

Reintroduction Workbook

OVERCOME FOOD FEARS &
CONFIDENTLY EXPAND YOUR DIET



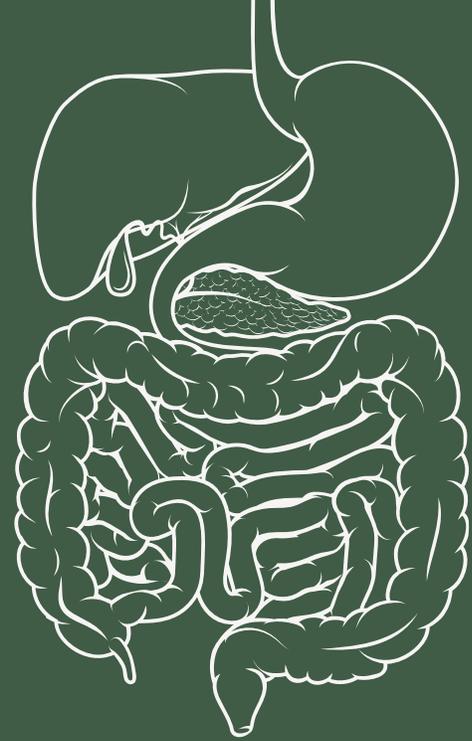
About this workbook

Fear or anxiety can often get in the way of reintroducing foods.

Management of many gastrointestinal (GI) symptoms comes with recommendations for dietary restrictions. When this restriction becomes excessive or prolonged, it can have a negative impact on overall health.

In some cases, restriction can lead to the development of a condition called Avoidant Restrictive Food Intake Disorder, or ARFID. Whether you've been formally diagnosed with ARFID or simply notice yourself getting anxious about the idea of trying new foods, expanding your diet is important and possible.

This guide is for those with digestive conditions who find themselves on a restrictive diet — and want help adding in more foods. Designed by expert dietitians with expertise in both GI diseases and eating disorder treatment, this workbook provides practical tools and exercises to help you you confidently reintroduce more foods into your diet.



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What is ARFID?

Avoidant Restrictive Food Intake Disorder (ARFID) is a formally recognized eating disorder

ARFID results in limited food intake or limited variety of foods eaten due to food-related anxiety or aversions. These diet restrictions can have nutritional and health consequences, as well as negative impacts on social wellbeing.

Unlike many other eating disorders, dietary restriction in ARFID is not due to body image concerns. However, some people may struggle with ARFID symptoms and body image concerns simultaneously.

ARFID is associated with one (or more) of:

- Significant weight loss
- Significant nutritional deficiency
- Dependence on nutrition shakes or tube feeding
- Marked interference with psychosocial functioning



ARFID can impact both physical health, resulting in weight loss or nutritional deficits, as well as social wellbeing, resulting in avoidance of social settings with food.

Excessive vs. necessary restriction

Dietary restriction is a routine part of care for many GI conditions. Restriction becomes a concern when it goes beyond what is needed for symptom control.

- The impacts of restriction will manifest differently for each person. They could mean fear of eating at restaurants or in social settings, or lead to fear of adverse sensory reactions to eating
- Restriction that becomes harmful to physical or mental health can and should be addressed
- For those with GI conditions, the reason for restriction is often related to fear of GI distress from the food
- The goal with diet therapy for GI conditions is always to follow the least restrictive diet possible that also keeps symptoms to manageable levels

1 Consider signs of excessive restriction:

- **Avoidance of food** or eating due to fear of GI discomfort
- **Limiting variety** of foods due to fear of GI discomfort
- Eating **small portions** due to fear of GI discomfort
- Difficulty **socializing** due to dietary restriction
- **Loss of pleasure** or interest in food and missing certain foods
- **Frustration** with your restrictive diet

2 Explore your relationship with food:

How would you describe your **relationship with food?**

Do you **enjoy** food?

Do you **skip meals** due to fear of GI symptoms?

Do you feel **anxious** around food?



IMPACTS OF UNDERNUTRITION ON THE GUT

MECHANISM

Inadequate dietary protein and energy results in atrophy of passive muscles involved in digestion. Reduced intake can also lower activity of gastrocolic reflex and motility leading to stagnation of food in digestive tract

Impaired absorption of certain carbohydrates, like FODMAPs, in the small intestine

Decreased dietary intake and variety may reduce diversity of bacteria in microbiome

SYMPTOMS

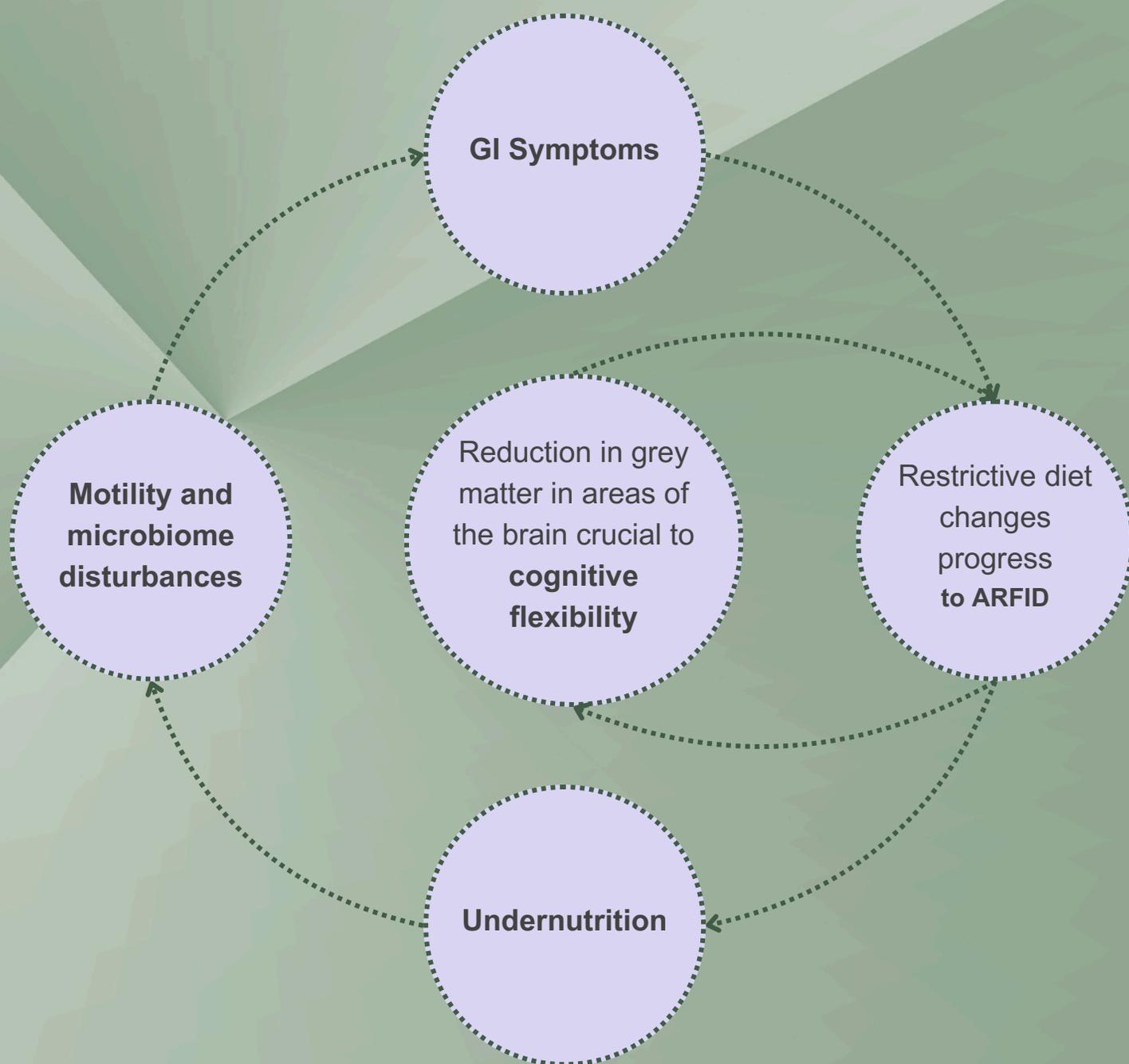
CONSTIPATION, EARLY SATIETY, NAUSEA, BLOATING

BLOATING, GAS, DIARRHEA

AMPLIFIED SIGNALING BETWEEN THE GUT-BRAIN AXIS LEADING TO VISCERAL HYPERSENSITIVITY

Restoring nutritional status can reduce or reverse these consequences and help manage GI symptoms

The ARFID undernutrition cycle



In the ARFID undernutrition cycle, GI symptoms can lead to increased dietary restriction in an attempt to manage digestive issues. This restriction then contributes to malnutrition and can instead worsen symptoms. ARFID also contributes to rigid thinking due to the impact of undernutrition on cognitive flexibility. With treatment, brain activity and digestive function can be restored and the cycle can be broken.

What can lead to ARFID

Exclusion diets, severe GI symptoms and other factors all increase risk for restrictive eating behaviors and ARFID

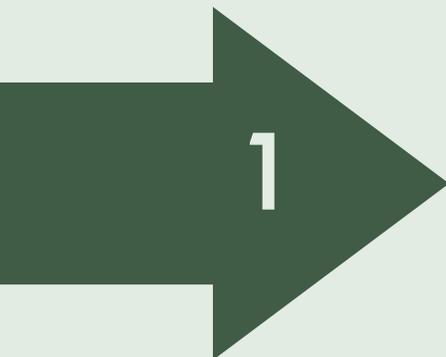
- Individuals who have been on a **restrictive diet**, such as low FODMAP or gluten-free, are 3x more likely to have ARFID symptoms
- Among those with GI conditions, greater **symptom severity** has been associated with increased ARFID risk
- Other conditions, such as **anxiety, autism and obsessive compulsive disorder** may also increase ARFID risk
- ARFID may affect 12 - 21% of those with disorders of gut-brain interaction. **Fear of food** is a primary factor leading to excessive restriction

Why haven't I heard about ARFID before?

- The connection between ARFID and GI conditions has historically been under-recognized. Research in the past few years has uncovered the serious impact ARFID can have in GI treatment
- Healthcare providers are increasingly recognizing the need to support patients managing both GI symptoms and food anxieties or restrictions
- ARFID rates are on the rise due to increasing numbers of people following a restrictive diet without proper support and rampant fear-mongering around food on the internet
- A wealth of tools, providers and treatment options are available to support recovery



Goals for ARFID nutrition

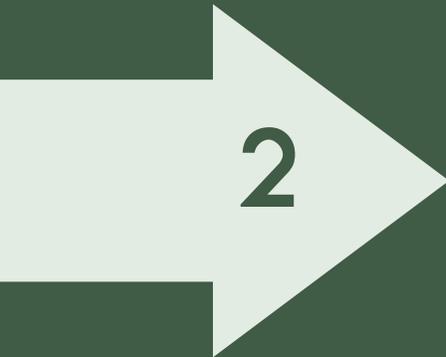


1

RESTORE NUTRITIONAL ADEQUACY

Ensuring nutritional needs are met will improve GI function and overall nutrition status. Proper nourishment helps restore digestive function, cognitive flexibility and confidence around food.

Stability in daily intake is a vital first step to ensure success ahead of dietary expansion.



2

EXPAND DIETARY VARIETY

Increased variety also improves nutrition status over time. A diverse diet helps feed the microbiome to support digestive health and reduces risk for vitamin and mineral deficiencies.

Dietary flexibility is also crucial to enjoy social interactions that involve eating and reduce time spent around food planning.

Build a multidisciplinary care team. A specialized therapist and/or GI psychologist can support your progress. Visit <https://romegipsych.org> for a list of providers.

Reintroduction exercises

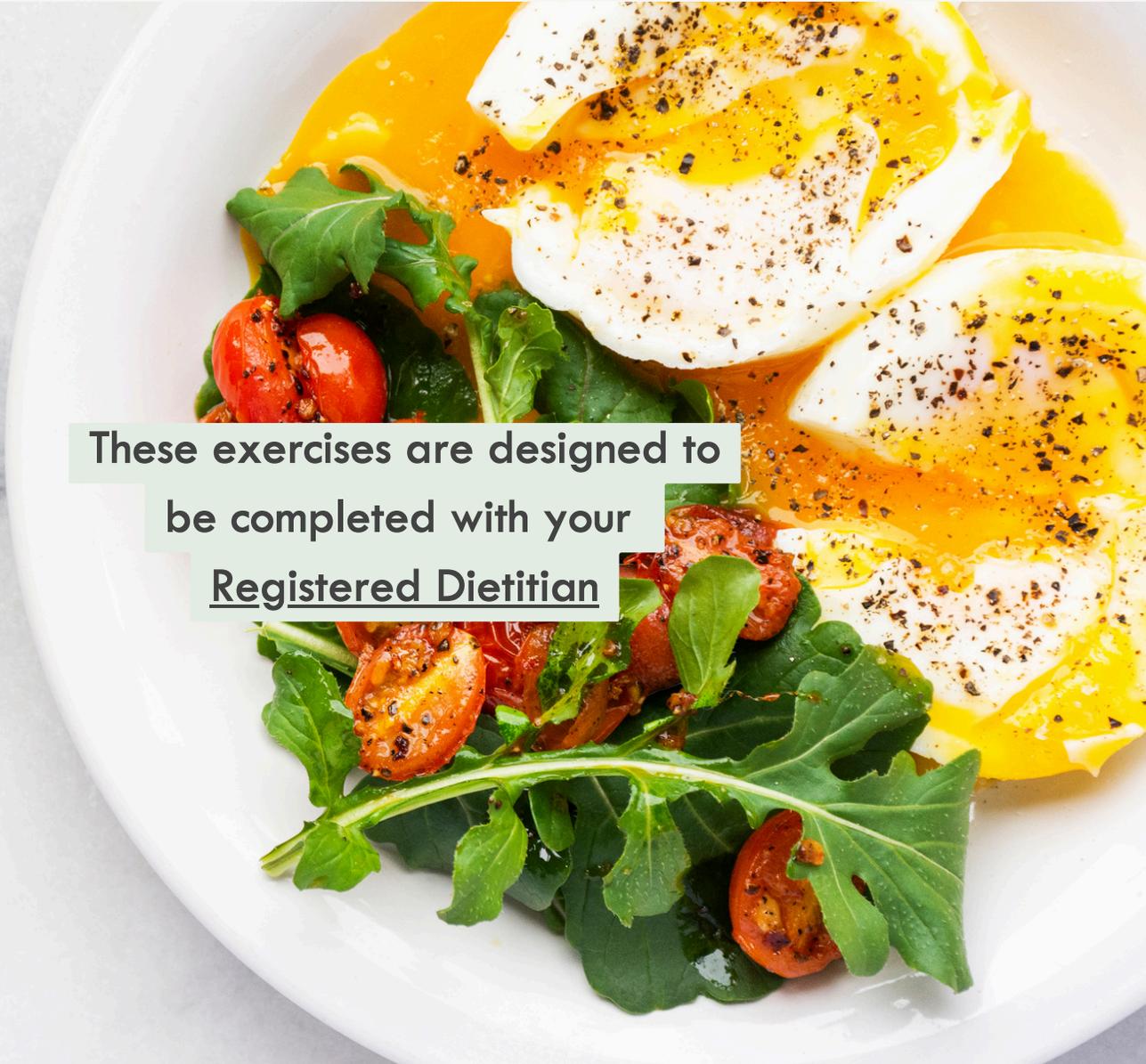
The following section of this guide contains several exercises to help you expand your diet

The exercises you choose to complete will depend on your particular goals and interests. There is no right or wrong order to complete them in, nor do you need to complete them all.

We've provided examples but know that the foods you work on reintroducing, eating scenarios and timeline will be highly specific to your situation.

Exercises include:

- Goal setting
- Meal planning
- Food fear/exposure hierarchy
- Reintroduction/exposure planning
- Food chaining

A top-down view of a white plate containing a sunny-side-up egg, a portion of arugula, and several cherry tomatoes. The egg is cooked with a runny yolk and is topped with black pepper. The arugula and tomatoes are also topped with black pepper. The plate is set on a light-colored, possibly marble, surface.

These exercises are designed to
be completed with your
Registered Dietitian

Goal setting

Create and set personalized goals to ensure you're working towards what matters most to you. Goals keep you motivated and committed to your progress.

- 1 **Reflect on how diet restrictions or rules may be impacting your nutrition or social life**
- 2 **Discuss with your dietitian how the thoughts and behaviors you have around food could change and what impact change might have**
- 3 **Agree on specific, measurable goals that feel realistic and achievable to work towards. Fill them in here:**

	GOAL DESCRIPTION	ACTION STEPS	PROGRESS OR REFLECTIONS
EXAMPLE	Try mixed-bean grab-and-go pot at Pret	<ul style="list-style-type: none"> - Trial 2 tbsp black bean hummus at home - Add a can of beans to my usual chicken and rice soup recipe - Try 1/2 mixed-bean pot paired with 1/2 of my usual order at Pret 	<ul style="list-style-type: none"> - Tolerated hummus and beans in soup without GI symptoms - Scheduled a day to go to Pret for lunch
1			
2			
3			

FILL ME IN

- 4 **Return to your goals weekly or monthly to celebrate progress, reflect on challenges and set new goals**

Meal planning

Nutritional adequacy starts with a plan. Aim for regular meal and snack times, every 3-4 hours. Brainstorm balanced meal and snack ideas so you have ideas handy when shopping and eating.

MEAL	TIME	GOAL	TARGET PORTION	EXAMPLE	EXAMPLE	EXAMPLE
Breakfast		protein starch fruit/veg fat				
AM Snack		1-2 foods				
Lunch		protein starch fruit/veg fat				
PM Snack		1-2 foods				
Dinner		protein starch fruit/veg fat				
PM Snack		1-2 foods				
Misc Snack		1-2 foods				
Misc Beverage		1-2 components				

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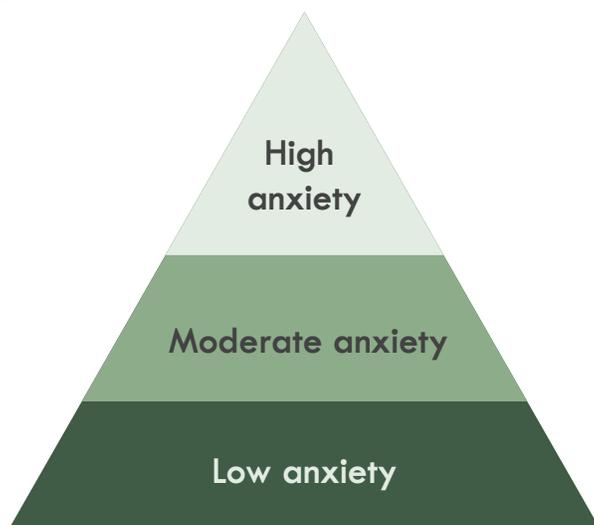
Food fear hierarchy

A food fear hierarchy helps identify specific food fears and the level of anxiety associated with introducing them to your diet.

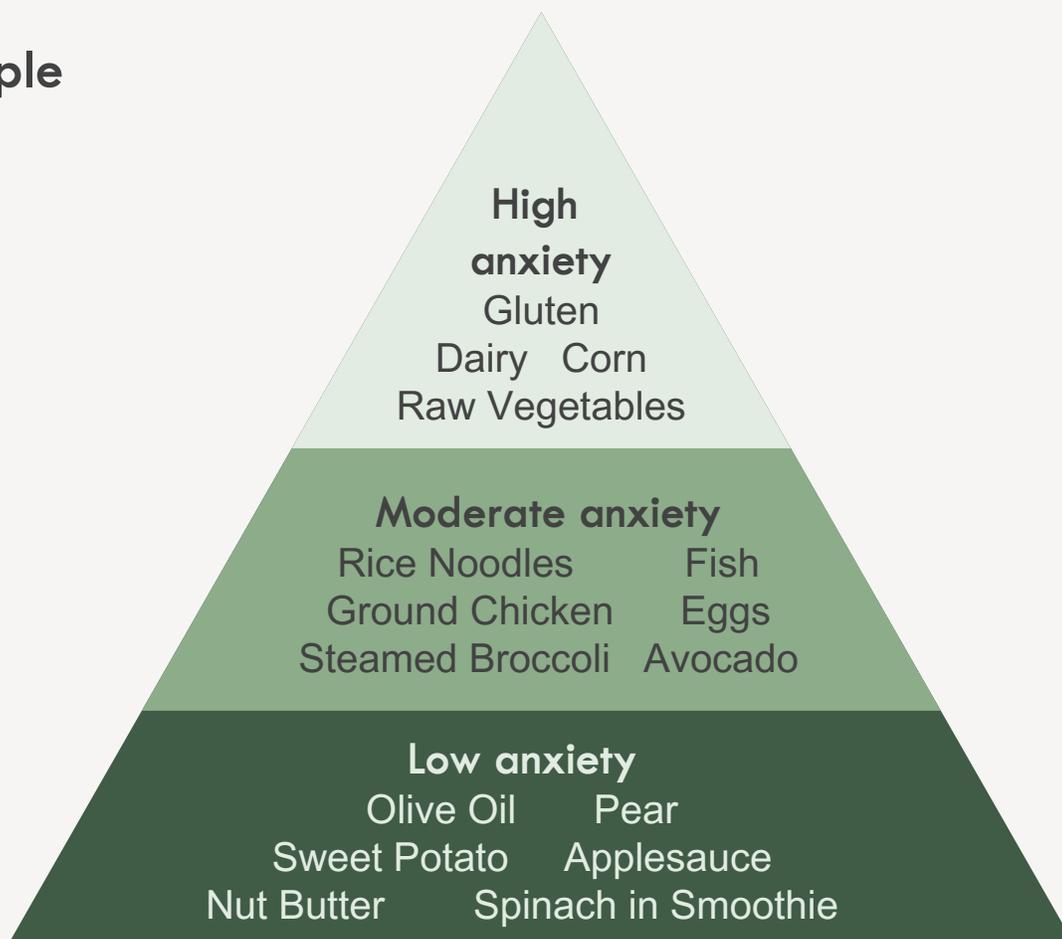
Foods you currently avoid or limit are ranked based on the level of anxiety adding them to your diet provokes, from low to high.

The goal is to start by introducing low anxiety foods and gradually work up to more challenging foods.

Your food fear hierarchy will be personal to you and your experiences.

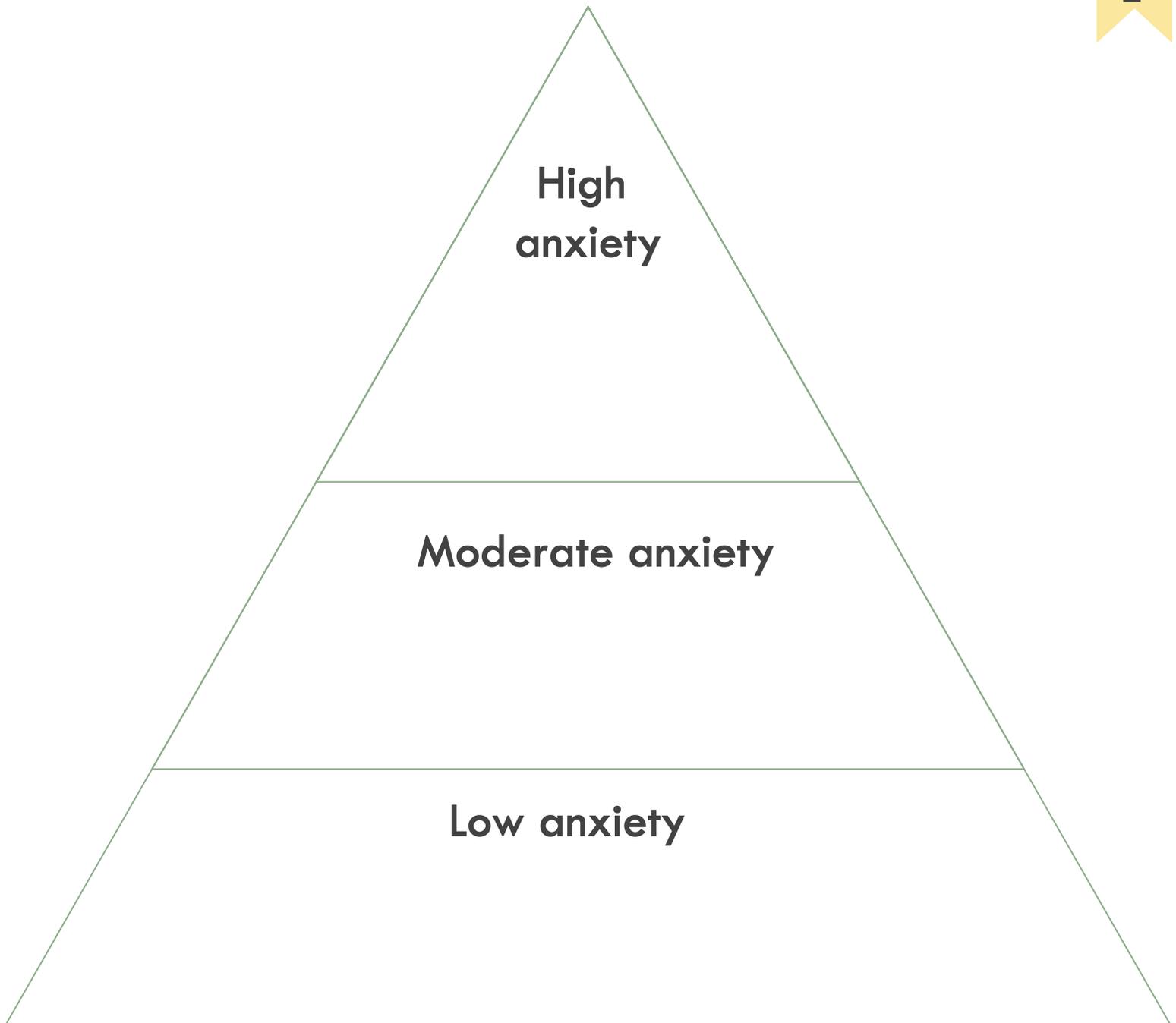


Example



Food fear hierarchy template

FILL ME IN



Reintroduction planning

A reintroduction plan helps you gradually reintroduce foods that you may be avoiding due to fear or anxiety.

The personalized plan provides a structured, systematic approach to expand your dietary variety and portions, while minimizing stress.

The specifics on foods, timing and portions will all be developed based on your goals, though it is important to outline these specifics to hold yourself accountable. Success requires you to be involved in planning.

EXAMPLE

FOOD	OLIVE OIL	PEAR
Day 1	1/2 tsp	1 tsp
Day 2	1 tsp	2 tsp
Day 3	2 tsp	1 tbsp
Day 4	1 tbsp	2 tbsp
Day 5	4 tsp	3 tbsp
Day 6	5 tsp	1/4 cup
Day 7	2 tbsp	1/2 cup

Reintroduction planning template

FOOD					
Day 1					
Day 2					
Day 3					
Day 4					
Day 5					
Day 6					
Day 7					
Day 8					
Day 9					
Day 10					
Day 11+					

FILL ME IN

Reintroduction planning log

For each scenario, reflect on your anxieties going into the exercise as well as how the reintroduction went.

Refer to the level of anxiety or identified around various foods and situations in the food exposure hierarchy exercise.

Reflecting on the exposure is important to identify progress and challenges.

EXAMPLE

Exposure scenario	whole grape	
Fears or anxieties about scenario	urgency, diarrhea	
Safety behaviors to avoid	checking bathroom is free	
Starting level of anxiety (1-10)	6	Ending level of anxiety (1-10) 4
Did fears or anxieties come true?	no	
What can I learn from this exposure?	I exercised control over my bathroom needs	

Reintroduction planning log template

Exposure scenario	
Fears or anxieties about scenario	
Safety behaviors to avoid	
Starting level of anxiety (1-10)	Ending level of anxiety (1-10)
Did fears or anxieties come true?	
What can I learn from this exposure?	

FILL ME IN

Food chaining

Food chaining facilitates dietary expansion by emphasizing similar features (taste, texture, provenance, temperature) between accepted food items and the new or targeted foods you want to introduce.

The goal is to create a "chain" of foods, progressively introducing new options that are familiar to those you tolerate, and therefore feel less intimidating than adding an entirely new food.

Gradually, you'll expand and diversify your diet through a series of progressive introductions.

The process of food chaining

1

Identify foods you currently enjoy and feel comfortable eating. This could include whole dishes or specific ingredients, like seasonings, fruits, vegetables, proteins or grains.

2

Note common characteristics of these foods, such as taste, texture, preparation or visual traits.

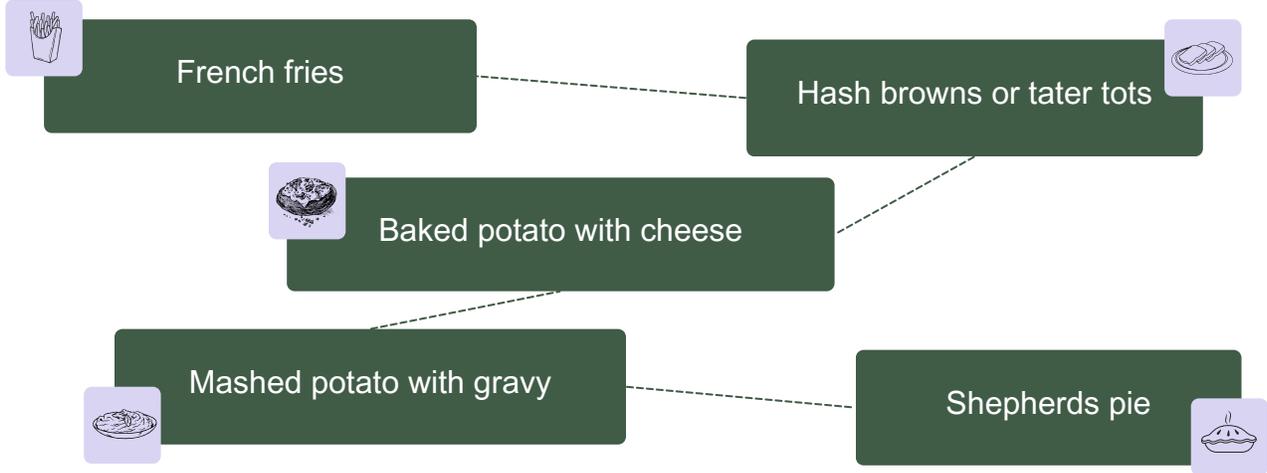
3

Identify new foods that are similar to those you already like. This can be based on preparation, ingredients, flavor or other similar characteristics you associate with both.

4

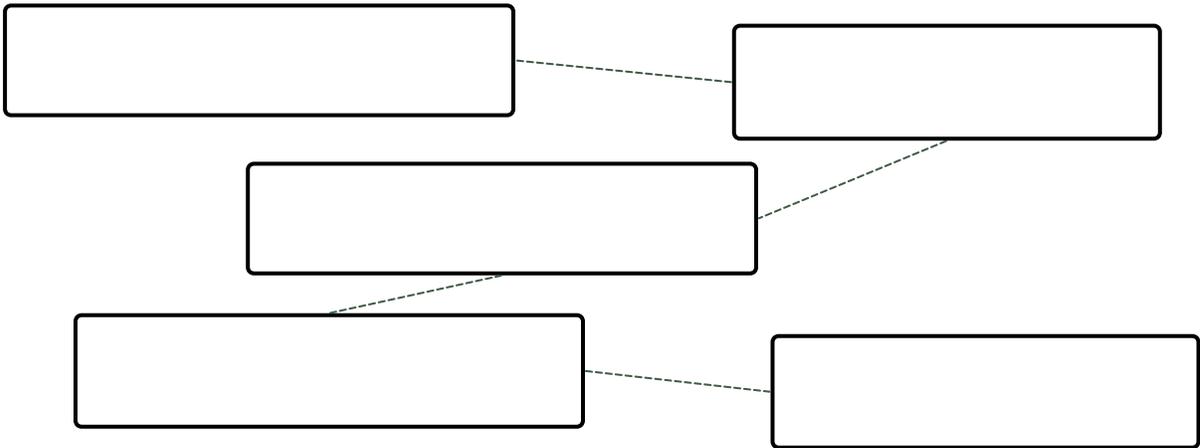
Gradually introduce the new foods, which will be increasingly different. Start with small portions and reflect on your experience throughout.

Food chaining example

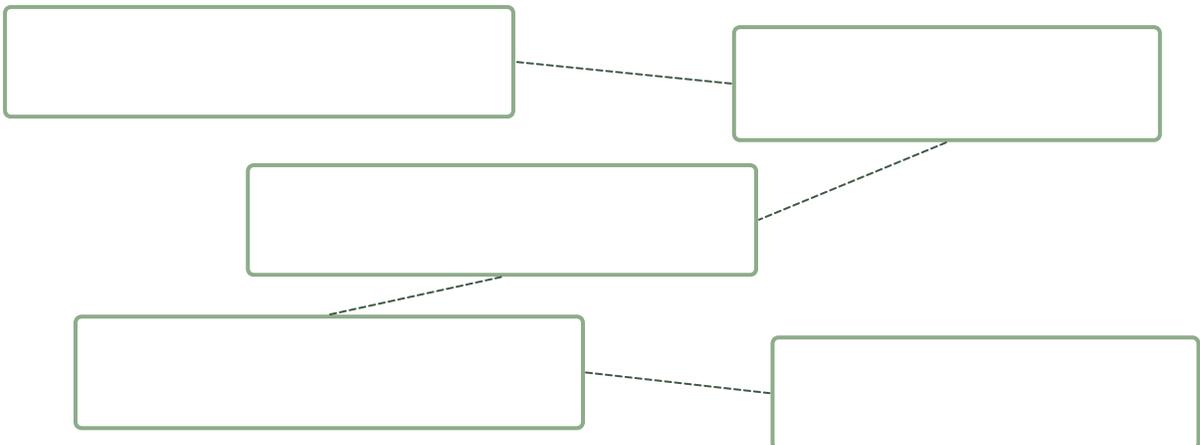


Food chaining templates

Exercise 1



Exercise 2



FILL ME IN

Takeaways and resources

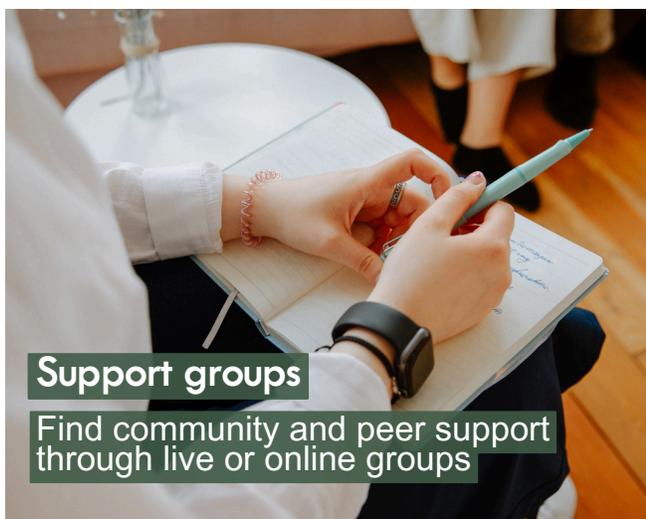
A wealth of resources and communities are available to support you in your reintroduction journey

Successful change is hard work and takes time. Recognize the small accomplishments along the way and know that small set-backs are expected and okay.

Reintroduction is a highly personalized experience and your goals and challenges will evolve over time.

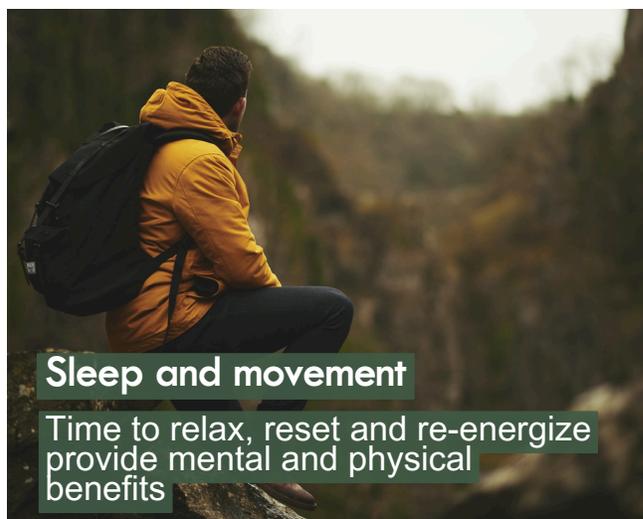
A multidisciplinary approach leads to the greatest success. Aim to include a therapist, dietitian, doctor and other categories of providers on your care team.

With time, symptoms related to restrictive eating and rigid thinking around food can be reduced.



Support groups

Find community and peer support through live or online groups



Sleep and movement

Time to relax, reset and re-energize provide mental and physical benefits



Stress management

Coping skills help manage the impact of stress on digestive and cognitive function



Digestive enzymes

Extra support against high-anxiety foods minimizes fear around reintroductions

About the authors

Kate Mintz is a registered dietitian specializing in gastrointestinal disorders, disordered eating, and sports nutrition. She supports patients with a variety of GI conditions in her role at the UCLA Division of Digestive Diseases and is a consultant dietitian at Kelly Jones Nutrition, a performance nutrition private practice that supports athletes at every level.

Kate is a liaison supporting the partnership between the American Gastroenterological Association and Dietitians in Gluten and Gastrointestinal Disorders (DIGID), an Academy of Nutrition & Dietetics subgroup, and is a member of the DIGID Eating Disorders in GI workgroup.

She has published research centered around the intersection between gastrointestinal disorders and eating disorders as well as several articles on GI nutrition and sports nutrition topics in Today's Dietitian Magazine.



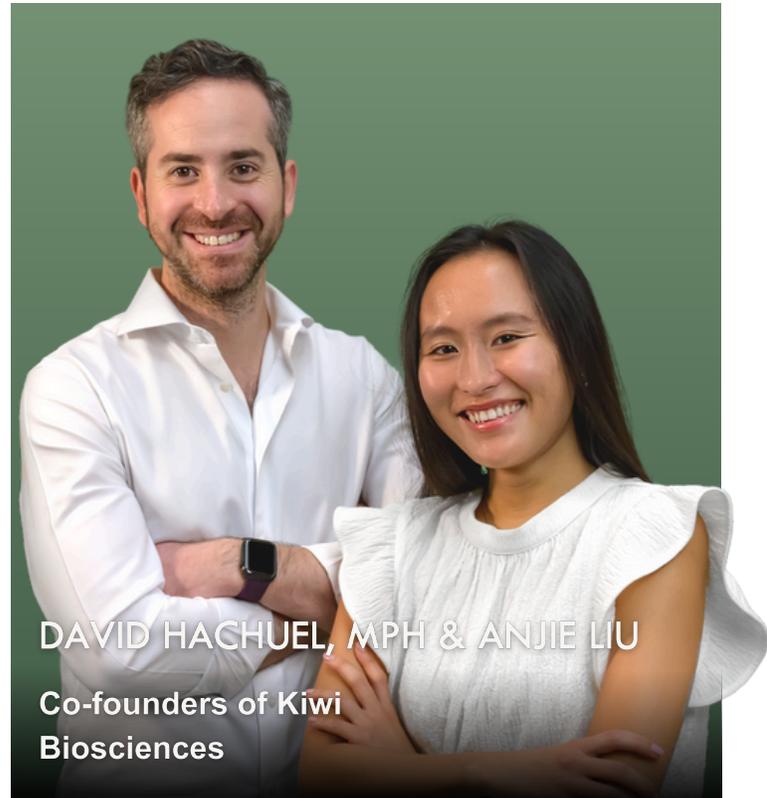
Kate is passionate about helping patients establish dietary patterns that support GI symptom management and enable them to maximize dietary variety and enjoyment of food.

About the authors

Kiwi Biosciences is a human-centered biotechnology company based in Cambridge, MA devoted to developing elegant scientific solutions for extraordinary gut relief.

Kiwi Bio is led by Harvard-trained founders Anjie Liu and David Hachuel who understand firsthand how much the community needs FODZYME®.

Anjie is a patient herself, who developed FODZYME® to be able to comfortably eat high-fructan foods; David previously founded auggi.ai, a stool recognition AI technology and digital gut health coach for IBS patients.



DAVID HACHUEL, MPH & ANJIE LIU
Co-founders of Kiwi
Biosciences



JOCELYN WELLS, MS, RDN
Head of Partnerships at
Kiwi Biosciences

Jocelyn Wells is a Registered Dietitian with expertise in GI nutrition. At FODZYME®, she leads nutrition communications and educational programming for healthcare providers to help ensure those with FODMAP sensitivities can successfully incorporate high FODMAP foods into their lives.

**Make your food
painless with FODZYME®**

TRY FODZYME®

Making food painless by breaking down FODMAPs

As you digest your meal, FODZYME[®] breaks down FODMAPs into simple sugars, that are quickly absorbed in the small intestine, effectively reducing the amount of FODMAPs in your gut.

FODZYME[®] BREAKS DOWN

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

TOP TIP

FODZYME gets sprinkled directly on your meal to maximize contact between enzymes and FODMAPs



Soy-free



Vegan



Non-GMO



Egg-free



Gluten-free



Casein-free



Dairy-free



No artificial colors or flavors

The right way to try FODZYME®

Try FODZYME® with lactose, GOS, and fructan foods

Fructan & GOS/Galactan

- | | | |
|--|---|--|
|  Garlic |  Artichoke |  Dried fruit* |
|  Onion |  Asparagus |  Grapefruit |
|  Wheat° |  Banana |  Lentils |
|  Barley & rye |  Beans |  Peas |
|  Brussels sprouts |  Beetroot |  Pistachios |
|  Zucchini |  Cashews |  Pomegranate |
|  Leek |  Chickpeas |  Scallion |
|  Baby spinach |  Cranberries |  Shallots |
|  Almonds |  Honeydew |  Silken tofu |

Lactose

-  Ice cream
-  Cottage cheese
-  Cream cheese
-  Soft cheese
-  Ricotta
-  Milk
-  Buttermilk
-  Kefir
-  Yogurt

°FODZYME® reduces fructan in wheat products, not gluten

*including dates, goji berries, dried mango, dried fig and dried pineapple



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