

Teaching the Low FODMAP Diet:
Tools and Techniques for Patient Success

By Niki Streaty, RDN, LD
The Diarrhea Dietitian

Sponsored by:
FODZYME

1

About Me

- Registered Dietitian Nutritionist since 1996
- Specialize in digestive health and athletes
- Author "The Diarrhea Dietitian: Expert Advice, Practical Solutions, and Strategic Nutrition" (2013)

2

Disclosures

- Presentation sponsored by FODZYME
- No conflicts of interest
- Employed by ModifyHealth

3

Objectives

- Objective 1**
Explore the principles of the Low FODMAP diet and its role in managing gastrointestinal symptoms commonly associated with irritable bowel syndrome.
- Objective 2**
Identify common high-FODMAP foods and evaluate appropriate low-FODMAP alternatives.
- Objective 3**
Leverage practical tools and resources to assist patients with meal planning and making informed food choices while following the Low FODMAP diet.
- Objective 4**
Evaluate the effectiveness of the Low FODMAP diet in alleviating patient symptoms and identify appropriate timing for FODMAP reintroduction and diet personalization.

4

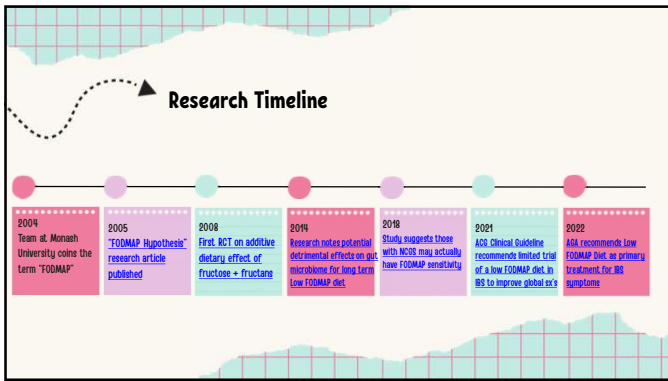
Agenda

1. History of the Low FODMAP Diet
2. Assessing Appropriateness
3. FODMAP Elimination
4. FODMAP Reintroduction
5. Dietary Personalization
6. FODMAP 2025 - Where are we?
7. Summary
8. Q & A

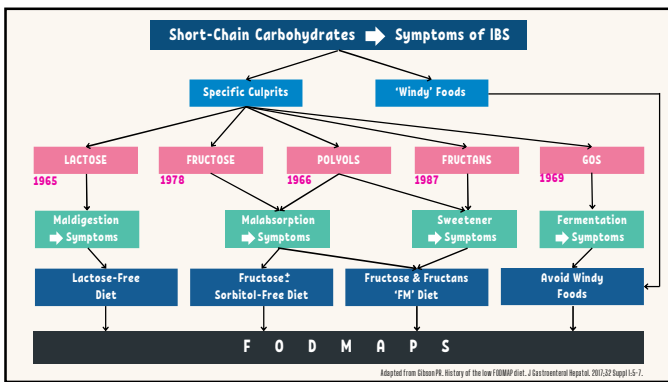
5

1. History of the Low FODMAP Diet (LFD)

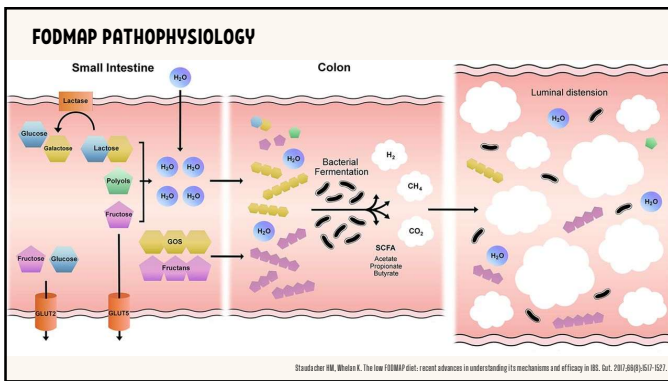
6



7



8



9

IBS Gastrointestinal Symptoms

- GERD
- Gas/Wind
- Bloating
- Abdominal distension
- Abdominal pain
- Diarrhea
- Constipation

10

2. Assessing Appropriateness

11

Who is NOT Appropriate for a Low FODMAP Diet?

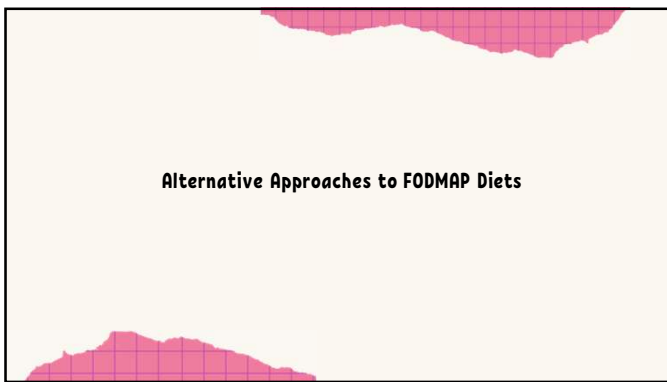
- 1 Those who haven't tried simple "diet cleanup" Lactics
- 2 Those with active eating disorder or Avoidant/Restrictive Food Intake Disorder (ARFID)
- 3 Those who are underweight or who are seeking to lose weight
- 4 Children?
An ESPGHAN Position Paper on the Use of Low-FODMAP Diet in Pediatric Gastroenterology. J Pediatr Gastroenterol Nutr. 2022;75(3):358-388.
- 5 Elderly?

12

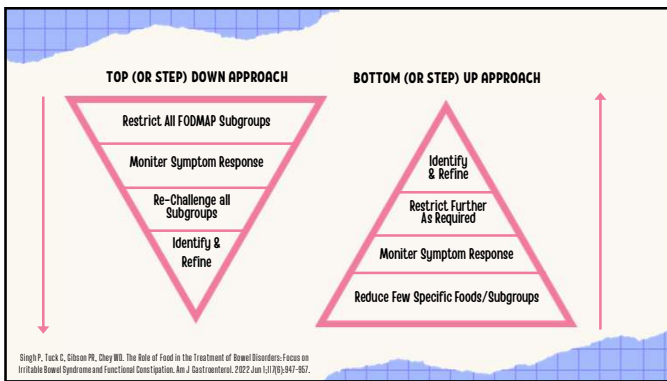
9 ITEM AVOIDANT/RESTRICTIVE FOOD INTAKE DISORDER SCREEN (NIAS)

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	I am a picky eater	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I dislike most of the foods that other people eat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	The list of foods that I like and will eat is shorter than the list of foods I won't eat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	I am not very interested in eating. I seem to have a smaller appetite than other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	I have to push myself to eat regular meals throughout the day, or to eat a large enough amount of food at meals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Even when I am eating a food I really like, it is hard for me to eat a large enough volume at meals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	I avoid or put off eating because I am afraid of GI discomfort, choking, or vomiting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I restrict myself to certain foods because I am afraid that other foods will cause GI discomfort, choking, or vomiting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I eat small portions because I am afraid of GI discomfort, choking, or vomiting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13



14



15

FODMAP GENTLE AKA FODMAP "LITE"

INSTEAD OF

- FRUITS**: apples, apricots, avocados, blackberries, cherries, mangoes, peaches, pears, plums, watermelon, dried fruit, fruit juice
- VEGETABLES**: garlic, onion, artichoke, asparagus, butternut squash, cauliflower, celery, mushrooms, snow peas
- PROTEINS**: cashews, pistachios, beans, hummus, soft peas, meats breaded or served with sauce, sausages
- DAIRY**: cream cheese, cottage cheese, ice cream, milk, yogurt, custard, evaporated and condensed milk
- CRAINS**: wheat-based foods, like bagels, bread, muffins, desserts, pastries, pasta & cereal
- OTHER**: spices and sauces with garlic/onions, high fructose corn syrup, honey, sugar-free gum & candy, fiber bars and cereal

CHOOSE

- banana (green), blueberries, cantaloupe, grapes, kiwi, oranges, papaya, pineapple, raspberries, strawberries
- garlic-infused oil, green onion tops, carrots, broccoli crowns, lettuce, chives, peppers, potato, spinach, squash, zucchini
- macadamia nuts, peanuts and peanut butter, pecans, walnuts, chickpeas, lentils, beef, chicken, fish, seafood, pork, turkey, egg
- cheddar, swiss, or parmesan cheese, dairy-free or lactose-free ice cream, milk, yogurt, or cottage cheese
- gluten-free bread or pasta, sourdough bread, rice, quinoa or oatmeal, cereal made from corn or rice, rice cakes and crackers
- water, coffee, peppermint or ginger tea, butter, oils, mayonnaise, pure maple syrup, sugar, Low FODMAP bars

16

FODMAP "ultra Lite"

LIMIT THESE FOODS

- Onion, Garlic, Leeks, Mushrooms
- Legumes
- Milk, Ice Cream
- Wheat and rye-based products
- Apples, Pears, Dried Fruit, Stone Fruit, Watermelon

17

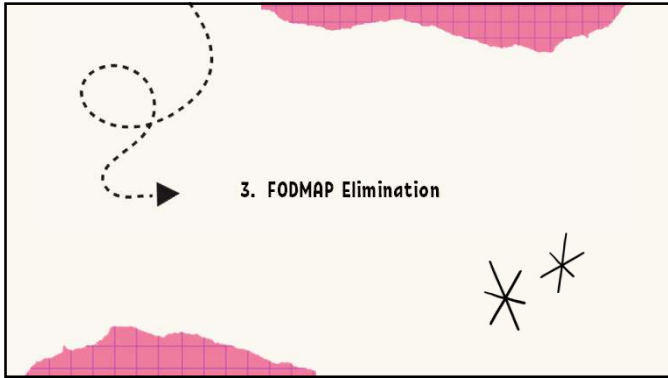
New Research- FODMAP-simple

- 95 patients with IBS-D:
 - 19 randomized to traditional Low FODMAP Diet (LFD)
 - 16 to FODMAP-simple
- 24 subjects finished study (31% drop-out):
 - 10 LFD
 - 14 in FODMAP-simple
- Similar reduction in abd pain, bloating, and discomfort in both groups
- Stool consistency improved for 91.9% LFD vs 92.5% FODMAP-simple (not statistically significant)

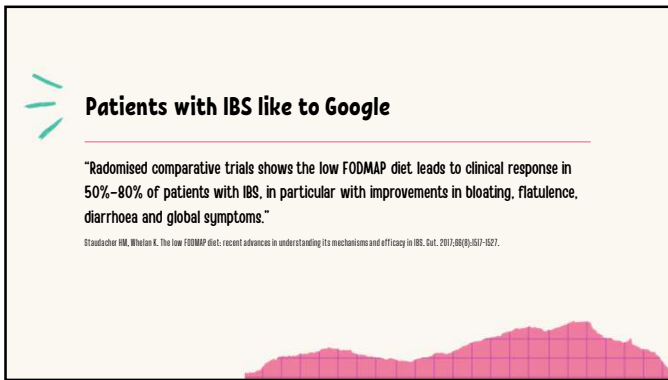
Conclusion:
 "A simplified version of LFD restriction focusing on only 2 FODMAP groups is feasible, well-tolerated, and improves abdominal symptoms in most patients with IBS-D"
 "It is likely that any differences in clinical outcomes between groups could be mitigated through the gradual restriction of additional FODMAPs after assessing the initial response to the FODMAP-simple restriction (step-up approach)"

Singh P, Chey SW, Hee J, et al. Is a Simplified, Less Restrictive Low FODMAP Diet Possible? Results From a Double-Blind, Pilot Randomized Controlled Trial. Clin Gastroenterol Hepatol. 2025;23(2):362-364.e2. doi:10.1016/j.cgh.2024.04.021

18



19



20

The Infamous "One Pager"

Consider starting with the diet on modified FODMAP and progress to full FODMAP if needed.	FODMAP Diet			
	Fructose	Lactose	Oligosaccharides	Polysaccharides
Avoid (modified FODMAP) Start here	High fructose cereals, syrups, and honey	Anything made from cow, goat or sheep milk that would include lactose	Cereal: Wheat & Rye. Avoid barley, pasta, crackers and biscuits. Avoid white foods	Sweeteners that end in "ol". Sorbitol, mannitol, xylitol, maltitol. Beware of negative gum and anything that is artificially sweetened.
Avoid	Fruit: apples, pears, prunes, mango, watermelon, nectarine, plums, apricot, cherries and lychee.	Report	Legumes: chickpeas, lentils, kidney beans, baked beans.	
Avoid	Avoid large servings of fruit to one sitting. Avoid dried fruit, seeds of fruit or fruit juice.	Cheese	Vegetables: artichokes, asparagus, Brussels sprouts, cabbage, garlic, onions, peas, and beans.	
OK to Eat	Fruit: blueberries, banana, grapefruit, grapes, raspberries, melon, lemon, lime, mandarin, orange, passion fruit, raspberry, strawberries, tanghais, kiwifruit.	Lactose free milk and rice milk, low cream alternatives such as soya and goats. Bother OK in small amounts.	Cereal: gluten free products, spelt, millet and cereal products.	Sweeteners: any sweetener other than polyols. This can include stevia (Thailand), glycine, sucralose, saccharin, aspartame (Epsom, NutraSweet).
OK to Eat	Honey Substitutes: maple syrup in small amounts.	Lactose free yogurt	Garlic Substitutes: garlic-infused oils.	
OK to Eat		Hard cheeses such as cheddar, stilton & parmesan.	Vegetables: Carrot, celery, corn, capsicum, eggplant, green beans, lettuce, parsnips, tomatoes, tsk they and	

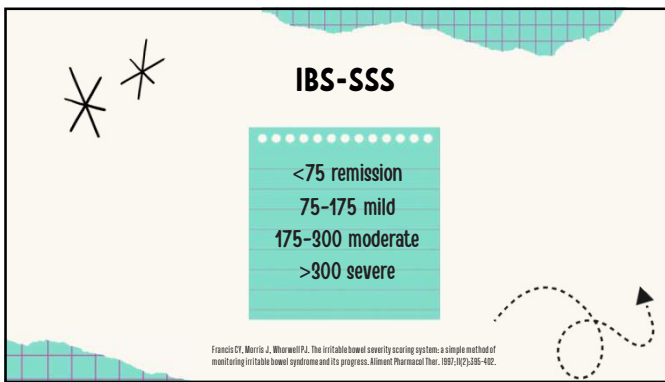
21

Evaluate Baseline IBS-Symptom Severity Score (IBS-SSS)

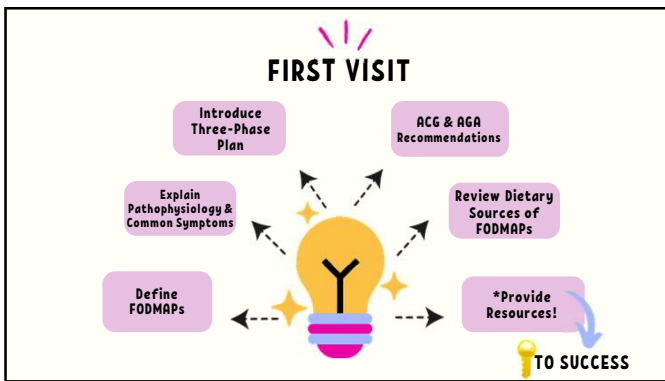
		Score
1	Do you suffer from abdominal distention (bloating, swelling, tightness)? Rate on a scale from 0 to 100 (0 = no distension/bloating to 100 = very severe)	
2	How severe has your abdominal pain been over the last 10 days? Rate on a scale from 0 to 100 (0 = no pain to 100 = very severe)	
3	On how many of the last 10 days did you get abdominal/stomach pain? Rate from 0 to 10 days	
4	How satisfied have you been with your bowel habits (frequency, ease, etc)? Rate on a scale from 0 to 100 (0 = very satisfied to 100 = very unsatisfied)	
5	How much has your IBS and/or digestive symptoms been affecting or interfering with your life in general? Rate on a scale from 0 to 100 (0 = does not interfere at all to 100 = completely interferes)	

Francis CY, Morris J, Whorwell PJ. The irritable bowel severity scoring system: a simple method of monitoring irritable bowel syndrome and its progress. Aliment Pharmacol Ther. 1997;11(2):395-402.

22



23



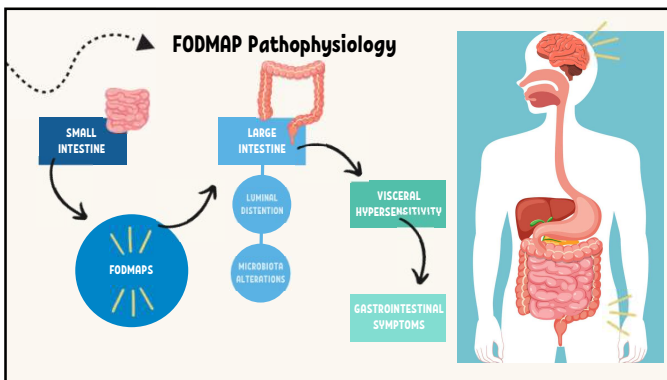
24

WHAT ARE FODMAPS?

SHORT CHAIN CARBOHYDRATES- SUGARS, STARCHES, AND FIBER THAT ARE NOT COMPLETELY DIGESTED IN OUR INTESTINES

- As FODMAPs move through the small intestine, water is pulled into the digestive tract
- In the large intestine, microbes rapidly *ferment* FODMAPs as fuel to survive, creating gas
- **Excess gas and water** in the intestine causes it to stretch and expand, which can be very uncomfortable or painful
- Those with irritable bowel syndrome (IBS) are known to have a highly sensitive digestive tract
- Symptoms of gas, bloating, diarrhea, or constipation can result

25



26


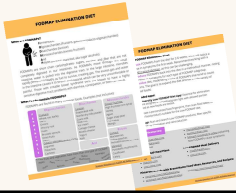
HOW DO FODMAPS CAUSE SYMPTOMS?

<p>FERMENTATION (GAS) Some foods are more likely to cause gas from bacterial fermentation</p>	<p>EXAMPLES oligosaccharides lactose</p>
<p>OSMOSIS (LIQUID) Other foods or beverages are more likely to pull water into the digestive tract</p>	<p>EXAMPLES fructose polyols</p>


27

LOW FODMAP DIET

- F Fermentable
- O Oligosaccharides (fructans, galactans/galacto-oligosaccharides)
- D Disaccharides (lactose)
- M Monosaccharides (excess fructose)
- A And
- P Polyols (sorbitol, mannitol: aka sugar alcohols)

28



FODMAP ELIMINATION DIET

- ✘ Eliminate FODMAPs from the diet for 2-6 weeks. Most notice a decrease in symptoms the first week
- ✘ Reintroduce FODMAPs back into the diet in a methodical manner, noting any increase in symptoms
- ✘ Personalize diet, moderating intake of FODMAPs to manage symptoms

29

✘ RECOMMENDED BY AGA AND ACG

"Of the available options, the Low FODMAP Diet is currently the most evidence-based dietary treatment choice for patients with IBS."

Chey WD, Hoshizaki J, Manning L, Chang L. AGA Clinical Practice Update on the Role of Diet in Irritable Bowel Syndrome. Expert Review. Gastroenterology. 2022;38(10):1737-1746.e5.

"In summary, this guideline committee believes that the complexity of the low FODMAP diet, combined with the potential for nutritional deficiencies, and the time and resources required to provide proper counseling on the 3 phases of the plan, requires the services of a properly trained GI dietitian."

Lucy BE, Pimental M, Brenner DM, et al. ACG Clinical Guideline: Management of Irritable Bowel Syndrome. Am J Gastroenterol. 2021;116(3):327-44.

30

TEACHING STRATEGIES

- 1**

Review current diet, swap low FODMAP foods for higher ones
- 2**

Go through food groups (i.e. breads/starches, veggies, fruits, dairy, etc), indicating which are better choices, and which are limited during FODMAP elimination
- 3**

Provide lists of foods in various FODMAP subgroups

31

THE NUANCES OF FODMAPS

- * Portion sizes matter
- * Explain details
 - FODMAPs are water soluble, not fat soluble
 - Ripeness of foods can make a difference
 - Cooked often better tolerated than raw
 - FODMAP content of foods is updated periodically
- * High/Low FODMAP foods aren't always intuitive

32

FODMAP STACKING

FODMAPs are certain sugars and fibers in your diet. All FODMAPs from your diet go into the same "bucket".



to excess gas, bloating, belly pain, diarrhea, or constipation

Adapted from The IBS Elimination Diet and Cookbook by Patsy Catsos, MS, RD, LD
Used with permission
Monash University Blog: FODMAP Stacking Explained

33

FOODS CONTAINING FRUCTANS

Artichoke, globe	Dates	Pasta
Asparagus	Dried fruits	Peach (white)
Banana (ripe)	Fennel (bulb)	Plums
Barley	Garlic	Prunes
Beets	Grapefruit	Pretzels
Bread/Wheat	Inulin	Pumpkin
Bell pepper (green)	Ketchup	Rye bread
Breakfast cereal (bran, wheat)	Leek (bulb)	Scallions (bulb)
Brussels sprouts	Melon (honeydew)	Squash (acorn)
Cantaloupe	Molasses	Shallots
Chicory root	Nectarine	Tea (chai, fennel, chamomile)
Couscous	Oats	Watermelon
Crackers (wheat, grain)	Onions	Zucchini

34

FOODS CONTAINING GALACTANS/GALACTOOLIGOSACCHARIDES (GOS)

Almonds	Lentils
Barley	Lima beans
Beans	Macadamia nuts
Beets	Peanuts
Brazil nuts	Peas (green, split)
Butternut squash	Pecans
Cashews	Pine nuts
Chesnuts	Pistachios
Chickpeas	Pumpkin (canned)
Hazelnuts	Rye
Hummus	Soy milk (from soybeans)
Kidney beans	Walnuts

35

FOODS CONTAINING (HIGHER AMOUNTS OF) LACTOSE

Buttermilk	Kefir
Cottage cheese	Milkshake
Cow's milk	Ricotta Cheese
Dry milk powder	Yogurt
Eggnog	
Evaporated milk (canned)	
Frozen yogurt	
Gelato	
Goat's milk	
Ice cream	

36

FOODS CONTAINING EXCESS FRUCTOSE

Apple	Mango
Agave syrup or nectar	Molasses
Artichoke hearts, canned	Orange juice
Asparagus	Pear
Bell pepper (orange, red, yellow)	Peas (sugar snap)
Beverages with high fructose corn syrup	Raspberries
Broccoli (stems)	Rye bread
Cherries	Scallions (bulb)
Grapes	Strawberries
High fructose corn syrup	Sun-dried tomatoes
Honey	Watermelon

37

FOODS CONTAINING SORBITOL

Apple	Peach (yellow)
Apricots	Peach (clingstone)
Avocado	Peach (white)
Blackberries	Pear
Bok choy	Plums
Cherries	Prunes
Coconut	Sugar-free gum, candy
Medications (i.e. cough syrup)	Supplements (chewable, i.e. Vit. C, melatonin)
Nectarine	Turnips

FOODS CONTAINING MANNITOL

Butternut Squash
Cauliflower
Celery
Mushrooms
Peach (clingstone)
Sauerkraut (fermented)
Sweet potato
Watermelon

38

ARE THERE ANY "FREE FOODS" ON FODMAP ELIMINATION?

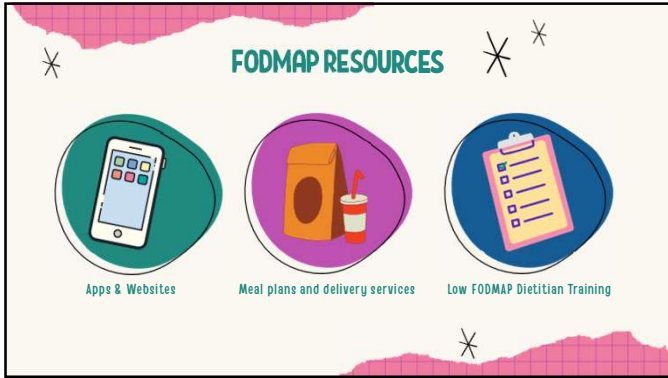
FOODS LOW IN FODMAP IN LARGER SERVING SIZES:

- Potatoes
- Rice
- Gluten-free pasta
- Carrots
- Bean sprouts
- Blueberries
- Collard greens
- Cucumbers
- Lettuce - arugula, butter, red leaf
- Oyster mushrooms
- Parsnips
- Pattypan squash

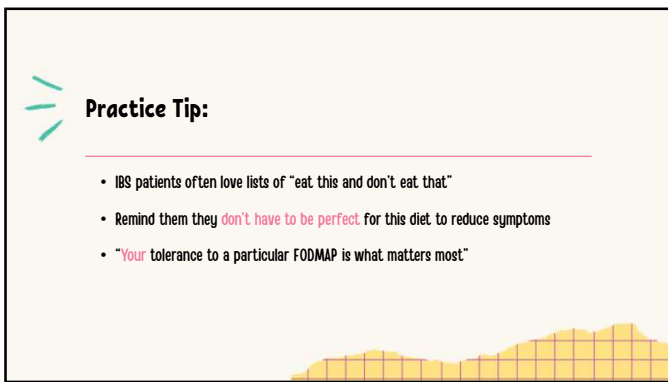
FAT/PROTEIN ONLY

- Simply prepared beef, pork, lamb, poultry, fish, shellfish
- Eggs
- Fats and oils

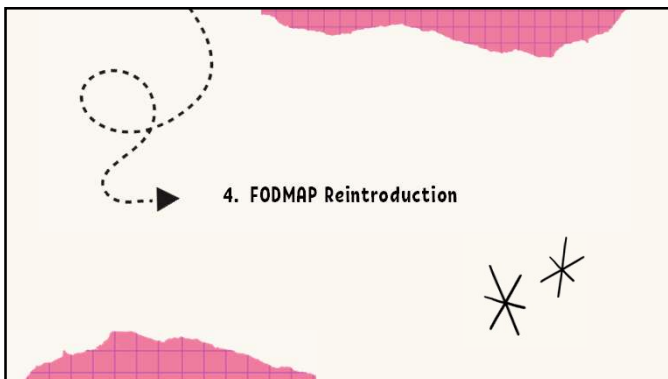
39



40



41



42


Obtain Updated IBS-SSS

<75 remission
75-175 mild
175-300 moderate
>300 severe


Francis DT, Morris J, Whorwell PJ. The irritable bowel severity scoring system: a simple method of manifesting irritable bowel syndrome and its progress. Aliment Pharmacol Ther. 1997;11(2):395-402.

43


THE "THREE DOORS" AFTER FODMAP ELIMINATION



#1
"I tried this diet to the best of my ability and it didn't help me."



#2
"I tried this diet to the best of my ability. It improved my symptoms and I'm ready for reintroduction"



#3
"I tried this diet. I'm not sure if I did it correctly (or didn't follow it closely.). My symptoms have improved, but I want to wait another 4-6 weeks and see if I can feel a bit better before beginning reintroduction"

44

FODMAP Reintroduction Guidelines

- 01 Continue FODMAP Elimination Diet, while reintroducing one FODMAP each week
- 02 Only choose foods from the reintroduction guide because they contain only one FODMAP subtype.
- 03 As FODMAPs are tested, do not add them back to the regular diet, even if it does not cause symptoms
- 04 Test the challenge food three days in a row, increasing the portion size each day, followed by a 2-4 day washout period
- 05 Track progress and record symptoms
- 06 Limit variables when possible. WAIT to challenge foods if traveling, sick, very stressed, etc.
- 07 Anticipate minor feelings of gas bubbles and bloating, normal when adding back foods with fiber
- 08 If severe symptoms are experienced on any test day, STOP that challenge
- 09 Consider retesting a different food in the same subgroup if reaction unclear
- 10 Don't lose hope, and don't give up! The reintroduction process can take 8+ weeks. The information learned helps tailor the long-term diet.

45

FODMAP Reintroduction Steps

Choose the FODMAP group and specific food selected to reintroduce (i.e. Sorbitol- blackberries)

Test using that same food all 3 days, all at one sitting

- Day 1- eat the test food along with the FODMAP elimination diet. Evaluate symptoms.
- Day 2- if symptoms were minor/tolerable on Day 1, consume the test food again, this time with a larger portion size.
- Day 3- if symptoms manageable, increase portion size (or can keep the portion size the same as Day 2). It is not necessary to test more than would normally be consumed.

46

FODMAP Challenges

Fructan

*Note: it is recommended to test these fructans over three separate weeks

	Day 1	Day 2	Day 3
• Garlic (sauteed in oil)	1/4 clove	1/2 clove	1+ cloves
• Onions (cooked)	1 tsp	2 tsp	1+ TBSP
• Wheat pasta	2/3 cup	1 cup	1 1/2 cups

47

FODMAP Challenges

GOS

	Day 1	Day 2	Day 3
• Almonds or	15 nuts	20 nuts	30 nuts
• Canned Chickpeas (drained, rinsed)	1/2 cup	2/3 cup	1 cup

48

FODMAP Challenges
Lactose

	Day 1	Day 2	Day 3
• Skim or 1% Milk or	1/4 cup	1/2 cup	1 cup
• Plain Lowfat	1/4 cup (2 oz)	1/2 cup (4 oz)	3/4-1 cup (6-8 oz)

49

FODMAP Challenges
Fructose

	Day 1	Day 2	Day 3
• Honey or	1 1/2 tsp	2 tsp	1 TBSP
• Mango or	1/4 mango	1/2 mango	1 mango
• Sugar snap peas	3-5 pods	6-8 pods	10 pods

50

FODMAP Challenges
Sorbitol

	Day 1	Day 2	Day 3
• Avocado and	1/4 avocado	1/2 avocado	3/4 - 1 avocado
• Blackberries (separate wk)	2-3 berries	5 berries	10 berries

51

FODMAP Challenges
Mannitol

	Day 1	Day 2	Day 3
• Celery or	1/2 med. stalk	1 medium stalk	1 large stalk
• Cauliflower or	2 small florets	4 small florets	8 small florets
• Sweet potato	3/4 cup	1 cup	1 1/2 cups

52

OVERALL GOAL FOR REINTRODUCTION:

"Determine your tolerance to individual FODMAP subgroups, expanding your diet to the widest variety of foods, while minimizing symptoms."

53

Be Prepared: Patients Might Be Scared

Providing encouragement and support for the reintroduction process is essential to your patient's success

54

Tools for Symptoms

Recommend discussing with medical provider and/or pharmacist

- Peppermint oil capsules
- STW-5
- Ginger capsules
- Simethicone
- Bismuth subsalicylate
- Loperamide (IBS-D)
- Magnesium citrate or magnesium oxide (IBS-C)
- Heating pad or hot water bottle

55

Practice Tip:

- We do not want them "stuck" on FODMAP Elimination
- Sometimes it feels "safe"
- Offer support and a gentle nudge toward reintroduction
- Set up check-in visit in ~4-5 weeks to evaluate progress

56

What if the FODMAP Elimination Diet Doesn't Work?

- ✗ Ask questions
- ✗ Review diet again for FODMAP Stacking
- ✗ Refer back to GI or PCP

57

New Research

- 117 patients underwent a 9-week blinded reintroduction using FODMAP powders
- Findings: IBS-SSS improved significantly from baseline (from 901 to 450) in 80% of patients
- Most prevalent triggers:
 - Fructans (56%)
 - Mannitol (54%)
 - GOS (35%)
 - Lactose (28%)
 - Fructose (27%)
 - Sorbitol (22%)
 - Glucose (25%)
- Increased pain:
 - Day 1 sorbitol/mannitol
 - Day 2 fructans/GOS
 - Day 3 lactose
- Symptom recurrence triggered by avg 2.5 ± 2 different FODMAPs per patient.
- Conclusion: "Mannitol and fructans were identified as the most prevalent triggering FODMAPs in this IBS cohort. However, the very heterogeneous and individualized pattern of symptom recurrence patterns precludes the concept of focusing only on these 2 categories when embarking on a low FODMAP diet. Selectively eliminating only these FODMAPs would lead to missing out identifying additional FODMAP triggers in patients."

Van den Hoede H, Colenier S, Reuthaux N, et al. Efficacy and Findings of a Blinded Randomized Reintroduction Phase for the Low FODMAP Diet in Irritable Bowel Syndrome. *Gastroenterology*. 2024;167(2):133-142. doi:10.1053/j.gastro.2024.02.008

58

New Research

- 45 patients underwent a FODMAP Elimination and Reintroduction
- Findings: 25 patients (45%) improved abd symptoms of abdominal pain and bloating with FODMAP Elimination
- Most prevalent triggers:
 - Fructans
 - GOS
- Symptom recurrence (pain/bloating) triggered by avg 2.55 different FODMAPs per patient
- On fructan reintro, pain reduced when fructans introduced later in the process
- Conclusion: "Our results suggest that the reintroduction of select FODMAPs may be responsible for symptom generation in patients with IBS who have responded to a low FODMAP diet, and provide a strong rationale for performing a future trial comparing the treatment effects of a limited low-FODMAP diet and a standard low-FODMAP diet."

Everson S, Janda KJ, Singh P, Birich S, Han-Monkey T, Chey WD. All FODMAPs aren't Created Equal: Results of a Randomized Reintroduction Trial in Patients With Irritable Bowel Syndrome. *Clin Gastroenterol Hepatol*. 2025;23(2):351-358.e5. doi:10.1016/j.cgh.2024.03.047

59

5. Dietary Personalization

60

Review Results of FODMAP Reintroduction

Questions to Ask:

- 01 What did you learn?
- 02 Which FODMAP subgroups caused symptoms and at what portion?
- 03 What were your symptoms?
- 04 Did these symptoms differ between different FODMAPs?
- 05 How long did it take from the time you ate a food until the symptoms began?
- 06 How long did it take for symptoms to resolve?

61

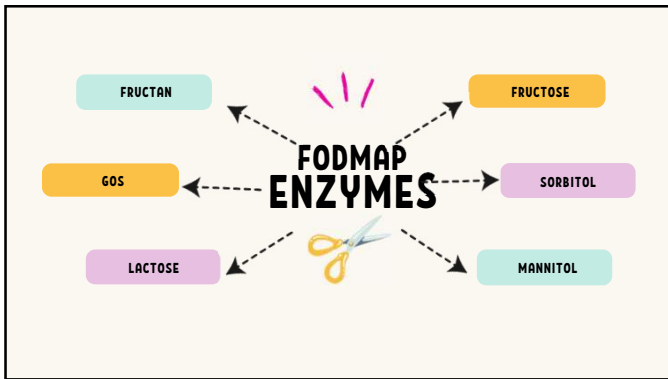
Diet Expansion

Encourage and teach how to add foods with multiple FODMAPs (i.e. apples, pears, butternut squash, asparagus...)

Ask if they are concerned with eating certain foods or if they plan to limit/avoid particular FODMAP subgroups long term

Consider adding FODMAP Enzymes

62



63

FODMAP ENZYMES

FRUCTAN

Look for products containing fructan hydrolase or inulinase

Clinical Pearl: some RDs use FODMAP enzymes along with FODMAP Gentle Diet

Ochoa KC, Samant S, Liu A, et al. In Vitro Efficacy of Targeted Fermentable Oligosaccharides, Disaccharides, Monosaccharides, and Polyols Enzymatic Digestion in a High-Fidelity Simulated Gastrointestinal Environment. *Gastro Rep Adv.* 2022;3(3):283-290. Published 2022 Oct 31.

64

FODMAP ENZYMES

GOS

Look for products containing alpha-galactosidase*

*Read labels: some brands contain manitol

Tuck CJ, Taylor KM, Gibson PR, Barrett JS, Mair JS. Increasing Symptoms in Irritable Bowel Symptoms With Ingestion of Galacto-Oligosaccharides Are Mitigated by α -Galactosidase Treatment. *Am J Gastroenterol.* 2018;113(3):324-334.

65

FODMAP ENZYMES

LACTOSE

Look for products containing lactase*

*Read labels: some of the chewable products contain manitol

Misselwitz B, Duttler M, Verbeke K, Fox MR. Update on lactose malabsorption and intolerance: pathogenesis, diagnosis and clinical management. *Gut.* 2019;68(1):200-209.

66



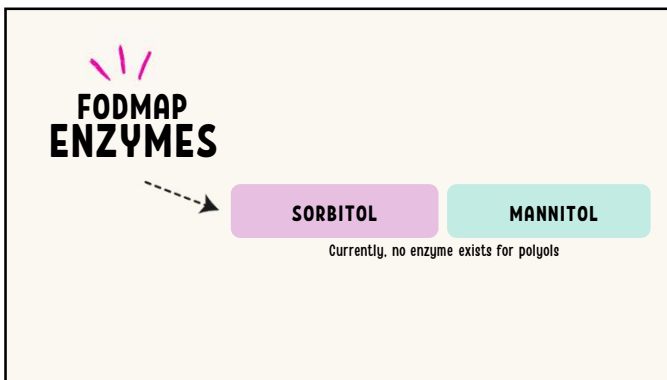
FODMAP ENZYMES

FRUCTOSE

Look for products containing glucose isomerase or xylose isomerase

Komericki P, Mikkilic-Maher M, Strimling T, Weyermark K, Hammer HF, Abner W. Oral xylose isomerase decreases breath hydrogen excretion and improves gastrointestinal symptoms in fructose malabsorption - a double-blind, placebo-controlled study. Aliment Pharmacol Ther. 2002;36(9):980-987.

67

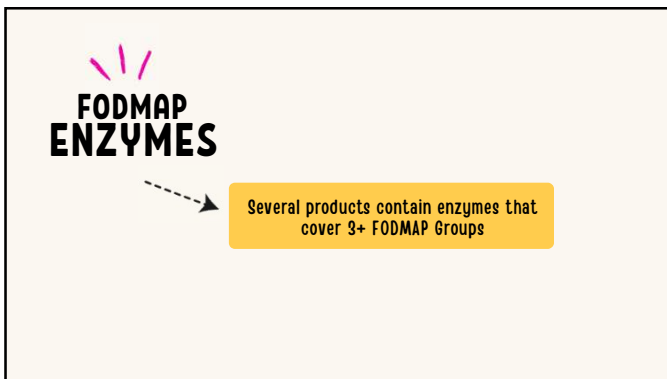


FODMAP ENZYMES

SORBITOL **MANNITOL**

Currently, no enzyme exists for polyols

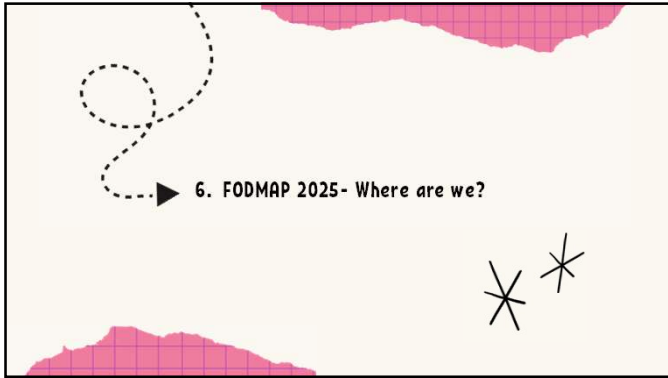
68



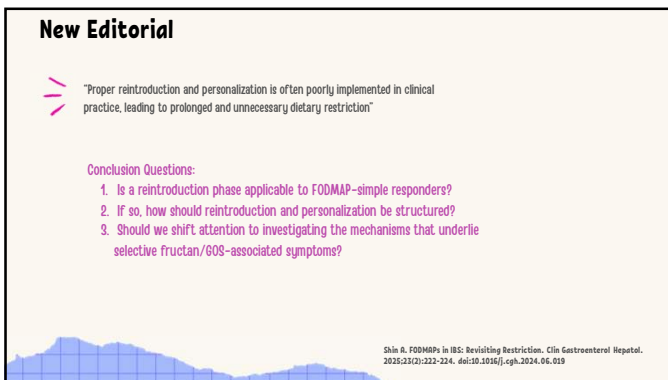
FODMAP ENZYMES

Several products contain enzymes that cover 3+ FODMAP Groups

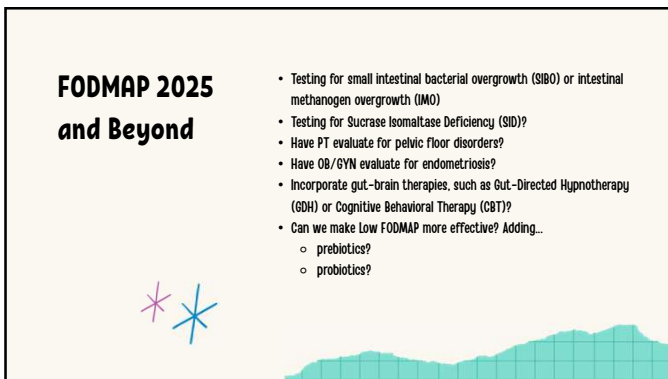
69



70



71



72

Prebiotics

Partially hydrolyzed guar gum (PHGG)

Wu E, Raik A, Tiomomy E, Yama H, Stral H, Buffall T, Vaisman N. Randomized clinical study: Partially hydrolyzed guar gum (PHGG) versus placebo in the treatment of patients with irritable bowel syndrome. *BMC Metab (Lond)*. 2016 Feb 6;16:10.

Psyllium

Menees SB, Jackson K, Baker JR, Fenner DE, Eswaran S, Hopkins D, Savel R, Leo AA, Chay WD. A Randomized Pilot Study to Compare the Effectiveness of a Low FODMAP Diet vs Psyllium in Patients With Fecal Incontinence and Loose Stools. *Clin Transl Gastroenterol*. 2022 Feb 16;13(2):e00454.

73

Probiotics

Group 1

Low FODMAP + Probiotics (5-strain)

Group 2

Low FODMAP only

- 85 patients completed 21-day study
- IBS-SSS decrease was similar for both groups (86.04% vs 85.71%)

Tanen R, Bengi S, Cahill R, Nguyen B, Snyders M. Clinical effectiveness of adding probiotics to a low FODMAP diet: Randomized double-blind placebo-controlled study. *World J Clin Cases*. 2020 Sep 6;10(25):7417-7432.

Interesting point- half of pts in both groups had IBS-C and response was similar to IBS-D

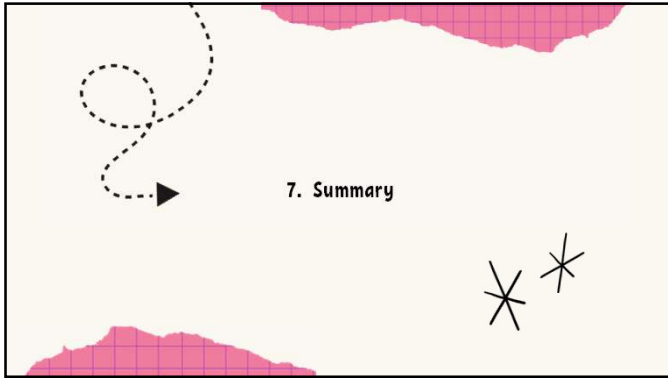
“This finding supports the argument that a low FODMAP diet can be applied in all subtypes of IBS”

74

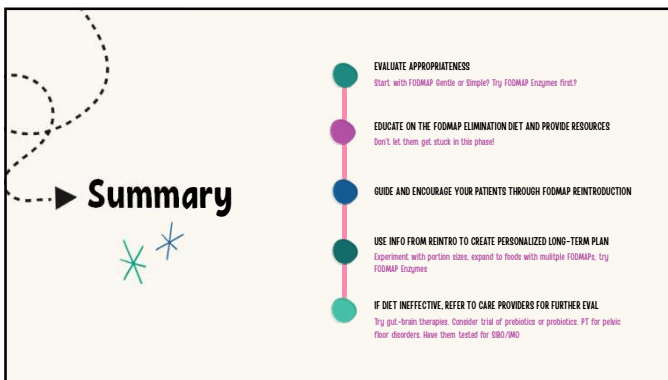
Other Potential Applications of the Low FODMAP Diet

SIBO	<small>Wielgoz-Grochowka JP, Domanski M, Drzewiel MC. Efficacy of an Irritable Bowel Syndrome Diet in the Treatment of Small Intestinal Bacterial Overgrowth: A Narrative Review. <i>Nutrients</i>. 2022;14(10):1982.</small>
GERD	<small>Piakkun S, Pancharatrakul T, Promjampa W, Onlacharavit S. The Effect of Fermentable, Oligosaccharides, Disaccharides, Monosaccharides, and Polyols (FODMAP) Meals on Transient Lower Esophageal Relaxation (TLESR) in Gastroesophageal Reflux Disease (GERD) Patients with Overlapping Irritable Bowel Syndrome (IBS). <i>Nutrients</i>. 2022;14(9):1755. Published 2022 Apr 22.</small>
IBD	<small>Peng Z, Yi J, Liu X. A Low-FODMAP Diet Provides Benefits for Functional Gastrointestinal Symptoms but Not for Improving Stool Consistency and Mucosal Inflammation in IBD: A Systematic Review and Meta-Analysis. <i>Nutrients</i>. 2022;14(10):2072.</small>
ENDOMETRIOSIS	<small>Moore JB, Gibson PR, Perry EC, Burgess BE. Endometriosis in patients with irritable bowel syndrome: Specific symptomatic and demographic profile, and response to the low FODMAP diet. <i>Aust N Z J Obstet Gynaecol</i>. 2017;57(2):201-205. doi:10.1111/ajog.12594</small>
PERFORMANCE NUTRITION	<small>Wiffin M, Smith L, Antonino J, Johnston J, Beasley J, Roberts J. Effect of a short-term low fermentable oligosaccharide, disaccharide, monosaccharide and polyol (FODMAP) diet on exercise-related gastrointestinal symptoms. <i>J Int Soc Sports Nutr</i>. 2019;16(1):1. Published 2019 Jan 15. doi:10.1186/s12970-019-0268-9</small>
AUTISM SPECTRUM Disorder	<small>Mogay NK, Walton J, Roberts KM, Nahikian-Nehme M, Witwer AN. The Effect of the Low FODMAP Diet on Gastrointestinal Symptoms, Behavioral Problems and Nutrient Intake in Children with Autism Spectrum Disorder: A Randomized Controlled Pilot Trial. <i>J Autism Dev Disord</i>. 2021;51(8):2800-2811.</small>

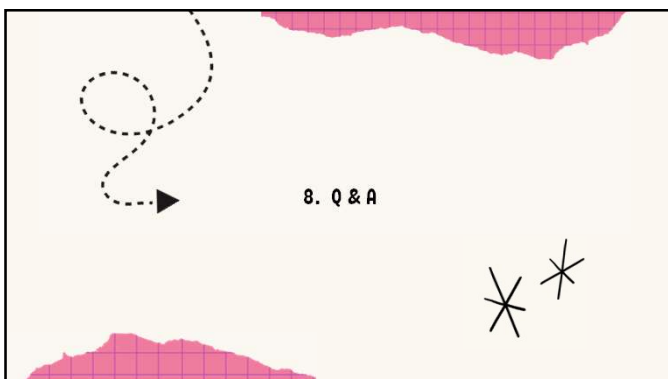
75



76



77



78

Q & A

niki@diarrheadietitian.com
 503-974-6454

LinkedIn: Niki Streatly, RDN, LD
Facebook: DiarrheaDietitian
Instagram: DiarrheaDietitian
X: @DiarrheaRD



79

THANK YOU!



80

References:

- Algeria JR, Demir O, Törblom H, Nybacka S, Simrén M, Stårsrud S. Low FODMAP diet reduces gastrointestinal symptoms in irritable bowel syndrome and clinical response could be predicted by symptom severity: A randomized crossover trial. *Clin Nutr.* 2022;41(12):2792-2800. doi:10.1016/j.clnu.2022.11.001
- Asarbuti E, Matas S, Simin E, Lanreli V, Marinova O, Bustamante MA, Fernández-Ol MDJ, Miranda J. Gluten and FODMAPs Relationship with Mental Disorders: Systematic Review. *Nutrients.* 2021 May 31;13(6):1894. doi: 10.3390/nu13061894. PMID: 34072914; PMCID: PMC8228761.
- Biesiekierski JR, Tuck CJ. Low FODMAP diet beyond IBS: Evidence for use in other conditions. *Curr Opin Pharmacol.* 2022;64:102208. doi:10.1016/j.coph.2022.102208
- Black CJ, Staudacher HM, Ford AC. Efficacy of a low FODMAP diet in irritable bowel syndrome: systematic review and network meta-analysis. *Gut.* 2022;71(6):1117-1126. doi:10.1136/gut.2021.232314
- Burton Murray H, Dreier M, Zickgraf HF, et al. Validation of the nine item ARFID screen (NIAS) subscales for distinguishing ARFID presentations and screening for ARFID. *Int J Eat Disord.* 2021;54(10):1782-1792. doi:10.1002/eat.23520
- Chey WD, Hershah JO, Manning L, Chang L. ACG Clinical Practice Update on the Role of Diet in Irritable Bowel Syndrome: Expert Review. *Gastroenterology.* 2022;162(6):1737-1746.e5. doi:10.1053/j.gastro.2021.12.248
- Cox SR, Lindsay JO, Fromentin S, et al. Effects of Low FODMAP Diet on Symptoms, Fecal Microbiome, and Markers of Inflammation in Patients With Quiescent Inflammatory Bowel Disease in a Randomized Trial. *Gastroenterology.* 2020;158(1):176-188.e7. doi:10.1053/j.gastro.2019.09.024
- Eswaran S, Jencks KJ, Singh P, Rikun S, Han-Matvey T, Chey WD. All FODMAPs Are Not Created Equal: Results of a Randomized Reintroduction Trial in Patients With Irritable Bowel Syndrome. *Clin Gastroenterol Hepatol.* 2025;23(2):351-358.e5. doi:10.1016/j.cgh.2024.03.047
- Francis CV, Morris J, Whorwell PJ. The irritable bowel severity scoring system: a simple method of monitoring irritable bowel syndrome and its progress. *Aliment Pharmacol Ther.* 1997;11(2):295-402. doi:10.1046/j.1365-2036.1997.142319005.x
- Gibson PR. History of the low FODMAP diet. *J Gastroenterol Hepatol.* 2017;32 Suppl 1:5-7. doi:10.1111/jgh.13685
- Gibson PR, Shepherd SJ. Personal view: food for thought—western lifestyle and susceptibility to Crohn's disease. The FODMAP hypothesis. *Aliment Pharmacol Ther.* 2005;21(12):1399-1409. doi:10.1111/j.1365-2036.2005.02506.x
- Iacovou M, Craig SS, Neland GW, Barrett IS, Gibson PR, Muir IG. Randomised clinical trial: reducing the intake of dietary FODMAPs of breastfeeding mothers is associated with a greater improvement of the symptoms of infantile colic than for a typical diet. *Aliment Pharmacol Ther.* 2018;48(10):1061-1073. doi:10.1111/apt.15007
- Lis DM. Exit Gluten-Free and Enter Low FODMAPs: A Novel Dietary Strategy to Reduce Gastrointestinal Symptoms in Athletes. *Sports Med.* 2019;49(Suppl 1):87-97. doi:10.1007/s40279-019-01034-0
- Komericki P, Akkic-Matena M, Strimlitz T, Weyeremair K, Hammer HF, Aberer W. Oral xylose isomerase decreases breath hydrogen excretion and improves gastrointestinal symptoms in fructose malabsorption - a double-blind, placebo-controlled study. *Aliment Pharmacol Ther.* 2012;36(10):980-987. doi:10.1111/apt.12057
- Lacy BE, Pimentel M, Brenner DM, et al. ACG Clinical Guideline: Management of Irritable Bowel Syndrome. *Am J Gastroenterol.* 2021;116(1):17-44. doi:10.14309/ajg.0000000000001205
- Menees SB, Jackson K, Baker JR, et al. A Randomized Pilot Study to Compare the Effectiveness of a Low FODMAP Diet vs Psyllium in Patients With Fecal Incontinence and Loose Stools. *Clin Transl Gastroenterol.* 2022;13(3):e00484. Published 2022 Feb 19. doi:10.14309/ctg.0000000000000484

81

17. Misselwitz B, Butter M, Vekic K, Fox MR. Update on lactose malabsorption and intolerance: pathogenesis, diagnosis and clinical management. *Gut*. 2019;68(11):2080-2091. doi:10.1136/gutjnl-2019-318404

18. Moore JS, Gibson PR, Perry RE, Burgell RE. Endometriosis in patients with irritable bowel syndrome: Specific symptomatic and demographic profile, and response to the low FODMAP diet. *Asian J Obstet Gynaecol*. 2017;5(7):201-205. doi:10.1111/ajgo.12594

19. Mumolo MG, Rettura F, Meissani S, et al. Is Gluten the Only Culprit for Non-Celiac Gluten/Wheat Sensitivity?. *Nutrients*. 2020;12(12):3785. Published 2020 Dec 10. doi:10.3390/nu12123785

20. Niv E, Hasiak A, Tommy E, et al. Randomized clinical study: Partially hydrolyzed guar gum (PHGG) versus placebo in the treatment of patients with irritable bowel syndrome. *Nutr Metab (Lond)*. 2016;13:10. Published 2016 Feb 6. doi:10.1186/s12944-016-0070-5

21. Nogyay NH, Walton J, Roberts KM, Nahikian-Nejms M, Witwer AN. The Effect of the Low FODMAP Diet on Gastrointestinal Symptoms, Behavioral Problems and Nutrient Intake in Children with Autism Spectrum Disorder: A Randomized Controlled Pilot Trial. *J Autism Dev Disord*. 2021;51(8):2800-2811. doi:10.1007/s10803-020-04717-8

22. Ochoa NC, Samran S, Liu A, et al. In Vitro Efficacy of Refined Fermentable Oligosaccharides, Disaccharides, Monosaccharides, and Polyols Enzymatic Digestion in a High-Fidelity Simulated Gastrointestinal Environment. *Gastro Hep Adv*. 2022;2(1):283-296. Published 2022 Oct 31. doi:10.1016/j.gta.2022.10.011

23. Peng Z, Yi J, Li X. A Low-FODMAP Diet Provides Benefits for Functional Gastrointestinal Symptoms but Not for Improving Stool Consistency and Mucosal Inflammation in IBD: A Systematic Review and Meta-Analysis. *Nutrients*. 2022 May 15;14(10):2072. doi:10.3390/nu14102072. PMID: 35631213; PMCID: PMC9146862.

24. Pesarani T, Giorgi A, Elli L, Costantini A. The low-FODMAP diet and the gluten-free diet in the management of functional abdominal bloating and distension. *Front Nutr*. 2022 Nov 8;8:1007716. doi:10.3389/fnut.2022.1007716. PMID: 36424820; PMCID: PMC9678936.

25. Platani S, Patcharatukul T, Promjanta W, Gonlacharwit S. The Effect of Fermentable, Oligosaccharides, Disaccharides, Monosaccharides, and Polyols (FODMAP) Meals on Transient Lower Esophageal Relaxations (TLER) in Gastroesophageal Reflux Disease (GERD) Patients with Overlapping Irritable Bowel Syndrome (IBS). *Nutrients*. 2022;14(9):1755. Published 2022 Apr 22. doi:10.3390/nu14091755

26. Priyanka P, Gayam S, Kupsc JT. The Role of a Low Fermentable Oligosaccharides, Disaccharides, Monosaccharides, and Polyol Diet in Nonceliac Gluten Sensitivity. *Gastroenterol Res Pract*. 2018 Aug 6;2018:1561476. doi:10.1155/2018/1561476. PMID: 30158962; PMCID: PMC6109506.

27. Shephard SL, Parker FC, Muir JG, Gibson PR. Dietary triggers of abdominal symptoms in patients with irritable bowel syndrome: randomized placebo-controlled evidence. *Clin Gastroenterol Hepatol*. 2008;6(7):765-771. doi:10.1016/j.cgh.2008.02.058

28. Singh P, Chey SW, Nee J, et al. Is a Simplified, Less Restrictive Low FODMAP Diet Possible? Results From a Double-Blind, Pilot Randomized Controlled Trial. *Clin Gastroenterol Hepatol*. 2025;23(3):362-364.e2. doi:10.1016/j.cgh.2024.04.021

29. Singh P, Tuck C, Gibson PR, Chey WD. The Role of Food in the Treatment of Bowel Disorders: Focus on Irritable Bowel Syndrome and Functional Constipation [published correction appears in *Am J Gastroenterol*. 2024 Jul 1;119(7):1442-1444. doi:10.14309/ajg.000000000000297]. *Am J Gastroenterol*. 2022;117(6):947-957. doi:10.14309/ajg.0000000000001767

30. Sledge GJ, Sarna VK, Hineline W, et al. Fructan, Rather Than Gluten, Induces Symptoms in Patients With Self-Reported Non-Celiac Gluten Sensitivity. *Gastroenterology*. 2018;154(3):529-539.e2. doi:10.1053/j.gastro.2017.10.040

31. Staudacher HM, Whelan K. The low FODMAP diet: recent advances in understanding its mechanisms and efficacy in IBS. *Gut*. 2017;66(8):1517-1527.

82

32. Thomazini RL, Lique V, Aza A, et al. An ESPGHAN Position Paper on the Use of Low FODMAP Diet in Pediatric Gastroenterology. *J Pediatr Gastroenterol Nutr*. 2022;75(3):356-368. doi:10.1097/MPG.0000000000003526

33. Tuck CJ, Muir JG, Barrett JS, Gibson PR. Fermentable oligosaccharides, disaccharides, monosaccharides and polyols: role in irritable bowel syndrome. *Expert Rev Gastroenterol Hepatol*. 2016;8(7):819-824. doi:10.1586/1747424.2016.83.7956

34. Tuck CJ, Taylor KM, Gibson PR, Barrett JS, Muir JG. Increasing Symptoms in Irritable Bowel Symptoms With Ingestion of Galacto-Oligosaccharides Are Mitigated by a Galactosidase Treatment. *Am J Gastroenterol*. 2018;113(1):124-134. doi:10.1038/ajg.2017.245

35. Tusan B, Bengi G, Cehvelik E, Akpinar N, Seydi M. Clinical effectiveness of adding probiotics to a low FODMAP diet: Randomized double-blind placebo-controlled study. *World J Clin Cases*. 2021;9(25):7417-7432. doi:10.12998/wjcc.v9.i25.7417

36. Van den Houze K, Colomer E, Naudhaux K, et al. Efficacy and Findings of a Blinded Randomized Reintroduction Phase for the Low FODMAP Diet in Irritable Bowel Syndrome. *Gastroenterology*. 2024;147(2):333-342. doi:10.1053/j.gastro.2024.02.008

37. van Lanen AS, de Bree A, Greyling A. Efficacy of a low-FODMAP diet in adult irritable bowel syndrome: a systematic review and meta-analysis [published correction appears in *Eur J Nutr*. 2021;50(6):615-23. doi:10.1007/s00394-021-02620-1]. *Eur J Nutr*. 2021;40(6):3509-3522. doi:10.1007/s00394-020-02473-0

38. Wnielgosz-Grochowka JP, Domanski N, Drywień ME. Efficacy of an Irritable Bowel Syndrome Diet in the Treatment of Small Intestinal Bacterial Overgrowth: A Narrative Review. *Nutrients*. 2022;14(16):3382. Published 2022 Aug 17. doi:10.3390/nu14163382

39. Wilkin M, Smith L, Antonio J, Johnson J, Reakley J, Roberts J. Effect of a short-term low fermentable oligosaccharide, disaccharide, monosaccharide and polyol (FODMAP) diet on exercise-related gastrointestinal symptoms. *J Int Soc Sports Nutr*. 2019;16(1):1. Published 2019 Jan 15. doi:10.1186/s12970-019-0268-9

83