# COMMON DIETS IN GASTROINTESTINAL DISORDERS

COLENE STOERNELL, MS, RDN, LD

PEDIATRIC DIETITIAN

DOERNBECHER SPECIALTY PEDIATRIC CLINICS - GASTROINTESTINAL CLINIC

OHSU CHILD DEVELOPMENT AND REHABILITATION CENTER

# BRIEF OVERVIEW

- Low-FODMAP
- SCD / Modified SCD
- Celiac / Gluten-free



# WHAT IS FODMAP?

### FODMAP

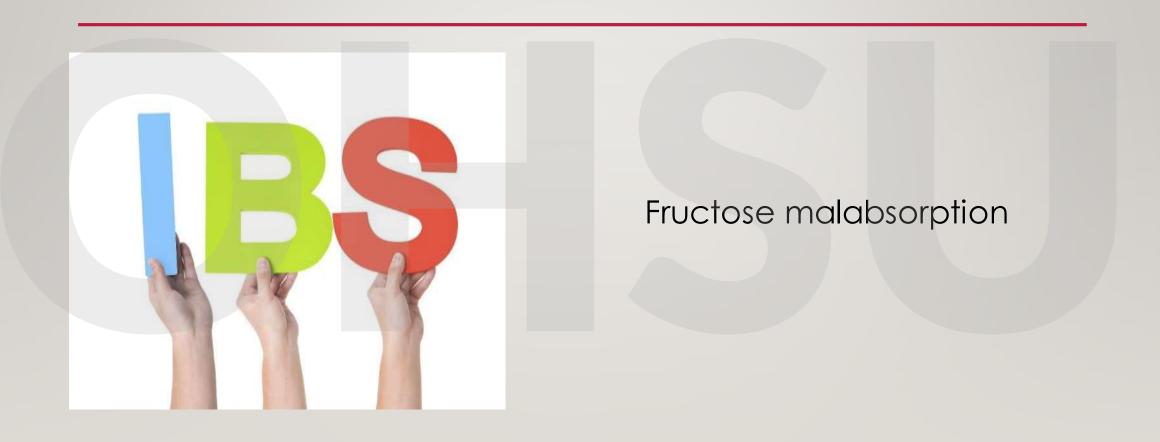
- Fermentable
- Oligosaccharides
- Disaccharides
- Monosaccharides
- Polyols
- May cause:
  - · Gas, bloating, abdominal pain, and diarrhea

FODMAP FOOD	LACTOSE	FRUCTANS	POLYOLS	GOS	FRUCTOSE
Dairy Products	X				
Certain Vegetables					
Onions, garlic, cauliflower, mushrooms		X	X		
Certain Fruits					
Apples, Watermelon, Blackberries			X		X
Wheat		X			
Legumes					
Beans Chickpeas, Lentils				X	
Inulin		X			
High Fructose Corn syrup, Agave, Honey, Artificial Sweeteners			X		X

### WHAT FOODS ARE APPROPRIATE ON THE LOW-FODMAP DIET?

Dairy	Fruits	Vegetables	Grains	Proteins	Nuts and Seeds
Lactose Free Milk	Varity of Berries (blueberries, strawberries, raspberries)	Carrots	Rice	Red Meat	ALL except Cashews and Pistachios
Hard Cheeses	Clementine	Broccoli	Oats	Fish / Seafood	
Alternative Milk Beverages	Unripe bananas	White Potatoes	Sourdough	Poultry	
Butter	Honeydew	Green Beans	Quinoa	Eggs	
Non-dairy yogurt	Kiwi	Green Bell Peppers	Corn bread	Lamb	
Dairy free ice cream and sorbet	Pineapple	Cucumbers		Pork	
Whipped Cream	Papaya	Lettuce		Deli Meat	

# WHO WOULD BENEFIT FROM A LOW-FODMAP DIET?



# HOW SHOULD THE DIET BE IMPLEMENTED?



- 2-9 weeks Restriction
   Phase
- Challenge /
   Reintroduction Phase
- Maintenance Phase

# SPECIFIC CARBOHYDRATE DIET (SCD)

- Based on Breaking the Vicious Cycle: Intestinal Health through Diet.
- Carbohydrates are not fully digested
  - can cause an overgrowth of harmful bacteria, and waste products of the digestion process can set off a chain reaction, or "vicious cycle," of irritation in the intestines
- Limiting carbohydrates to only ones that are very easily digested
  - no undigested carbohydrates left over to cause overgrowth of bad bacteria and set off the chain reaction leading to irritation.

### RESEARCH

- Small but growing body of research that supports the Specific Carbohydrate Diet
  - Inflammatory bowel diseases Crohn's disease and ulcerative colitis.
- 2017 review of research on the Specific Carbohydrate Diet's use in treating Crohn's disease
  - Shows promise as a nutritional treatment for both adults and children
  - More research and stronger studies are needed

	Beverages / Sweeteners	Fruits	Vegetables	Meats / Protein	Dairy / Alternative	Grains / Starches	Fats / Oils
SCD	Honey, dates, most teas, coffee, cider, juices without additives	Most fresh frozen, or dried fruits without added sugar; Banana s with brown spots	Most Vegetables	Unprocesse d meat, poultry, fish, shellfish, eggs Legumes, Dried Beans, Lentils, Split Peas, most nuts and seeds	Homemade Yogurt fermented for at least 24hrs, dry, homemade nut and seed milk, canned coconut milk	Coconut flour, lentil flour, nut flour	Ghee, most oils, mayonnais e- homemad e or store bought if without starches, additives or sugars Olives
Modified SCD	Pure maple syrup 100% cocoa nibs, powder		Sweet potatoes		* Organic	Oats Rice and grass-fe	ed preferred

Beverages / Sweeteners	Fruits	Vegetables	Meats / Protein	Dairy / Alternative	Grains / Starches	Fats / Oils
sugar, molasses, maple syrup, sucrose, processed fructose, candy and chocolate, fruit juice from concentrate or with added sugars	Plantain, green banana, fruit with added sugar	Seaweed, Canned vegetables with added ingredients	Some legumes, Canned or processed meats	All milk and milk products high in lactose, such as mild cheddar, store-bought yogurt, cream, sour cream, and ice cream	Corn, wheat, wheat germ, barley, oats, and rice, Starchy tubers such as potatoes, sweet potatoes, and turnips	Canola oil and store-bought mayonnaise

# CELIAC DISEASE

- Genetic, autoimmune condition in which eating gluten causes damage to the small intestine.
- Only Treatment is avoidance of gluten



# WHAT HAS GLUTEN?

- Avoid all foods and drinks containing:
  - Wheat
  - Barley
  - Rye
  - Triticale a cross between wheat and
  - Oats, in some cases



# OTHER SOURCES OF GLUTEN

- Desserts and sweets
- Medications including vitamins and minerals
- Processed foods and meats
- Sauces, gravies, condiments (soy sauce)
- Seasonings and mixes
- Cross contamination

# **PRECAUTIONS**



- Prescreen for Eating Related Disorders prior to initiation
- Nutrient Deficiencies



### REFERENCES

- Fedewa, A., & Rao, S. S. (2014). Dietary fructose intolerance, fructan intolerance and FODMAPs. *Current gastroenterology reports*, *16*(1), 370. doi:10.1007/s11894-013-0370-0
- Lie, J., et al. (2020). Low-FODMAP Diet for Irritable Bowel Syndrome: What We Know and What We Have Yet to Learn. *Annual Review of Medicine*, 71:303-314 Doi: 10.1146/annurev-med-050218-013625
- Staudacher HM, Whelan K. The low FODMAP diet: recent advances in understanding its mechanisms and efficacy in IBS. Gut 2017;66:1517-1527.
- Tuck, C., et al. (2019). Implementation of the low FODMAP diet in functional gastrointestinal symptoms: A real-world experience. *Neurogastroenterology & Motility*. 32 (1). Doi: 10.1111/nmo.13730
- https://www.webmd.com/ibd-crohns-disease/crohns-disease/specific-carbohydrate-diet-overview
- Phillips, W. et, al. (2018). When a registered dietitian becomes the patient: translating the science of the low-fodmap diet to daily living. Practical gastroenterology, Series #175. <a href="https://med.virginia.edu/ginutrition/wp-content/uploads/sites/199/2018/05/Low-FODMAP-Diet-May-18.pdf">https://med.virginia.edu/ginutrition/wp-content/uploads/sites/199/2018/05/Low-FODMAP-Diet-May-18.pdf</a>.
- Suskind DL, Wahbeh G, Gregory N, Vendettuoli H, Christie D. Nutritional therapy in pediatric Crohn disease: the specific carbohydrate diet. J Pediatr Gastroenterol Nutr. 2014 Jan;58(1):87-91. doi: 10.1097/MPG.00000000000103. PMID: 24048168.
- https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gluten-free-diet/art-20048530
- Gottschall, E. Breaking the Vicious Cycle: Intestinal Health through Diet, The Kirkton Press, 1994.
- Journal of Clinical Gastroenterology: "Clinical and Fecal Microbial Changes With Diet Therapy in Active Inflammatory Bowel Disease."
- Journal of Pediatric Gastroenterology and Nutrition: "Clinical and mucosal improvement with specific carbohydrate diet in pediatric Crohn disease."
- North American Society for Pediatric Gastroenterology, Hepatology and Nutrition: "The Specific Carbohydrate Diet" (pdf).
- Nutrition: "Specific carbohydrate diet for pediatric inflammatory bowel disease in clinical practice within an academic IBD center."

### REFERENCES CONTINUED...

- Journal of Pediatric Gastroenterology and Nutrition: "Nutritional therapy in pediatric Crohn disease: the specific carbohydrate diet."
- Journal of Gastroenterology and Hepatology Research: "The Specific Carbohydrate Diet in the Treatment of Crohn's Disease: A Systematic Review."
- Journal of the Academy of Nutrition and Dietetics: "The Specific Carbohydrate Diet for Inflammatory Bowel Disease:
   A Case Series."
- Digestive Diseases and Sciences: "Patients Perceive Clinical Benefit with the Specific Carbohydrate Diet for Inflammatory Bowel Disease."
- Cincinnati Children's Hospital Medical Center: "The Benefits and Effects of the Specific Carbohydrate Diet" (pdf).
- Stanford University Pediatric Gastroenterology, Hepatology and Nutrition: "Nutrition in IBD: Enteral Nutrition and Alternative Diets" (pdf).
- Journal of Pediatric Gastroenterology and Nutrition: "Nutritional Adequacy of the Specific Carbohydrate Diet in Pediatric Inflammatory Bowel Disease."
- Clinical Gastroenterology and Hepatology: "Diet and Inflammatory Bowel Disease: Review of Patient-Targeted Recommendations."