



The Gut Health Paradox: Why High-Fiber Diets Backfire — and How Digestive Enzymes Can Help

About us



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Today we'll review

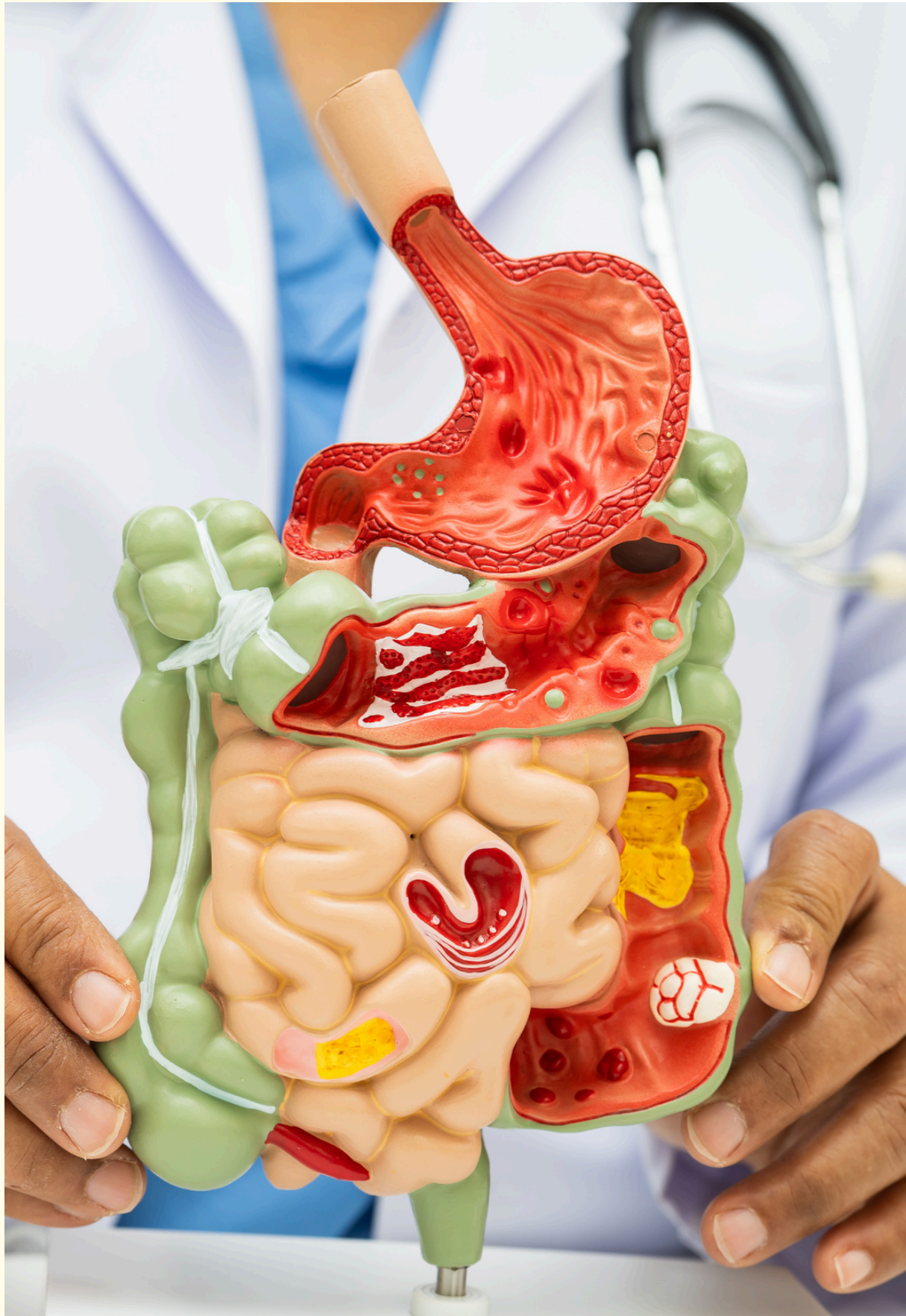
THE PARADOX OF “HEALTHY” EATING

THE SCIENCE OF DIGESTIVE ENZYMES

THE SOLUTION OF FODZYME

RESOURCES & Q&A





Gut health = "a state of normal gastrointestinal function without active gastrointestinal disease and gut-related symptoms that affect quality of life"

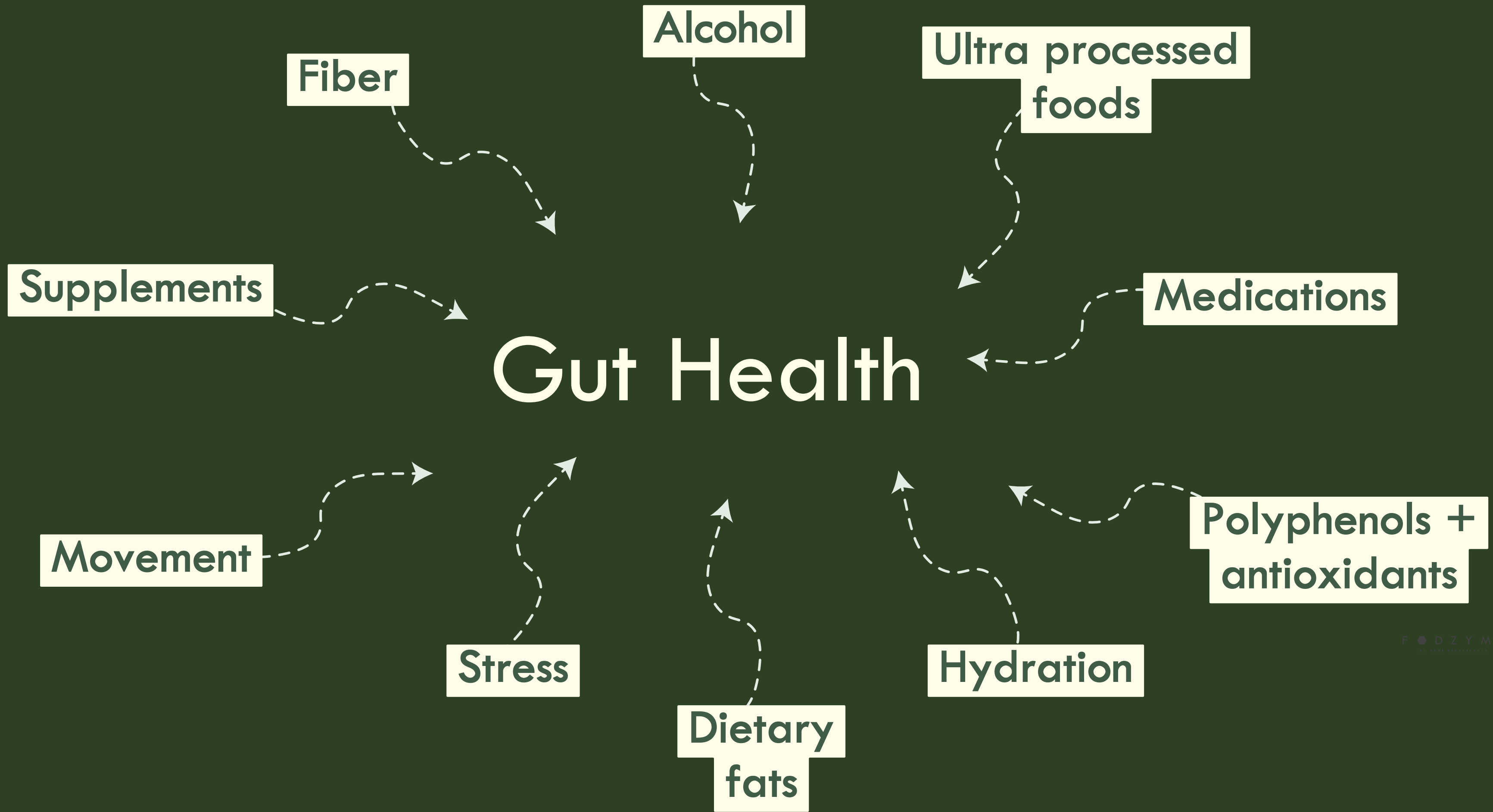
Regular bowel movements + gut motility

Adequate digestion + absorption

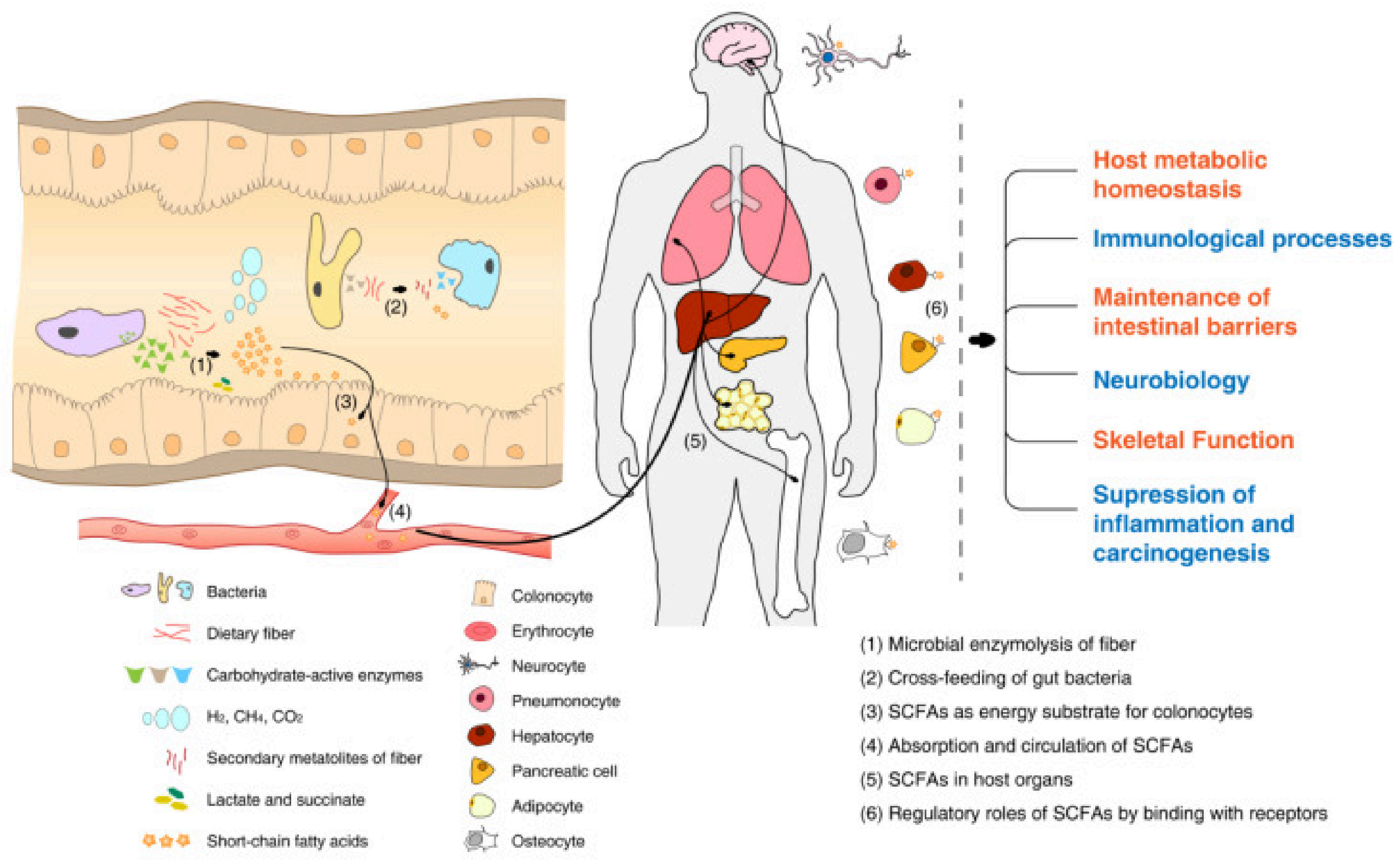
Stable, diverse gut microbiome

Strong intestinal barrier

Effective immune function







Low fiber intake is associated with microbiome disturbances, which have systemic negative health implications

**2026 American Cancer Society: colorectal cancer is
leading cause of cancer deaths for men <50
+ 2nd for women <50**

Ages 20-39 projected to rise by 90% by 2030!

Poor microbiome health and low fiber intake increases risk for:



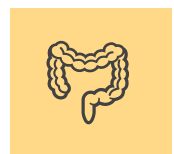
METABOLIC DYSFUNCTION



CARDIOVASCULAR DISEASE



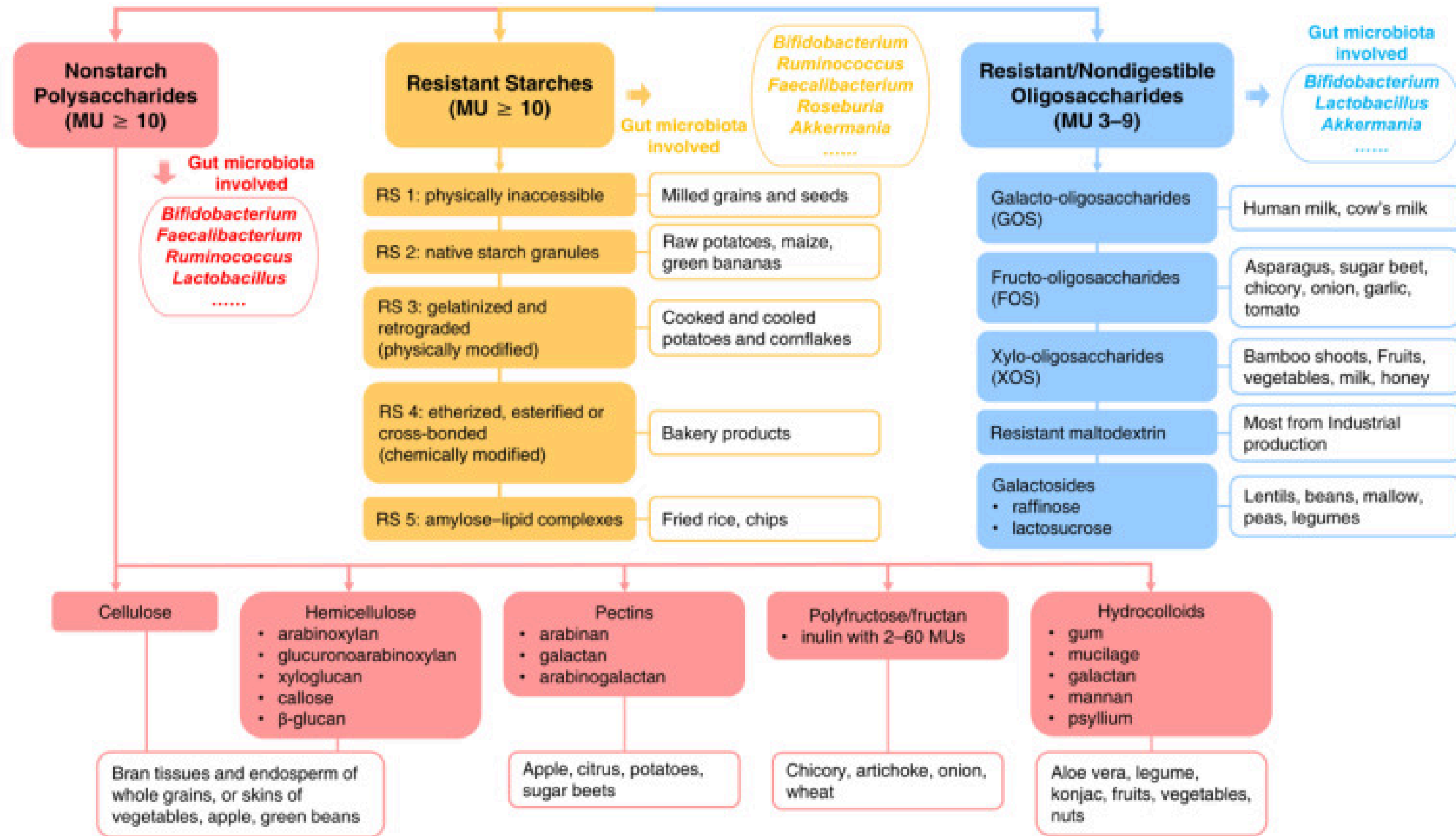
TYPE 2 DIABETES



COLON CANCER



A diverse microbiome relies on a diverse, fiber-rich diet



Increasing fiber decreases health risks





Fiber principles for health promotion

Target 30g or more of fiber per day

Include diverse fiber types from a variety of plant-based foods

Incorporate fiber-rich, plant-based protein sources like legumes

Choose wholegrain foods over refined products

Aim for at least 3g of prebiotic fiber per day

95%

of American adults and children do not consume the recommended amount of fiber

barriers to fiber consumption

Growing popularity of gluten-free, wheat-free, and grain-free diets (eg. Keto, paleo)

Confusion and misperception around good fiber sources (eg. misleading labels)

Beliefs that they do not taste good and are expensive and complicated to cook

Perceived and real negative digestive effects, such as intestinal gas

Abdominal pain is the #1 GI complaint

81%

of adults with abdominal pain were symptomatic in the past week

Perceived causes of abdominal pain

FOOD	UNSURE	GAS AND BLOATING				
CONSTIPATION	IBS	STRESS/ANXIETY	MENSTRUATION	GALLBLADDER	ACID REFLUX	
FOOD ALLERGIES	STRESS AND FOOD	MEDICATIONS	DIGESTIVE ISSUES	ULCERS	DIVERTICULITIS	
HERNIA	APPENDICITIS	FLU AND VIRUS	INFLAMMATORY BOWEL DISEASE	ALCOHOL	IRREGULAR BOWEL MOVEMENT	ENDOMETRIOSIS

vitamins & minerals

prebiotics

polyphenols

antioxidants

The healthiest foods can be the biggest triggers

fiber

prebiotics

resistant starch

fiber

vitamins & minerals



fructan

fructan

fructan

GOS

GOS

fructan

fructan

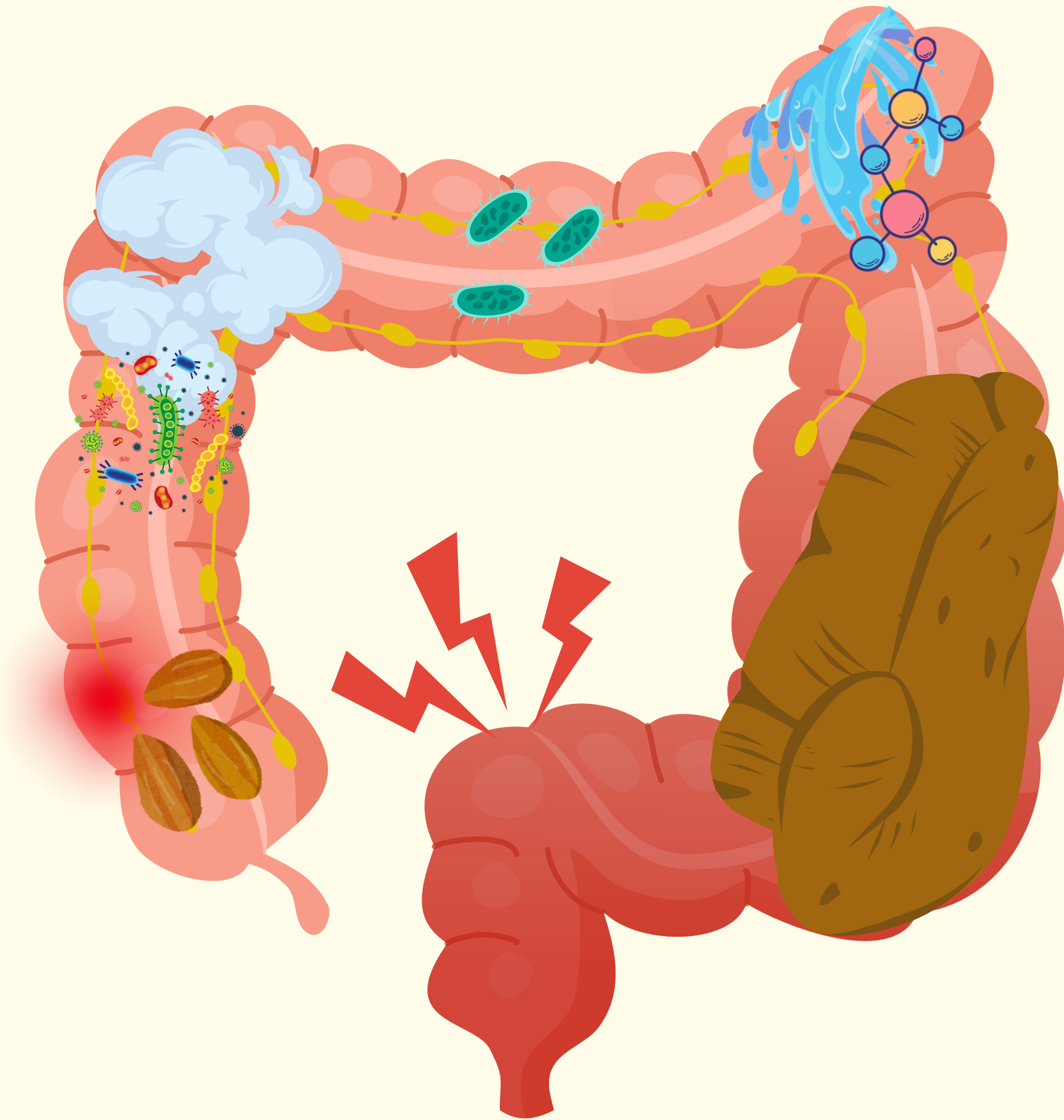
fructan


GOS

Symptoms lead to poor adherence to a Mediterranean diet



Why fiber can be problematic



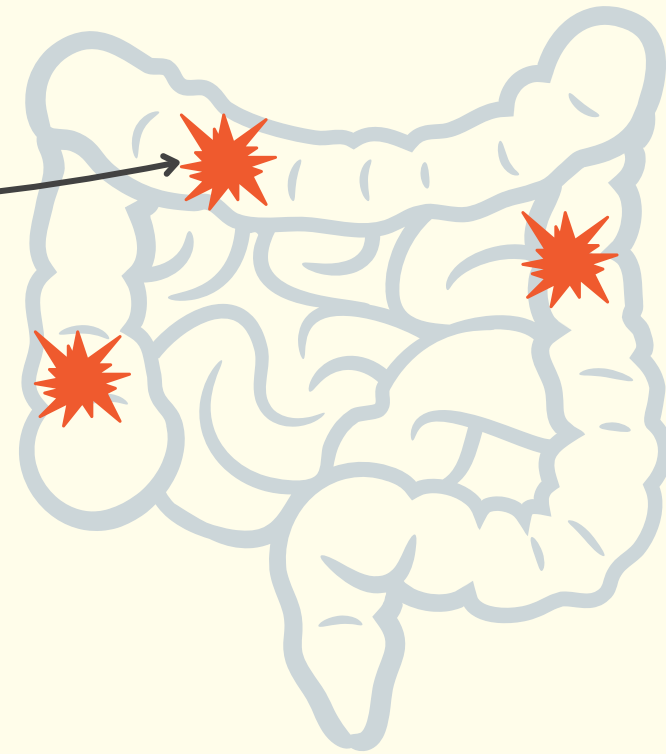


F Fermentable
O Oligosaccharides
D Disaccharides
M Monosaccharides
A And
P Polyols

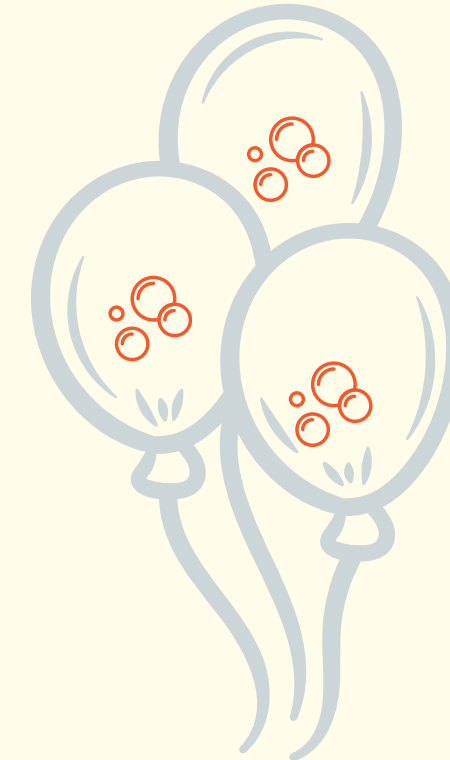
- Short-chain carbohydrates that are **indigestible or poorly absorbed** by the gut
- Can trigger gut symptoms like **abdominal pain, constipation, excessive gas, bloating, and diarrhea** when they reach the colon
- Symptom onset is generally **4-8 hours** after FODMAP intake

How FODMAPs trigger symptoms

Excess **water and fermentation** in the colon



Releases **gas** and creates pressure



Leading to **bloating, pain and irregular bowel movements**

Many FODMAPs are healthy fibers, which support short-chain fatty acid production

The low FODMAP diet (LFD)



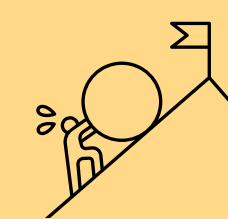
MONASH
University

A FODMAP diet is a 3 step diet used to help manage the symptoms of IBS.



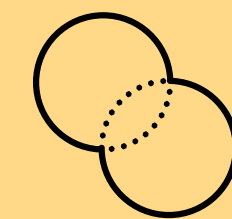
ELIMINATION

Eliminating / greatly minimizing high FODMAP foods, to assess for symptom relief



REINTRODUCTION / CHALLENGE

Systematically reintroducing foods containing FODMAPs to learn triggers & tolerance



PERSONALIZATION

Integrating the trigger foods and personalizing their intake

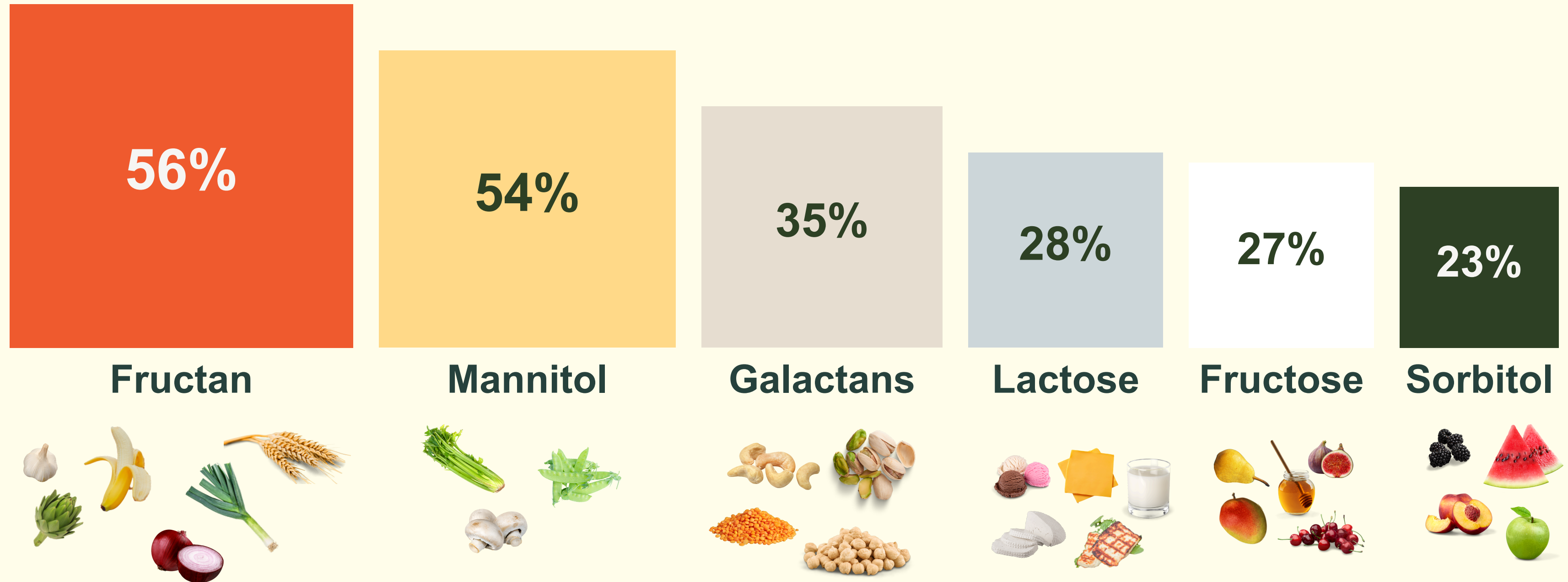
Where are FODMAPs?

FODMAPs and particularly **fructan** are found in the most, delicious fiber-rich foods and recipes...

...and are notoriously hard to avoid



The most common FODMAP triggers



Excessive diet restriction has risks

NUTRIENT & ENERGY DEFICIENCIES

SOCIAL ISOLATION

FOOD FEARS & ANXIETY

INCREASED FOOD COSTS

MICROBIOTA CHANGES DUE TO LOW FIBER



The digestive enzyme unlock

Enzymes are highly specialized proteins (chains of amino acids) folded in particular ways. Digestive enzymes can act on compounds in foods, including FODMAPs, to break them down.

ENZYMES CAN TARGET MANY TYPES OF CARBOHYDRATES

SUBSTRATE	ACTIVE ENZYME
Fructan (inulin, FOS, levan, graminan)*	Fructan hydrolase (proprietary to FODZYME [®])
Fructose*	Glucose isomerase (aka xylose isomerase)
Galactooligo-saccharides (GOS)*	Alpha-galactosidase
Inulin*	Inulinase (Endo or Exo)
Lactose*	Lactase
Pectin	Pectinase
Polyols (mannitol, sorbitol)*	Under development
Sucrose	Invertase, fructan hydrolase
Starch	Amylase & glucoamylase
Insoluble fiber	Hemicellulase

*FODMAPs



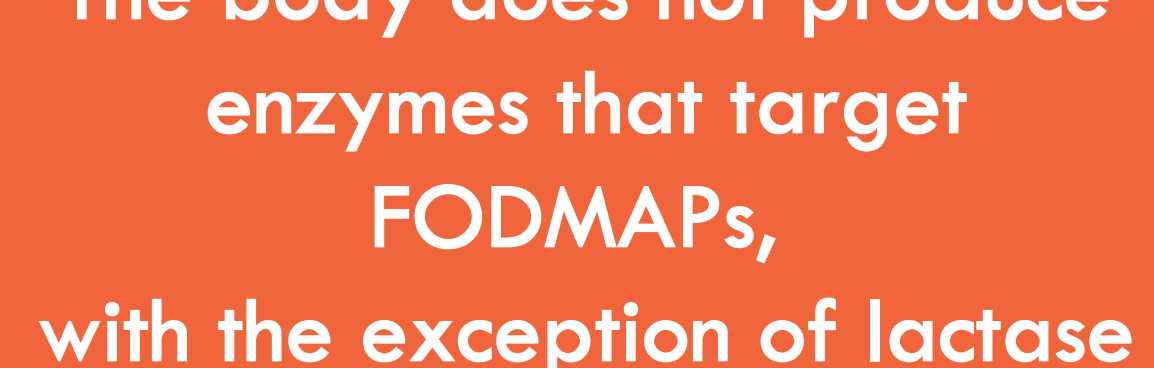
Enzymes for FODMAPs

Digestive enzymes act as specialized molecular scissors to break down FODMAP molecules, making them easier to digest.

Targeted use of digestive enzymes with FODMAP-containing foods helps break down their FODMAP content before they can trigger symptoms.

THE MOST EFFECTIVE ENZYMES FOR FODMAPS:

- Lactase
- Alpha-galactosidase
- Fructan hydrolase



The body does not produce enzymes that target FODMAPs, with the exception of lactase

Clinical guidelines on enzymes

Guidelines in peer-reviewed journals and by Monash University on how to implement the low FODMAP diet recommend the use of digestive enzymes to enable:

- 1 **Management of symptoms**, eg. bloating, gas, diarrhea, constipation
- 2 **Dietary flexibility** and reduced anxiety around social or uncontrolled eating situations
- 3 **Long-term sustainability** and expanded food options to meet nutrition needs



Efficacy of digestive enzymes

Research shows that those with FODMAP sensitivities benefit from using enzymes with otherwise triggering foods:

1

Supplemental **lactase** reduces bloating, abdominal pain and gas in both adults and children

2

In those with IBS, **alpha-galactosidase** prevents bloating and gas and reduces global distress following galactan-rich meals

3

Multi-enzyme blends can help control overall IBS and IBS-like symptoms such as bloating, gas and abdominal pain



Clinical
Research

Intolerances guide enzyme selection

Most meals contain multiple FODMAPs, so combination products are helpful

LACTOSE

Lactase

Milk, ice cream, frozen yogurt, gelato, soft cheeses (ricotta, cottage, paneer, etc), yogurt, kefir, pudding, custard, condensed milk

FRUCTAN

Fructan hydrolase

Onions, garlic, scallion, shallot, leek, wheat bread, pasta, spelt, inulin, FOS, artichoke, chickpeas, Brussels sprouts, dried fruit, beets, cabbage

GALACTANS/GOS

Alpha galactosidase

Beans, beets, lentils, falafel, hummus, soymilk, soybeans, soft tofu, peas, cashews, pistachios, kale, tomatillo, almond meal

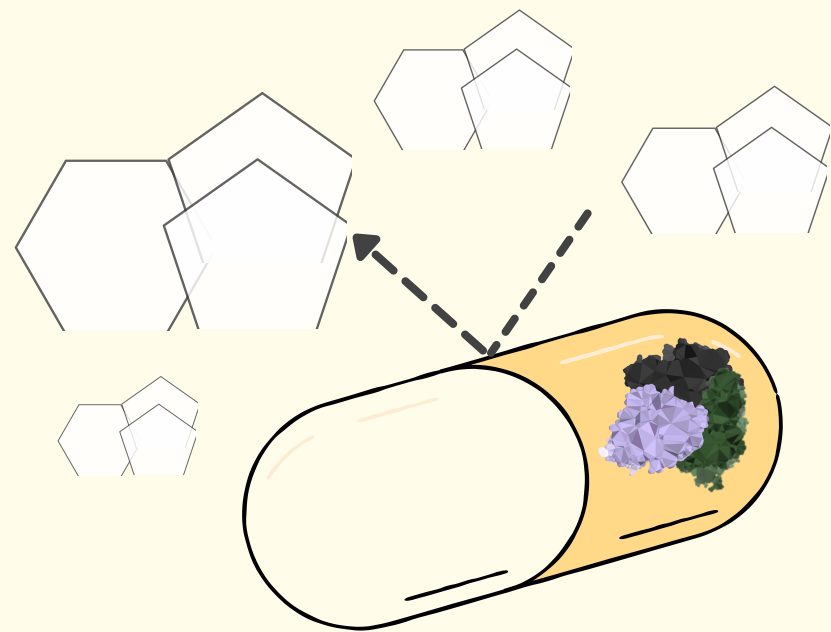
FRUCTOSE

Xylose/glucose isomerase

Apples, pear, fig, mango, watermelon, fruit juice/smoothies, honey, agave nectar, high fructose corn syrup, candies and sweets

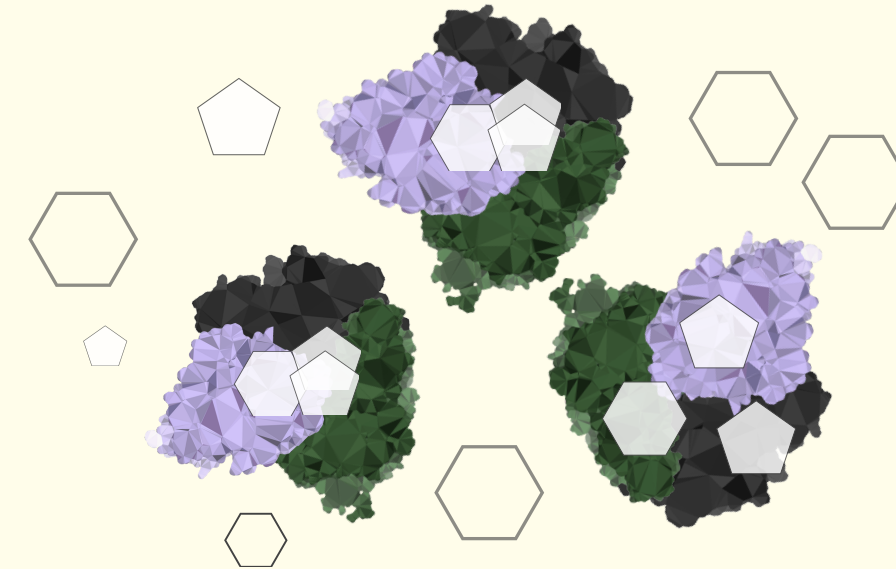
Powders vs. Capsules

While most enzyme products are sold as capsules or pills, a powder format is more efficacious to support maximum FODMAP break down.



ENZYMES IN CAPSULES:

- isolated from FODMAP substances
- deactivate in the stomach
- are digested themselves



ENZYMES IN POWDER FORM:

- get to FODMAPs faster & break them down
- integrate easily with FODMAPs
- distribute freely in food in the gut

What to look for in an enzyme

How to choose an effective digestive enzyme

TARGETED FORMULA

An effective digestive enzyme will target a patient's known or suspected triggers

MODE OF ADMINISTRATION

A powder form maximizes an enzymes' effect, while capsules reduce their ability to homogenize with and break FODMAPs down

NO OTHER GUT TRIGGERS

Avoid supplements formulated with mannitol, sorbitol, lactose, carrageenan, emulsifiers, artificial sweeteners and other gut irritants

BACKED BY SCIENCE

Exercise caution when non-peer reviewed studies are cited. Also be wary of citations on background bioactives research and lack of research on a product's formula

About FODZYME[®]

We make food painless

FODZYME[®] breaks down FODMAPs into simple sugars, that are quickly absorbed in the small intestine to reduce the amount of FODMAPs in the colon

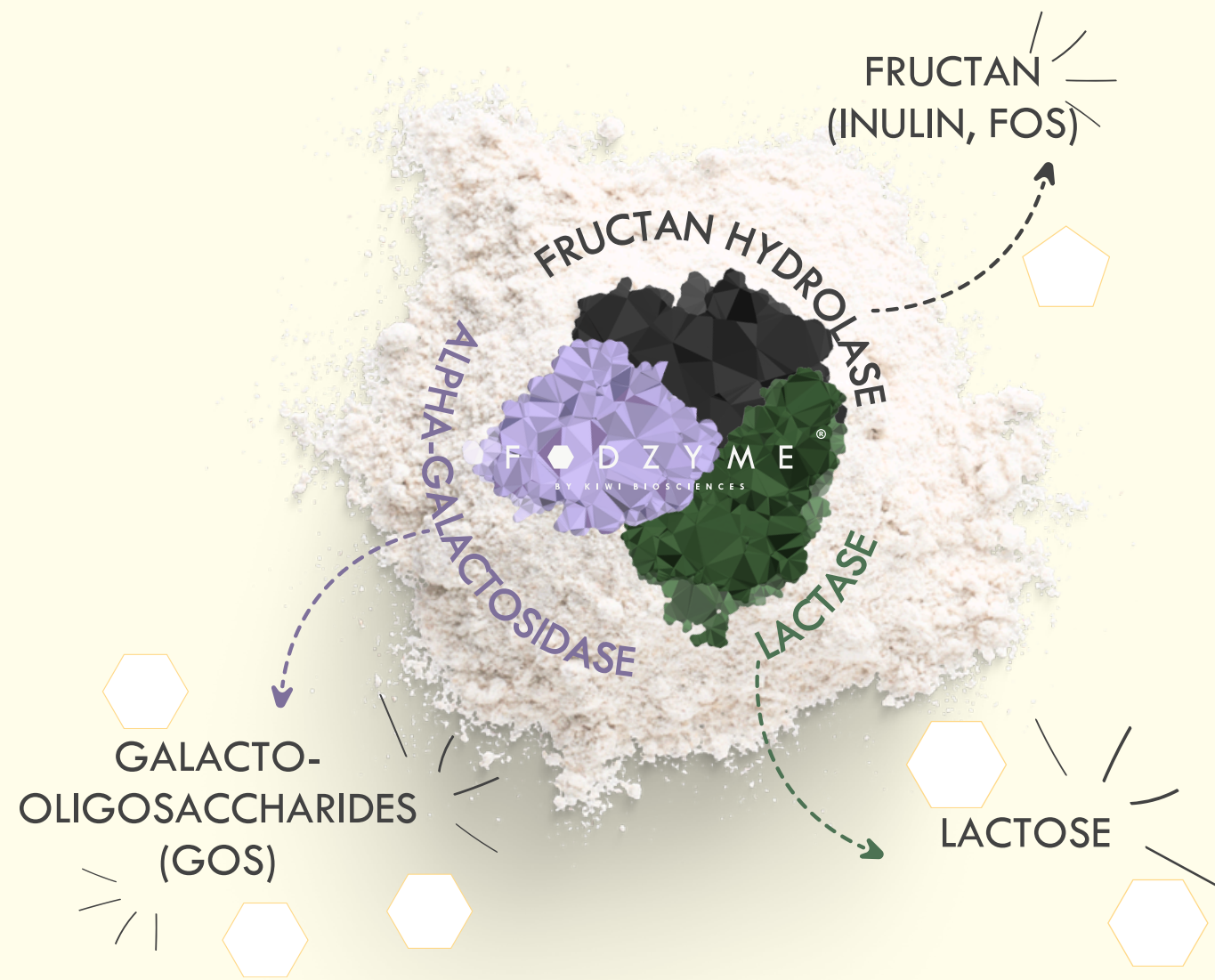
FODZYME[®] BREAKS DOWN

- Galacto-oligosaccharides (GOS)
- Lactose
- Fructan (inulin, FOS, levan, etc.)



OUR FORMULA

Designed to address the most common gut triggers



FODMAP SUBSTRATE	ACTIVE ENZYME	F O D Z Y M E [®]
Fructan (inulin, FOS, levan, etc.)	Fructan hydrolase	●
Galactooligo-saccharides (GOS)	Alpha-galactosidase	●
Lactose	Lactase	●
Polyols (mannitol, sorbitol)	N/A	Under development

Other ingredients: dextrin to stabilize the enzymes

Backed by science

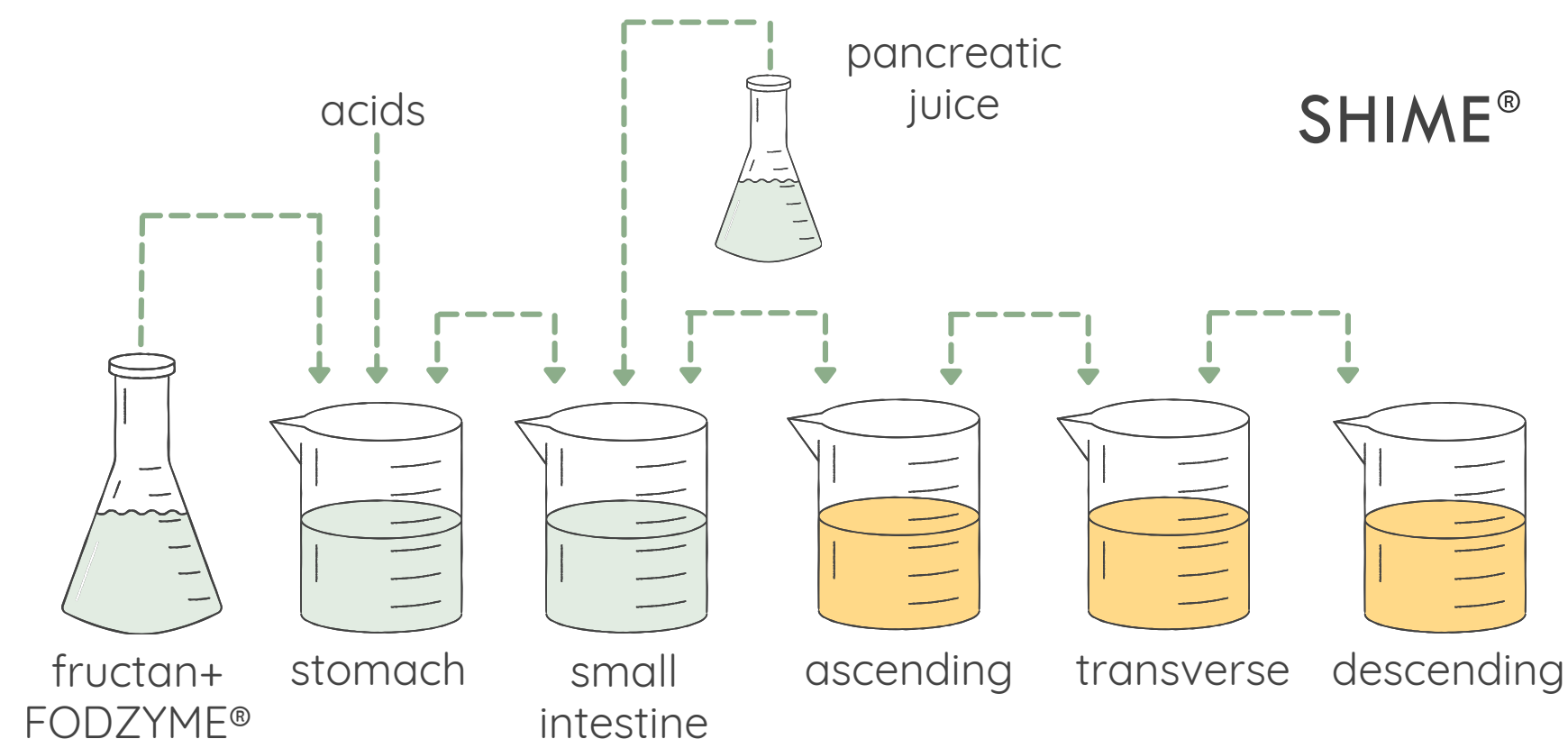
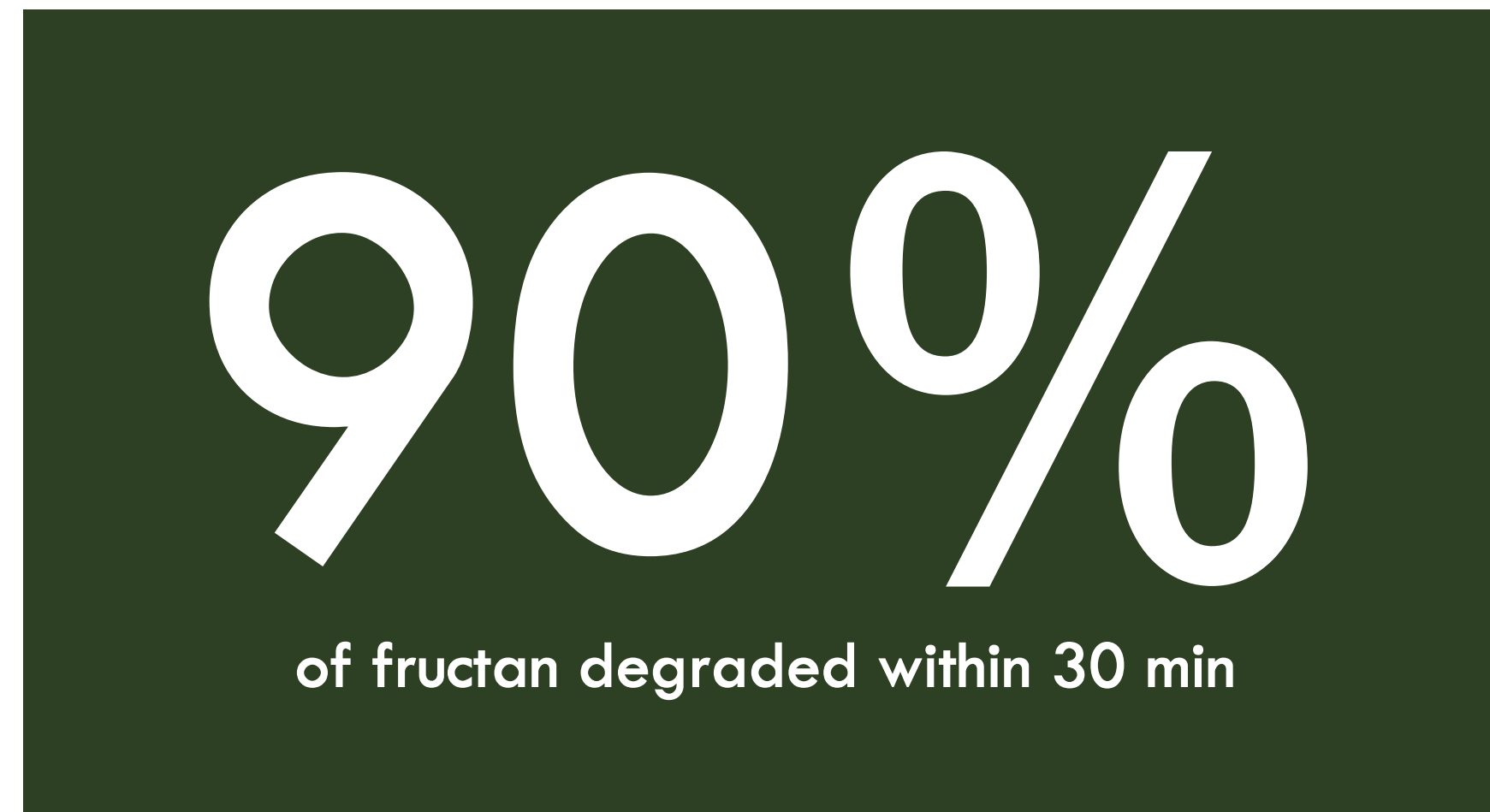
We tested FODZYME®'s efficacy through SHIME®, a scientifically validated model of a human gut.

We discovered that 90% of inulin (fructan) was degraded within half an hour.

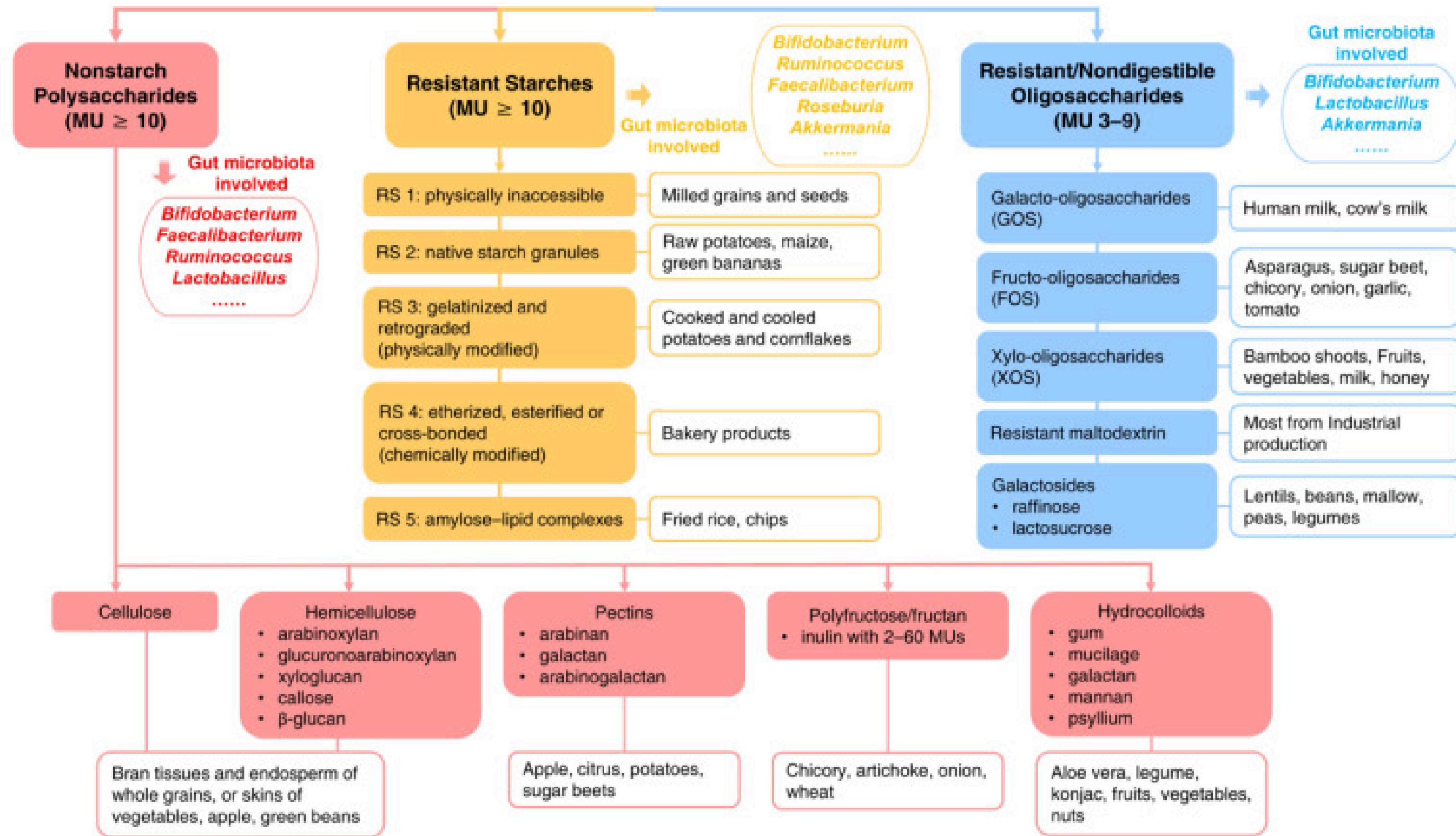
70% of fructose was absorbed during the simulated small intestinal transit

SCFA production is lower but preserved, thus reducing gas

F O D Z Y M E®



Digestive enzymes like FODZYME[®] enable greater intake of fiber-rich, healthy foods like whole grains, fruits, vegetables and nuts



Clinically studied

- Gas & Bloating
- Abdominal Discomfort
- Constipation
- Diarrhea

78%

Report a clinically relevant decrease in bloating at 4 wks

74%

↑ quality of life

71%

↓ food avoidance

Getting started



1

MIX INTO FOOD DIRECTLY OR SPRINKLE AND CHEW WITH FIRST BITE

2

CHEW WELL TO HELP ENZYMES INTEGRATE INTO FOOD

3

ADD A SECOND DOSE FOR LARGER AND EXTENDED MEALS

4

EXPECT BENEFIT 4-8 HOURS AFTER MEAL OR SNACK

Benefits of regular use



social events



dining out



home cooked meals



traveling

1

Designed as an alternative approach to managing symptoms associated with high-FODMAP foods without requiring strict restriction

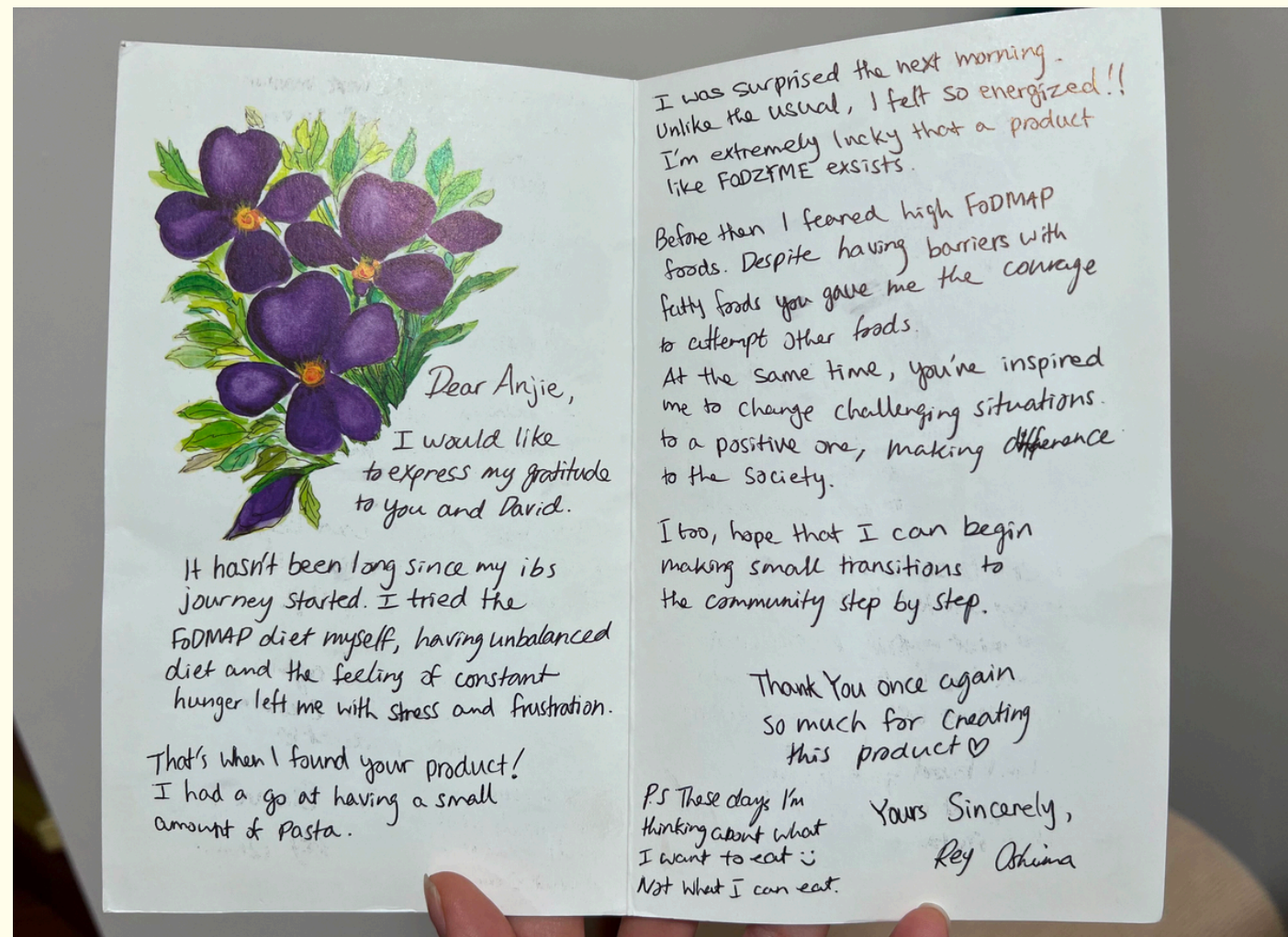
2

Freedom to eat high-FODMAP foods, without the worry

3

May support greater dietary flexibility and quality of life for people managing digestive sensitivities

Extra confidence for diet expansion



"Kiwi Biosciences aims to free Irritable Bowel Syndrome sufferers from restrictive diets"



★★★★★ Verified Mar 10, 2022

Best thing that happened in my life in...

Best thing that happened in my life in a Long time!!!! Fodzyme has made a HUGE difference in my life. I used to be sick to my stomach all the time, now it is uncommon to not feel just fine. THANK you for caring enough to make this AMAZING product for people like me with IBS & other dietary concerns.

Date of experience: March 10, 2022

★★★★★ 5 days ago

This product is a gift from the gods

This product is a gift from the gods. I've had IBS for 19 years and have tried absolutely everything under the sun, and the only thing that seemed to give me relief was an extremely strict low FODMAP diet (which was really hard to maintain and made it impossible to eat at restaurants). I was praying for a product like this. It works really well on symptoms like gas, bloating, pain, etc. I'm still waiting to see if it will improve constipation. I am forever grateful to the Fodzyme team. You have changed my life!! I can't wait for the polyols product!!!

Date of experience: January 28, 2023

bourbon_and_kittens i wish y'all every success, because it would be completely and utterly devastating to return to life before Fodzyme - no joke. thank you! ❤️

BJ Smith FODZYME dude, You have seriously improved my life significantly by letting me eat like a normal human again without having to read every ingredient

Like Reply Hide Send Message 2d

★★★★★ Verified Dec 11, 2022

So happy I found YOU

So happy I found YOU! My tummy thanks you. I can eat whatever I want. So far with no problems! Just happiness.

Miaoue @Miaoue1

Replying to @AlexNDArtist

i'm an enormous fan of @fodzyme for those foods i really need or want to eat which aren't compatible with my low fodmap needs. i think it might also be useful as a test of whether reducing your fodmap intake helps you, without having to resort to an elimination diet

15:48 · 20/09/2022 · Twitter for Android

Mat Hennessey @stokey_abroad

@fodzyme very happy to be eating baked beans and vegan sausages containing onion today!

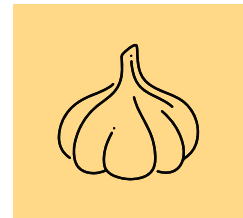


Specific nutritional benefits



NUTRITIONAL DIVERSITY

Avoid nutrient deficiencies and promote health (eg. calcium-rich dairy to support bone health)



PLANT-BASED FIBER FOODS

Increase fiber variety and tolerated volume to support microbiome health



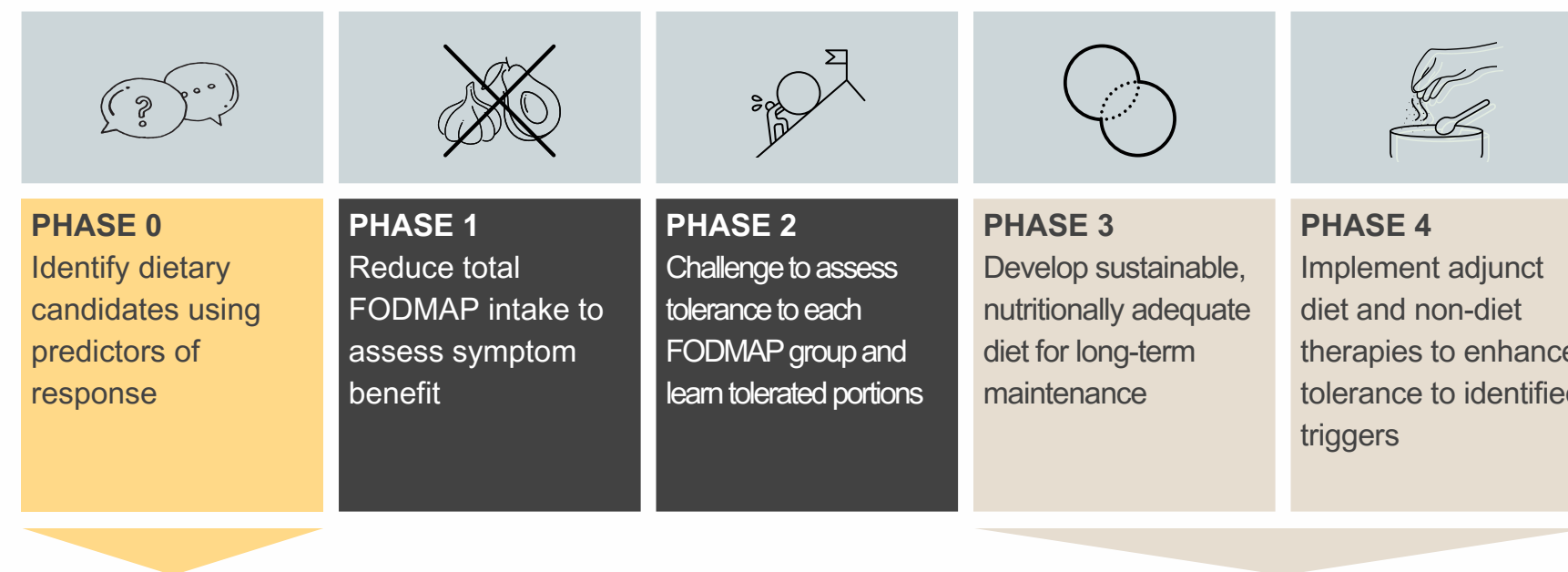
PROTEIN BEYOND MEAT

Increase high-FODMAP protein foods like tofu, peas, legumes, nuts, soy and dairy



Ways to use FODZYME[®]

Enzymes may be used with or without dietary change based on a patient's indications, interests and awareness of FODMAP triggers



WITHOUT DIETARY CHANGES

When knowingly eating food that contains FODMAP triggers (eg. garlic, dairy, beans)

Regardless of meal makeup when FODMAP content is unknown

WITH DIETARY CHANGES

With known triggers during the personalization phase of the low FODMAP diet

Following identification of FODMAP triggers through alternative approach (eg. swapping)

When to use FODZYME[®]

Use as frequently as needed. Most meals contain FODMAPs

Fructan	GOS	Lactose	Fructose	Polyols
Artichoke	Almond	Buttermilk	Agave	Apple
Banana	Beans	Condensed Milk	Asparagus	Apricot
Brussels Sprouts	Beet	Cream	Bell Pepper (Red, Orange, Yellow)	Artificial Sweeteners
Cabbage	Cassava	Cream Cheese	Butternut Squash	Avocado
Cauliflower	Cashew	Cottage Cheese	Figs	Blackberry
Chicory Root, Inulin	Chickpeas	Custard	Fruit Juices	Celery
Corn	Falafel	Goat Milk	High Fructose Corn Syrup	Cherry
Dried Fruit	Kale	Goat Cheese	Grapes	Coconut
Garlic, Onion	Lentils	Haloumi	Grapefruit	Date
Honeydew	Peas	Ice Cream	Honey	Mushroom
Pomegranate	Pine Nuts	Kefir	Mango	Nectarine
Scallion, Shallot	Pistachio	Milk	Pear	Peach
Squash (Acorn, Delicata, Kabocha, Pumpkin)	Silken Tofu	Powdered Milk	Raisins	Plum
Sweet Potato	Soy Milk (Soy Bean)	Ricotta	Soda	Prune
Wheat, Rye, Barley	Taro	Sour Cream	Tomato	Rutabaga
Zucchini	Tomatillo	Queso Fresco		Turnip
	Walnuts	Yogurt		Watermelon

..... Broken Down by FODZYME[®] Limit Portions per Tolerance

Where FODZYME fits in

Digestive symptoms (bloating, pain, gas, diarrhea, constipation)

Limited intake of plant-based foods due to fear of symptoms

Food anxiety or worry of symptoms for confidence to expand

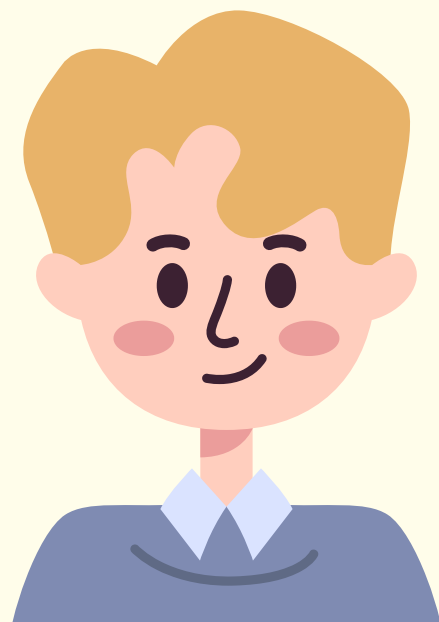
Disordered eating or on a restrictive diet for another condition

Low fiber tolerance (gluten-free, low-carb, ketogenic or paleo)





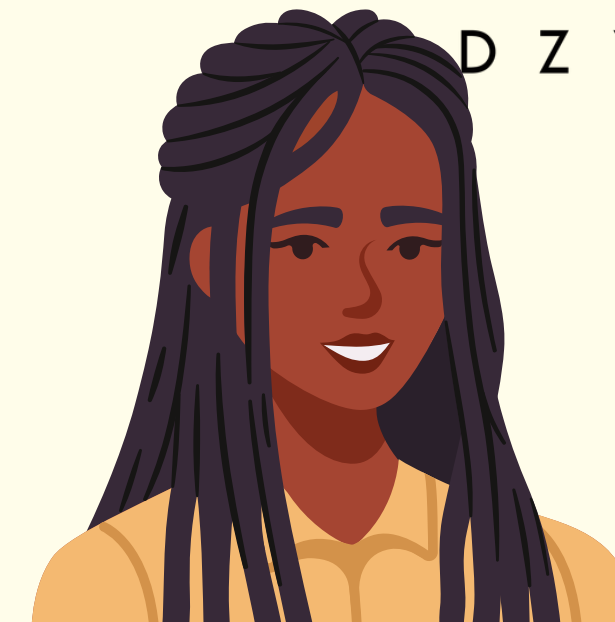
Navigating IBS. Unsure of symptom triggers - feeling stuck and overwhelmed



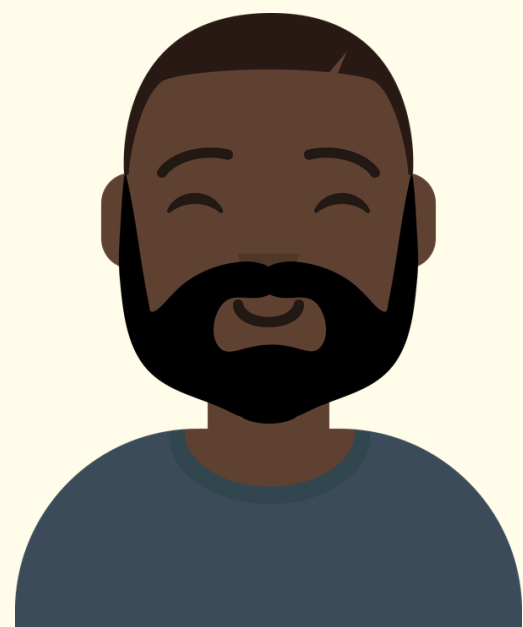
Coping with SIBO diagnosis. High symptom burden while navigating treatment



Managing endometriosis and notices more gas + bloating throughout cycle



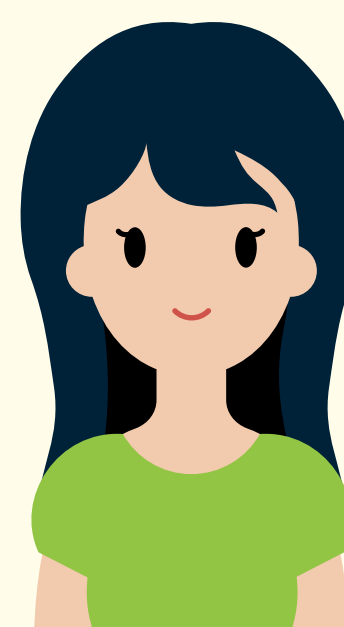
Increased symptoms while entering perimenopause and struggling with diet recs



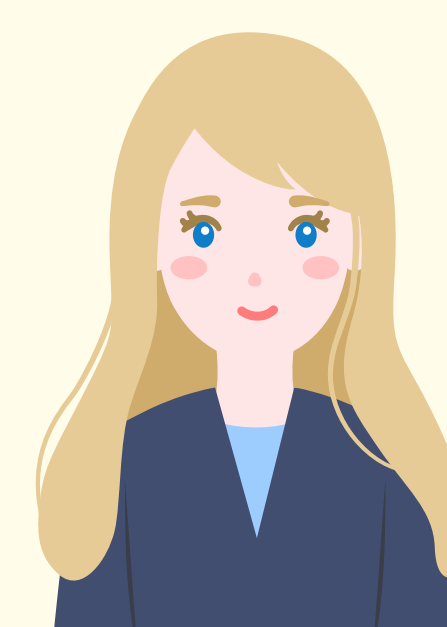
IBD in remission but noticing more gas and bloating while increasing fiber



Food intolerances have come "out of nowhere" with age - also needs to gain weight



History of an eating disorder and now navigating an IBS diagnosis



Went through a LFD and found triggers but now feeling limited



Troubleshooting

FIBER

Increase gradually, diversify types, consider fiber manipulation (eg. hummus vs. chickpeas)

HYDRATION

Encourage hydration throughout the day, especially as fiber intake increases

PORTION SIZES

Listen to satiety cues, eat slowly and mindfully, chew well

OTHER TRIGGERS

Monitor fatty and spicy foods, alcohol, caffeine, carbonation and artificial sugars

FODZYME[®] in your practice

Request **samples**
+ **handouts** to
pair with your
recommendation



Patient sees **success**
& they place an
order with a
discount code



RD-led onboarding
team provides **support**
with dosing & use, while
you move **forward** in
your care plan

Need more information to feel confident in the recommendation? Book a call with us!

A hand is shown pouring a green powder from a small packet into a stainless steel pan. The pan contains a dish with yellow sauce, white noodles, and green herbs. The packet is labeled 'FODZYME' and 'sprinkle to make food painless'. The background is a wooden table.

Request samples

link.fodzyme.com/hcpsamples

Where to find FODZYME[®]

PRICE PER DOSE



SUBSCRIPTION \$1.08
ONE TIME ORDER \$1.35

PRICE PER DOSE



SUBSCRIPTION \$2.17
ONE TIME ORDER \$2.71



↪ Comes with access to RD-led customer support

A hand is shown pouring a green powder from a small packet into a stainless steel pan. The pan contains a dish with yellow sauce, white noodles, and green herbs. The packet is labeled 'FODYMELT' and 'sprinkle to make food painless'. The background is a wooden table.

Thank you!

Questions?