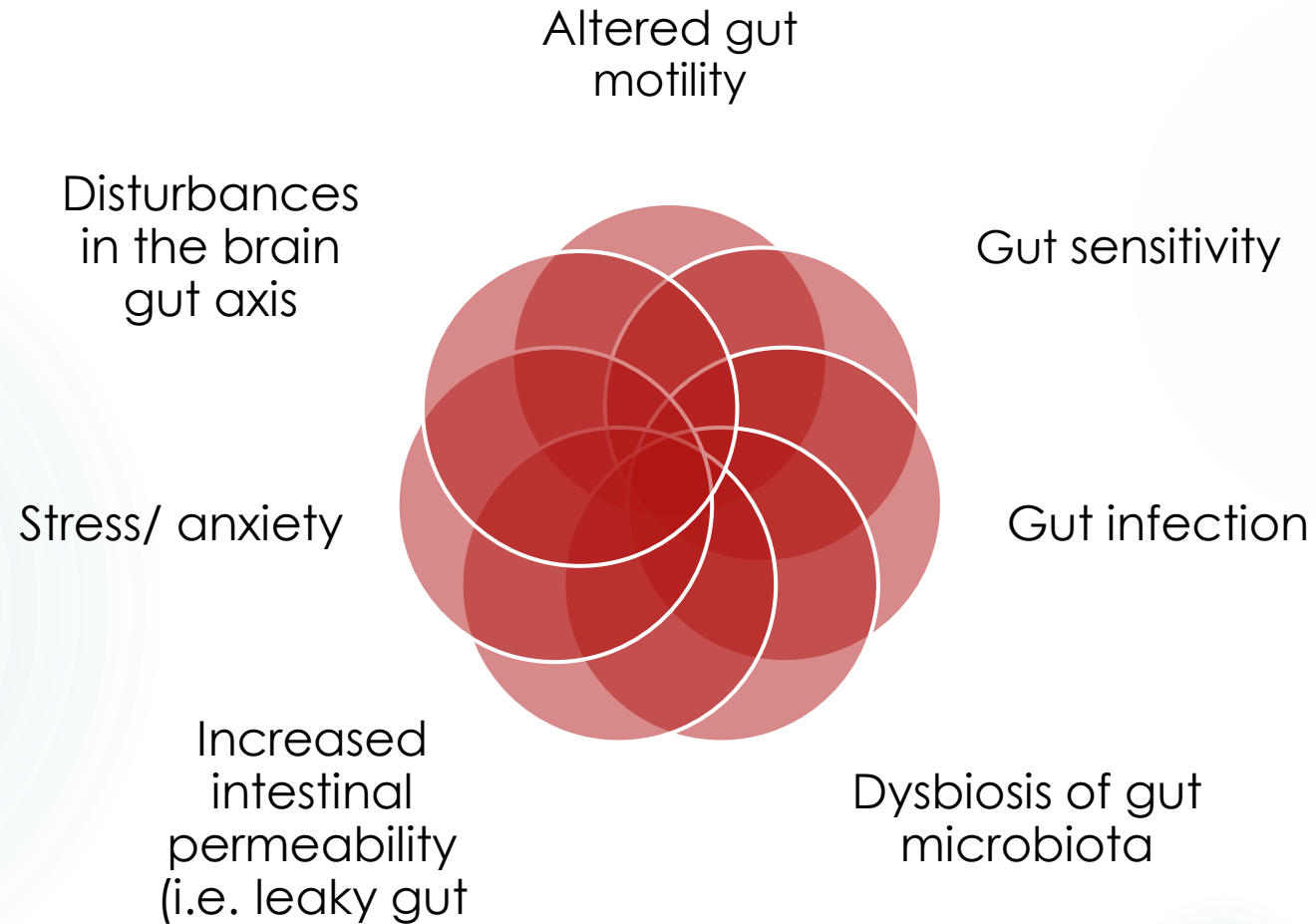


Physical discomfort of digestive issues can also send signals back to the brain, intensifying emotional distress and creating a cycle of gut brain dysregulation.

Can be impacted by diet and stress

Causes of IBS

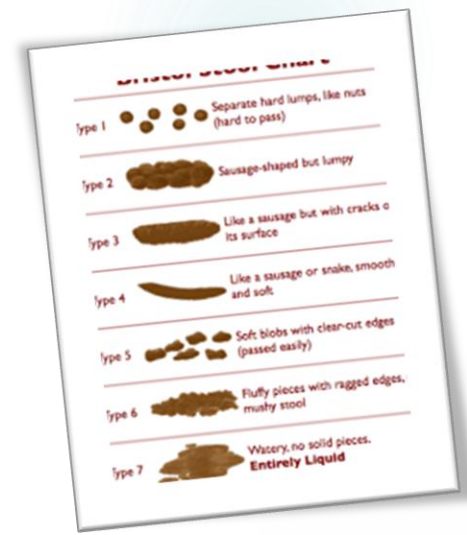
- Not completely understood
- Likely multifactorial



Diagnosis of IBS

Diagnosis made using:

- **Symptom-based criteria** (Rome IV)
- **Blood tests** (to rule out Coeliac Disease, IBD +/- Bowel and Ovarian Cancer)
- **Stool sample** (to rule out inflammation)
- **Absence of Red Flags:**
 - *Blood in stools*
 - *Unexplained weight loss*
 - *Anaemia*
 - *Family history of bowel or ovarian cancer*
 - *Patient is older*



Relevant information gathering

- ▶ History of food intolerances/ allergies
- ▶ Diet and eating habits (food and symptom diary)
- ▶ History disordered eating/ eating disorders (such as Orthorexia Nervosa [ON]or Avoidant Restrictive Food Intake Disorder [ARFID])
- ▶ Pre-existing active digestive disorders e.g. IBD, Coeliac Disease, bile acid malabsorption, SIBO
- ▶ History of abdominal/ pelvic surgery
- ▶ Traumatic life events e.g. maternal separation or sexual abuse
- ▶ Gynae issues (e.g. Dysmenorrhea, PCOS, endometriosis)
- ▶ Urinary Symptoms (e.g. overactive bladder)
- ▶ Sleep disturbances
- ▶ Drug use, Supplement use
- ▶ History of anxiety/ depression

Information gathering specific to athletic population

- ▶ - Exercise: intensity, duration, modality
- ▶ - Environmental conditions(heat stress, humidity, altitude)
- ▶ - Travel (Jet lag, long haul flight, poor hygiene exposure)
- ▶ - History of Low Energy Availability (LEA)
- ▶ - Supplement use (e.g. bicarbonate, caffeine)
- ▶ - Competition/ life stress

30-70% of athletes experience gut symptoms



Management of IBS – Holistic approach



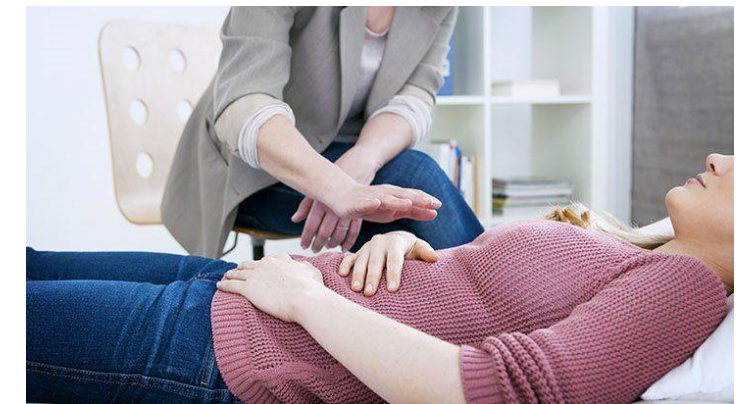
Dietary
Strategies



Psychological
Support



pharmacology



Diet key trigger for IBS symptoms

- Current dietary approaches most often used in the UK

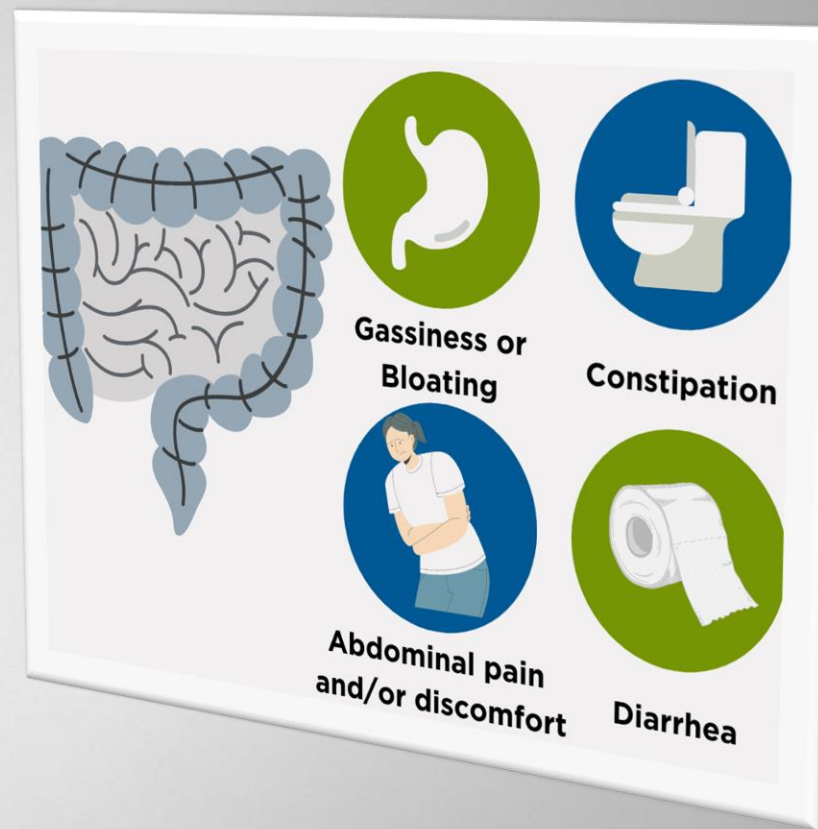
Diet	What is it?	Evidence
“Traditional” Diet Advice (TDA) – combination of NICE/BSG guidelines	General healthy eating and lifestyle guidelines, including reduction/addition of food, in accordance with symptoms.	TDA had similar symptom improvement when compared to a Gluten Free diet (GFD) and Low FODMAP diet (LFD). <i>More <u>patient-friendly</u> in terms of cost, convenience, and ease of implementation, when compared to both diets.</i>
Low FODMAP elimination diet (LFD)	A diet low in poorly absorbed carbohydrates	LFD ranked first for global symptoms of IBS, compared to alternative interventions, including TDA.

'Traditional' diet and lifestyle advice – 1st line advice

(a combination of BDA, NICE, BSG guidelines) – response rate 54%

- Regular meals, chew food slowly
- Smaller, more frequent meals may ease symptoms
- Drink at least 8 cups of fluid per day
- *Limit caffeinated drinks to 3 cups max per day [50-100mg]*
- *Limit intake of alcohol and fizzy drinks*
- Limit fruit to 3 portions daily (1 portion per sitting); limit juices, smoothies
- Eat less saturated fats and more unsaturated fats
- Assess intake of spicy foods alongside other components e.g. onions, garlic, chilli
- Avoid artificial sweeteners that contain polyols (e.g. sorbitol and mannitol)
- Include wide diversity of plant-based foods – F&V, wholegrains, legumes, nuts, seeds, prebiotic dietary fibres (↑ or ↓ depending on current intake and reported symptoms)
- Exercise regularly

Consider Specific Symptoms (BDA)



Constipation



- ↓wheat bran e.g. Weetabix, shredded wheat, wheaten bread

You might find it helpful to:

- ↑ soluble fibre intake (up to 20-30g/ day)
 - Wholegrains, oats, vegetables, fruit
 - Linseeds (max 2 tbsp/ day with 150ml additional fluid per tbsp.)
- ↑ fluid intake
- Consider 150ml glass prune juice daily
- *Eat whole kiwis x BD*
- *Try toileting stool*

Dietary supplements to consider:

- Psyllium husk (soften stool)
- Probiotics (? *Lactobacilli and Bifidobacteria*, ↑ *gut transit time*)
- Magnesium oxide*

Diarrhoea

- Limit foods that may stimulate the colon e.g. chilli, high fat food, coffee, energy drinks, alcohol
- Limit intake of high fibre foods e.g. whole wheat breakfast cereals, breads, nuts, seeds
- Limit fruit to 3 portions per day-1 piece per sitting
- Limit sugar free sweets, mints, gums and drinks containing sorbitol, mannitol and xylitol
- Smaller more frequent meals
- Replace lost fluids – may need electrolyte solution (e.g. dioralyte) if fluid is passing 'straight through'
- *Prebiotic fibres (influence gut microbiota)*

Dietary supplements to consider:

- *Consider Probiotic (e.g. Bacillus coagulans ↑ stool form)*
- *Consider psyllium husk (thicken stool)*

Antibiotic associated Diarrhoea (AAD) - Antibiotics can disrupt gut bacteria and lead to chronic symptoms such as IBS

Taking a probiotic during antibiotic therapy and continuing for a week post antibiotics may decrease risk of AAD

- Saccharomyces boulardii and some Lactobacilli-containing products found to be effective.



Wind, Bloating

Qs: Over doing it with fibre foods? Suffering from constipation? SIBO?

Advice

- Limit gas producing foods e.g., beans, pulses, sprouts
- Limit sugar free mints /chewing gum/ drinks
- Limit whole fruit to 3 portions per day; 1 piece per sitting
- Avoid large meals

You might find it helpful to consume:

- Oats
- Linseeds (1-2 tbsp/day): (150ml fluid per tbsp.)
- Probiotic (lactobacillus and bifidobacterium, either as single or multi strain probiotic most effective)



Abdominal Pain

Anti spasmotic may help relax the intestine and reduce stomach pain. (e.g., peppermint oil)

- Probiotics (*Bacillus coagulans*)

Lactose Free Diet – 1st line advice

- ▶ Lactose is a sugar found in dairy/ milk products.
- ▶ Some IBS sufferers are unable to digest and absorb this sugar, which can lead to symptoms of bloating, diarrhoea and abdominal pain.
- ▶ May be helpful to try a lactose free diet (12g/day) to identify symptom relief in those who report exacerbation of symptoms from dairy/ milk products.

Lomer ME, Nutrition Society, 2024, 83, 17–27

The infographic is divided into two vertical panels. The left panel, titled 'High Lactose Foods', has a red background and lists: Milk (with a carton and glass), Ice Cream (with a sundae), Plain Natural Yoghurt (in a green tub), Cream (in a white bowl), White Pasta Sauce (in a white bowl), and Soft Cheeses (a wedge of cheese). The right panel, titled 'Low Lactose Substitutes', has a green background and lists: Almond & Rice Milk (with a carton and glass), Greek Yoghurt (in a blue bowl with berries), Soy Protein Based Milks (Not Soy Bean Based) (in a carton and glass), Lactose-Free Dairy Products (a bottle labeled 'MILK LACTOSE FREE'), and Hard Cheeses Cottage & Feta Cheese (a wedge of Swiss cheese). At the bottom right of the right panel, it says 'IBS AWARENESS MONTH with FODMAP Friendly' next to a circular logo.

High Lactose Foods

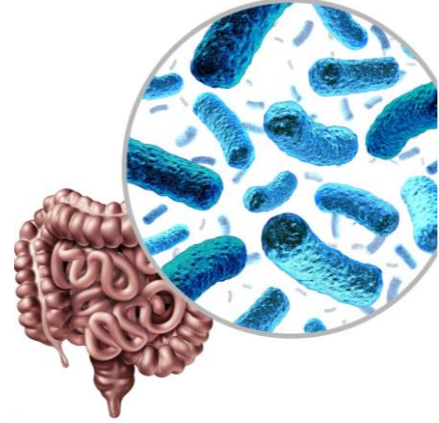
- Milk
- Ice Cream
- Plain Natural Yoghurt
- Cream
- White Pasta Sauce
- Soft Cheeses

Low Lactose Substitutes

- Almond & Rice Milk
- Greek Yoghurt
- Soy Protein Based Milks (Not Soy Bean Based)
- Lactose-Free Dairy Products
- Hard Cheeses
Cottage & Feta Cheese

IBS AWARENESS MONTH
with FODMAP Friendly

Probiotics in IBS – 1st line advice



-Live bacteria that can help restore the natural balance of good bacteria within the gut.

Studies show a ↓ in the diversity of gut microbiota in IBS patients (lactobacillus, bifidobacteria and bacteriodetes). Therefore, there is an increased interest in whether probiotics may be used to help regulate the gut microbiota, and thereby improve symptoms.

Whilst there are no official guidelines recommending specific probiotic strains for IBS due to insufficient evidence, recent meta-analyses have shown that some single and multi-strains may be effective for treating pain and overall symptoms of IBS.

Guidance on using Probiotics in IBS:

- Take for minimum of 4 weeks and up to 12 weeks, monitor effect
- Discontinue if no improvement in symptoms. Could try another strain
- Probiotics appear to have strain specific effects and should be selected specifically for the symptom you hope to treat
- Important to look for supporting clinical evidence before recommending and take in amounts that have been shown in research to provide benefit

Probiotics advised by BDA (based on clinical trials)

- ▶ **Activia** – multi strain
- ▶ **Biokult** – multi strain
- ▶ **Vivomixx** – multistrain
- ▶ **Symprove** – multistrain
- ▶ **Afflorex** – single strain



Online Resources for Probiotic Use

- ▶ International Scientific Association for Probiotics and Prebiotics (ISAPP)
- ▶ Alliance for Education on Probiotics (AEPbio)
- ▶ Clinical guide to US probiotics (usprobioticguide.com)
- ▶ Meta Analyses/ Systematic Reviews
 - *Evidence remains highly heterogeneous with small sample sizes and short intervention times making it hard to compare individual studies in meta-analyses and systematic reviews*

McFarland et al. E Clinical Medicine.2021.41:101154, McKenzie et al, Hum Nut Diet, 2016. 29(5):549-75, British Dietetic Association Study Day on IBS 2021, Goodoory et al. Gastroenterology. 2023. 1206-1218, Ford et al. 2018. Alimentary Pharmacology & Therapeutics, 48 (10). pp. 1044-1060

Brain Gut Behavioural Therapies

Brain gut behavioural therapies effective in ↓ symptom burden in IBS individuals

- Gut directed hypnotherapy (as effective as LFD)
- IBS directed CBT/ mindfulness
- Meditation and yoga –(as effective as LFD)



Consider if not responded to 1st line or 2nd line treatments after 3-6 months
Or if there is a significant association between stress and symptoms

- Referral to Clinical Psychology



Diet

Probiotics –Probiotic taken for 6 weeks ↓ depression scores and ↑ QOL scores in IBS patients. Interestingly a lower brain activity response to fearful stimuli seen was in the probiotic group compared to placebo.

Mediterranean diet linked to beneficial microbial profiles and ↓ symptoms of anxiety and depression.

Address other clinical issues that can lead to IBS symptoms

Low energy availability (LEA) risk: restore energy availability

Disordered Eating/ Eating Disorder: LEAF/LEAM-Q, Scoff Q, referral to Clinical Psychology, ED dietitian, avoid restricting foods.

Mood: General Anxiety Disorder Questionnaire, the Patient Health Questionnaire, referral to clinical Psychology via GP.

Disturbed Sleep: Offer sleep hygiene practices

Co-existing/ underlying GI diseases e.g. Crohns disease, ulcerative colitis, bile acid malabsorption/ small intestinal bacterial overgrowth, among others)

Medical review to rule out or treat active disease

Current Medications: may need medical review for ? side effects

Gynae issues: medical review, identify symptoms and help manage

Management strategies for Exercise associated gut symptoms

- ▶ Carbohydrate/ Amino acid consumption during exercise
- ▶ *Gut training*
- ▶ *Optimal Hydration*
- ▶ *Internal Cooling strategies* i.e. ice slushies

Jet lag: adjust body clock to destination time in 2-3 days before departure, adapt to locations natural time and eating schedule, avoid naps, get out into daylight, stay hydrated

Long haul flights: soluble fibre, empty water bottle, small meals, chewing gum, time caffeine intake, move around cabin regularly

Poor hygiene: hand sanitizer, bottled water, avoid ice and high-risk foods, probiotic

Disturbed Sleep: x 2 kiwis before bed, avoid caffeine after 4pm, high GI carbs rich in tryptophan in evening meal, tart cherry juice rich in melatonin, Mg supplement, Relaxing bedtime routine

Travel: allergens/ intolerances catered for, long-life items, sports supplements. Research supermarkets/ restaurants located near accommodation



Low Fodmap Diet

Low FODMAP diet –Top down approach

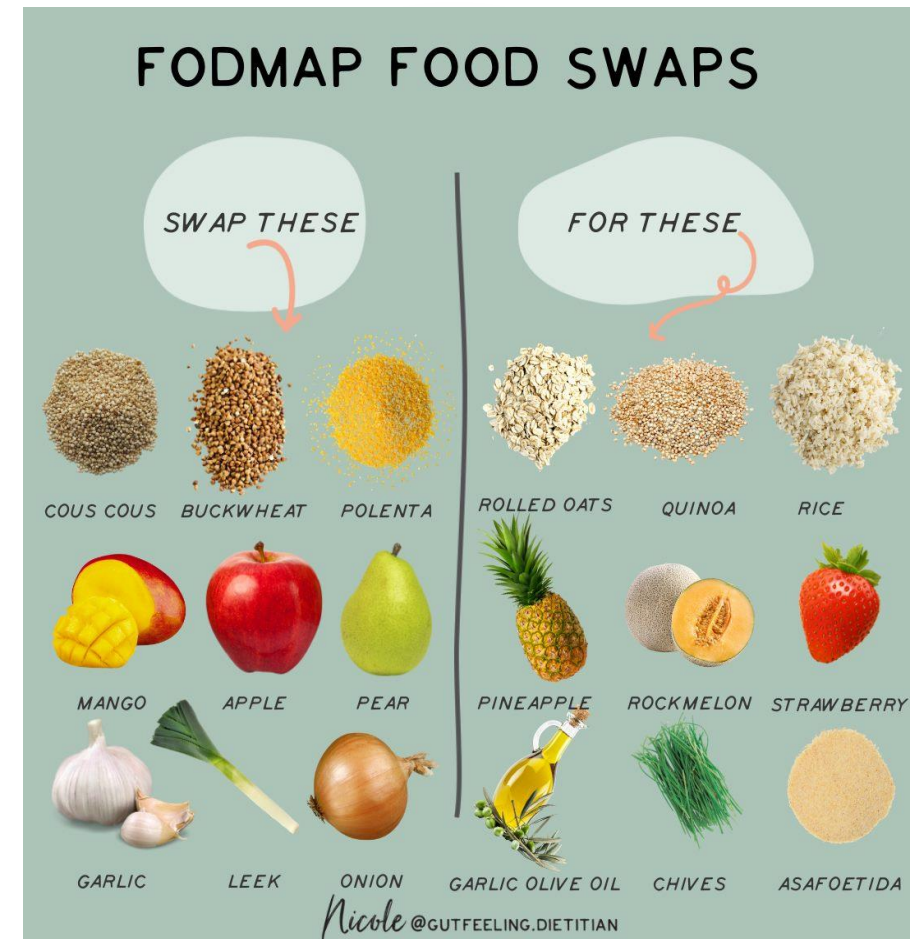
FODMAPs (Fermentable, Oligosaccharides, Disaccharides, Monosaccharides and Polyols)

A group of *poorly absorbed carbohydrates*, found in a variety of foods, that are rapidly fermented by bacteria in the large bowel, producing excess water and gas, triggering adverse GI symptoms

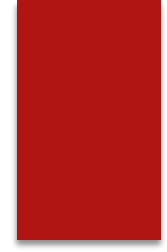
Involves three stages: Restriction (4-8 weeks), Reintroduction (6-10 weeks) and Personalisation (no time limit)

Symptom control achieved in up to 75% of individuals, within 2-4 weeks, and up to 60% individuals had symptom relief at long term follow up (up to 8 years follow up)

Clinical effectiveness highest via dietitian-led education



Challenges with the Low FODMAP diet

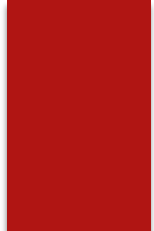


- LFD is a complex and restrictive diet
 - May not be suitable for those with learning difficulties, older adults, high levels of anxiety, children and co morbidities with negative risk assoc. with altered diet e.g. IBD
 - Not appropriate for those who may: eat out or travel regularly, limited control over cooking and shopping, limited cooking skills
- Potential for nutritional deficiencies: ↓ fibre, calcium and B vitamins, ↑ constipation
- Anxiety re. concerns of worsening IBS symptoms and diet restrictions associated with development of an Eating Disorder (ED)
 - LFD is not appropriate if ED identified
 - EDs such as ARFID or ON are most common in IBS; up to 53% have co existing IBS.
- Some FODMAPs are prebiotics; restricting these has led to a ↓ abundance of gut bifidobacteria (tend to be restored following FODMAP personalisation)

Non-Responders to a Low FODMAP Diet

25% don't respond to a LFD. WHY?

- ▶ Check for challenges
- ▶ Was advice dietitian led vs leaflets/ handouts from GP or internet search?
- ▶ Strict adherence to the diet?
- ▶ Any red flags not investigated?
- ▶ **IBS mimickers:** Coeliac Disease, Inflammatory Bowel Disease, Bile acid malabsorption, small intestinal bacterial overgrowth, Pancreatic Exocrine insufficiency, Pelvic floor dysfunction, Sucrose-isomaltase deficiency
- ▶ Factors beyond food contributing to the severity of gut symptoms e.g. Stress.
 - Brain gut behavioural therapies similar symptom control when compared to LFD



Assessment of Low FODMAP Suitability

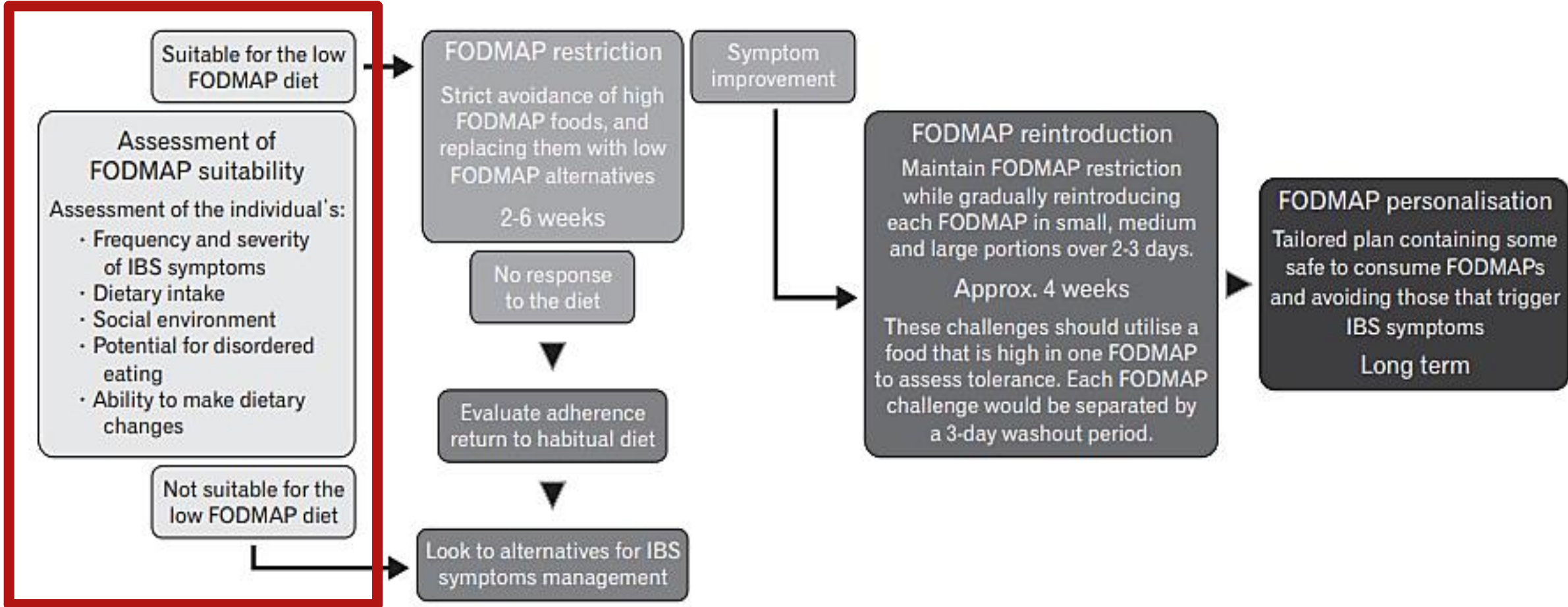


Figure 1. The stages of the fermentable oligo-, di-, mono-saccharides, and polyols (FODMAP) dietary strategy.

Gluten Free Diet (GFD)



- ▶ A study showed similar symptom response to following a GFD when compared to TDA and LFD.
 - Benefit of a GFD a result of the reduction of FODMAP carbohydrate sources (e.g. fructans) that are also found in gluten containing grains.
 - TDA still found to be more patient friendly in terms of cost, convenience and ease of implementation.
 - Nevertheless, all 3 dietary therapies appear to reduce total FODMAP intake in differing degrees, with studies highlighting the potential to use TDA and GFD as a *bottom-up approach* to FODMAP reduction.
- ▶ **Be cautious:** GF foods tend to be:
 - ▶ - higher in sugar, salt and fat
 - ▶ - more expensive
 - ▶ - a prebiotic and fibre source

'Bottom up' or 'FODMAP gentle' approach to IBS?

- ▶ Involves restricting a limited number of foods that are highly concentrated sources of FODMAPS and/or restricting foods high in FODMAPS if these are suspected of triggering symptoms. Further restrictions applied if necessary.

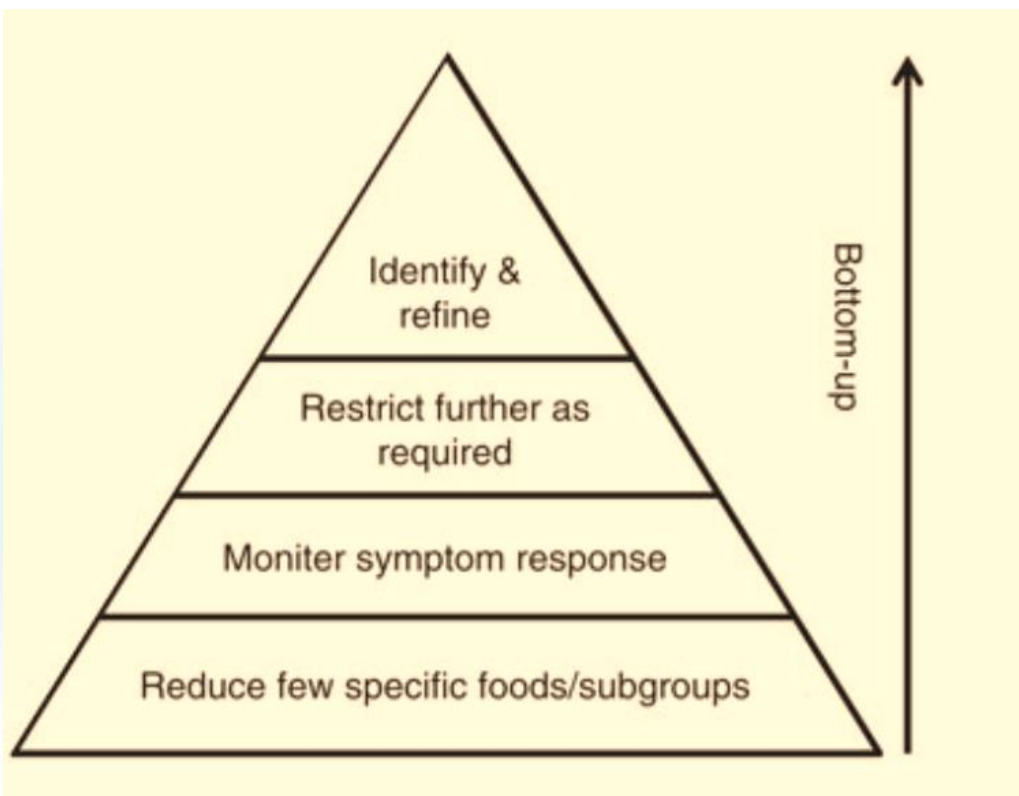


Table 2 Description of a FODMAP-gentle diet

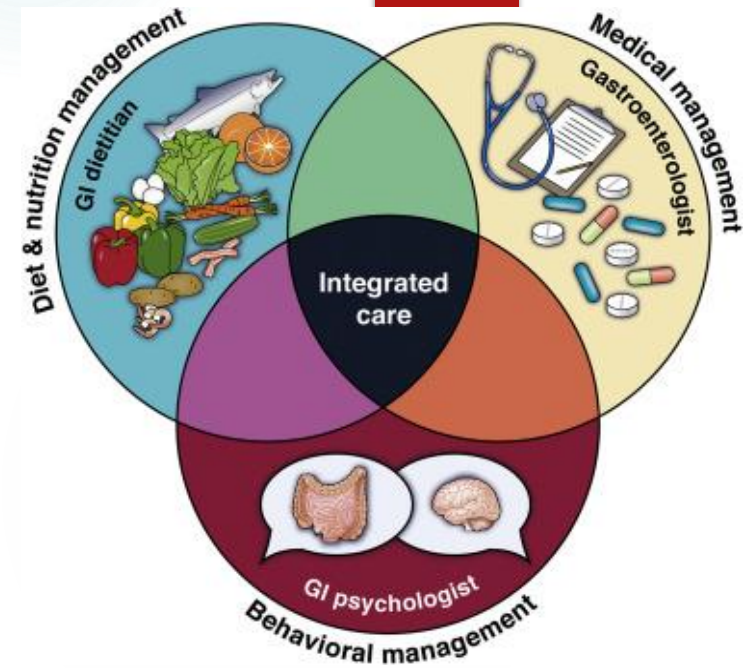
Food group	High FODMAP foods to restrict on a FODMAP-gentle diet
Grains	Wheat and rye
Vegetables	Onion, leek, cauliflower, and mushrooms
Fruit	Apple, pear, dried fruit, stone fruit, and watermelon
Dairy	Milk and yoghurt
Meat/alternatives	Legumes

FODMAP, fermentable oligosaccharides, disaccharides, monosaccharides, and polyols.

Might benefit those with milder symptoms, risk of nutritional deficiencies or difficulties adhering to the top-down approach.

Summary

- ✓ IBS management is not a “one size fits all”
- ✓ Personalised approach will offer best outcome
- ✓ Understanding one's symptoms, triggers, history and behaviours will help determine the most effective treatment plan and encourages one to self-manage their symptoms in the long term.
 - ✓ *A dietitian can make a huge difference in terms of clinical outcomes, satisfaction and QOL in individuals.*



Integrating Diet and Behavioural Interventions effective in managing IBS:

1st line treatment: TDA combining NICE/ BDA/BSG guidelines, fibre, probiotics, gentle LFD, gut brain behavioural therapies

2nd line treatment: Strict LFD, gut brain behavioural therapies

THE TORTURED IBS PATIENT DEPARTMENT

When you find a dietitian who actually gets how to manage IBS:

The Alchemy
Taylor Swift

