



SPECIAL ARTICLE

This is not just any FODMAP diet: Hispanic adaptation of the FODMAP diet and a reintroduction guide

Esta no es una dieta FODMAP cualquiera: adaptación hispana de la dieta FODMAP y una guía de reintroducción

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Abstract

Short-chain carbohydrates and sugar alcohols are poorly absorbed in the small intestine and rapidly fermented by bacteria. Fermentable oligo-, di-, monosaccharides and polyols (FODMAP) content of a wide range of foods has been measured. However, the list of foods allowed, as well as the quantities of FODMAP each food differ between studies, making the management of the low FODMAP diet difficult.

The aim of this research was to propose a FODMAP diet guide culturally adapted to different Hispanic countries for dietitians-nutritionists and nutrition experts, to facilitate the management of patients who benefit from this diet.

A consortium of FODMAP diet experts was created among Spanish-speaking countries. Dieticians from 11 Latin American countries (Argentina, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Peru, Uruguay and Venezuela) and Spain elaborated a low FODMAP diet adjusted each to the gastronomic culture of their own country. They also created a list of foods to be reintroduced in phase 2 (or reintroduction phase) of the FODMAP diet, along with typical recipes from the country.

Twelve low FODMAP diets with their corresponding reintroduction phase were designed, each adapted to the commonly consumed foods and recipes of each country. The adaptation of the diet to local



gastronomy is pertinent, as it may increase the likelihood of durable adherence and better response to symptomatology.

There are limitations in developing tables of FODMAP-rich and FODMAP-poor foods. The cut-off levels of FODMAP content are not clearly defined. More studies are needed to reach a unified consensus, as inconsistency in the data provided between studies has been found in relation to the FODMAP diet.

Keywords

FODMAP; diet therapy; practice guideline; hispanic; culture

Resumen

Los carbohidratos de cadena corta y los alcoholes de azúcar se absorben mal en el intestino delgado y las bacterias los fermentan rápidamente. Se ha medido el contenido de oligo, di, monosacáridos y polioles fermentables (FODMAP) de una amplia gama de alimentos. Sin embargo, la lista de alimentos permitidos, así como las cantidades de FODMAP de cada alimento, difieren entre estudios, lo que dificulta el manejo de la dieta baja en FODMAP.

El objetivo de esta investigación fue proponer una guía dietética FODMAP adaptada culturalmente a diferentes países hispanos para facilitar a dietistas-nutricionistas y expertos en nutrición el manejo de los pacientes que se benefician de la dieta baja en FODMAP.

Se creó un consorcio de expertos en dieta FODMAP entre países de habla hispana. Dietistas de 11 países latinoamericanos (Argentina, Colombia, Ecuador, El Salvador, Guatemala, Honduras, México, Panamá, Perú, Uruguay y Venezuela) y España elaboraron una dieta baja en FODMAP ajustada cada una a la cultura gastronómica del país. También crearon una lista de alimentos para ser reintroducidos en la fase 2 (o fase de reintroducción) de la dieta FODMAP, junto con recetas típicas del país.

Se diseñaron doce dietas bajas en FODMAP con su correspondiente fase de reintroducción, cada una adaptada a los alimentos y recetas de consumo común de cada país. La adaptación de la dieta a la gastronomía local fue pertinente, ya que puede aumentar la adherencia a la dieta y una mejor respuesta a la sintomatología.

Existen limitaciones en el desarrollo de tablas de alimentos ricos y pobres en FODMAP. Los niveles de corte del contenido de FODMAP no están claramente definidos. Se necesitan más estudios para alcanzar un consenso unificado, ya que se ha encontrado inconsistencia en los datos proporcionados en estudios relacionados con la dieta FODMAP.

Palabras clave

FODMAP; dietoterapia; guía de práctica; hispano; cultura



ABBREVIATIONS

FODMAP, Fermentable Oligo-, Di- and Monosaccharides and Polyols

IBS, Irritable Bowel Syndrome

FOS, fructo-oligosaccharides

Introduction

The acronym 'FODMAP' (Fermentable Oligo-, Di- and Monosaccharides and Polyols) was created to describe a group of short-chain carbohydrates and sugar alcohols (polyols)⁽¹⁾. They comprise fructose, lactose, fructo- and galactooligosaccharides (fructans, and galactans), and polyols (such as sorbitol, mannitol, xylitol and maltitol). These molecules are poorly absorbed in the small intestine, they are osmotically active and are rapidly fermented by bacteria producing gas⁽²⁾. The additional gas and water inside the gut stretches the bowel wall and triggers symptoms such as abdominal pain, gas and bloating, distension, constipation and diarrhea in some situations and patients⁽³⁾.

It was in 2005, when researchers in the Department of Gastroenterology at Monash University⁽³⁾ identified this group of short-chain carbohydrates in food. The research team measured the FODMAP content of a wide range of foods, including fruit, vegetables, breads, cereals, nuts, legumes, dairy products and processed foods. This food composition information allowed the team to develop the first low FODMAP diet. The team used this low FODMAP diet in the first research studies which showed that a low FODMAP diet reduces symptoms in people with Irritable Bowel Syndrome (IBS)⁽³⁾.

The FODMAP concept in the management of functional gut symptoms relies on a dietary approach that restricts FODMAP intake globally, not individually; and represents an opportunity for reducing symptoms⁽²⁾. Restriction of individual FODMAP has been used with varying success in the management of functional gut symptoms for a long time. However, such approaches have not become widespread in their application, perhaps in part related to their limited success. Restricting one FODMAP in isolation ignores the likelihood that there is potentially a range of FODMAP in the diet, all of which have similar end-effects in the bowel⁽⁴⁾. The innovation in the FODMAP concept is that global restriction should have a far greater and more consistent effect than limited restriction⁽²⁾.

There is considerable evidence that FODMAP induce abdominal symptoms. Acute provocation tests with lactose⁽⁵⁾, fructose^(5,6), fructo-oligosaccharides (FOS)⁽⁷⁾ or sorbitol^(5,8) cause abdominal symptoms such as bloating, pain, nausea and disturbed bowel habit (diarrhoea and/or constipation) in many people, especially those with IBS.



All the research applying the low FODMAP diet indicates that up to 70% of the patients who follow a diet low in FODMAP present a significant improvement in symptoms, especially those related to abdominal pain and bloating⁽⁹⁻¹³⁾. The symptom that least improves is constipation, which can be related to the low fiber intake of this dietary model⁽¹⁴⁾. The low FODMAP diet has not only shown to have nutritional and symptomatic benefits in gastrointestinal diseases (e.g. IBS⁽¹⁵⁾, non-celiac gluten sensitivity⁽¹⁶⁾ or celiac disease⁽¹⁷⁾), but also in patients with fibromyalgia⁽¹⁸⁾, sclerosis⁽¹⁹⁾ and endometriosis⁽²⁰⁾.

A global approach to restricting carbohydrates that have similar actions (high osmotic effect and rapid fermentation) should optimize symptom control in patients. Nonetheless, the low FODMAP diet may not alleviate symptoms of every subject, being compliance a main factor⁽²⁾. Because the diet is fairly complex, advice should be given by a specialized dietitian trained in the area with appropriate resources, along with a multidisciplinary team of other health professionals, and food intake should be monitored for nutritional adequacy⁽²⁾. Since the first low FODMAP diets were described⁽²¹⁾, there have been modifications to the food lists that have been prompted by new scientific data on food composition. Robust data now exist describing the FODMAP content of commonly consumed foods⁽²²⁾. However, not all studies provide the list of foods allowed in the low FODMAP diet or if they do, they differ between studies, as well as the quantities of FODMAP each food may have. Even some studies^(23,24) allow foods (peeled apples, pears and milk) as part of the low FODMAP diet, which are not consistent with a low FODMAP diet as it was originally described. Inconsistency in the data provided has not only been found in relation to the FODMAP diet, but also in histamine content lists for histamine intolerance patients⁽²⁵⁾. Other limitations of the low FODMAP diet include lack of clear cutoff levels for FODMAP content in foods and non-availability of information on FODMAP content on food packages⁽²⁾. All of the above make it difficult to standardize, homogenize and create a tool for clinical practice and research. It is also important to note that low FODMAP diets are very restrictive. Therefore they can produce a reduction in the intake of certain dietary components such as calcium, fiber, iron, zinc, folic acid and vitamin D⁽²⁶⁾. Thus, in order to ensure that the diet is not deficient despite the restrictions, it is necessary that the treatment is controlled by experienced dietitians⁽²⁶⁾. Generally, the strict low FODMAP diet is not recommended to be followed long term, as it may also result in reduced total bacterial abundance⁽²⁷⁾ and reduced concentration of bifidobacterial⁽⁹⁾.

Despite the disadvantages of a low FODMAP diet, the diet has provided symptomatic relief in more patients with IBS compared to a standard dietary advice consisting of healthy eating principles, alteration of insoluble and soluble fibers, and limiting sugar-free foods and



foods containing sorbitol (86% and 49%, respectively)⁽²⁸⁾. There are many studies carried out in the field of a low FODMAP diet, finding more than 350 results in some search databases, although many of them are retrospective^(21,24) or prospective and uncontrolled⁽²⁹⁻³¹⁾ making the studies potentially subject to bias and confounding. However, in recent years well-designed clinical trials have been designed to support the efficacy of low FODMAP diet in patients with IBS; to date, two controlled trials^(24,28) and six randomized controlled trials^(9,11,12,29,32,33). However, more studies are needed to compare and establish more robust and specific food lists and quantities of FODMAP in foods. Further research is needed to standardize the information regarding the FODMAP diet and create reliable guidelines for clinical practice.

The lack of culturization and adaptation of the diet, through lists and gastronomic customs of countries where this diet is not very widespread, such as Latin American countries, can pose a problem in the treatment follow-up. Therefore, the aim of this research was to propose a FODMAP diet guide culturally adapted to different countries for Dietitians-Nutritionists and nutrition experts, to facilitate the management of patients who benefit from this diet.

Material and methods

A consortium of FODMAP diet experts was created among Spanish-speaking countries between June and August 2020. Dieticians from 11 Latin American countries (Argentina, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Peru, Uruguay and Venezuela) and Spain were enrolled in the project. Universidad de Belgrano (Argentina), *Clínica Universitaria Colombia* (Colombia), *Consulta Adriana Pérez-Chávez* (Ecuador), Nexa Resources Cajamarquilla S.A. (Peru), the Nutrition School at *Universidad de la República* (Uruguay), *Centro de Medicina Deportiva y Rehabilitación MEDKAR* (Venezuela), *Centro de Hemodiálisis y de Salud Renal* and *Universidad Dr. Andrés Bello* (El Salvador), the Nutrition department at *Universidad del Valle de Guatemala* (Guatemala), *Universidad Tecnológica Centroamericana* and *Consulta María Regina Pacheco Blanco* (Honduras), GenoVive (Mexico), *Hospital Punta Pacífica* and *Instituto de Investigaciones Científicas y Servicios de Alta Tecnología INDICASAT-AIP* (Panama) and Research Centers in Nutrition and Health CINUSA (Spain) participated in the elaboration of low FODMAP diets adjusted each to the culture of their own country.

At enrolment time, all participating institutions were asked to elaborate a low FODMAP balanced menu, adapted to the gastronomic culture of their own country (including typical



recipes and ways of cooking and eating). Two examples of a menu were given to each participant as well as a unique list of foods rich (worst tolerated) and low (best tolerated) in FODMAP, to serve as a guide. In any case, participants were encouraged to use the Monash University FODMAP diet app⁽²²⁾ to access the library of low FODMAP foods, recommendations and recipes. Each diet had to be structured as a 7-day balanced healthy menu. Each intake must consist of carbohydrate + vegetable + protein or vegetable + protein, with an approximate distribution of 40-60% carbohydrates (no ultra-processing products, soft drinks, simple sugars, pastries or fast food), 15-30% protein (both animal and plant origin), and 20-35% fat (including blue fish, nuts, oleaginous fruits, and avoiding trans fats). The menus were revised by an experienced dietician on the FODMAP diet to ensure they all followed the same criteria.

All the collaborators were also asked for a list of foods, which are frequently consumed in their country, to be reintroduced in phase 2 (or reintroduction phase) of the FODMAP diet, along with typical recipes from the country where the reintroduction foods could be included.

Results

Low FODMAP diets

A total of 12 low FODMAP diets were designed, each adapted to the commonly consumed foods and recipes of each participating country (Tables 1-12).



Table 1. Low FODMAP menu for 7 days adjusted to the Argentinian gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> - Almond drink - Rice cookies with homemade strawberry jam - Banana 	<ul style="list-style-type: none"> - Quinoa drink or Infusion - Whole wheat bread (suitable) - Kiwi 	<ul style="list-style-type: none"> - Almond drink - Rice cookies with homemade strawberry jam - Banana 	<ul style="list-style-type: none"> - Quinoa drink or Infusion - Whole wheat bread (suitable) - Tangerine 	<ul style="list-style-type: none"> - Almond drink - Whole wheat bread (suitable) - Kiwi 	<ul style="list-style-type: none"> - Quinoa drink or Infusion - Quince muffins - Tangerine 	<ul style="list-style-type: none"> - Almond drink - Rice cookies with homemade strawberry jam - Kiwi
Lunch	<ul style="list-style-type: none"> - Goldfish with mashed potatoes - Carrot, tomato and cucumber salad - Tangerine 	<ul style="list-style-type: none"> - Baked trout with lemon with pumpkin and eggplant wok and zucchini - Figs 	<ul style="list-style-type: none"> - Meat, cheese and carrot cake - Baked quince 	<ul style="list-style-type: none"> - Spinach pancakes with chicken - Pineapple or papaya slices 	<ul style="list-style-type: none"> - Zucchini noodles - Baked salmon - Grapefruit 	<ul style="list-style-type: none"> - Yamani rice risotto with chicken - Carrot and boiled beans - Kiwi 	<ul style="list-style-type: none"> - Roast strip or <i>vacío</i> - Tomato, carrot, cucumber and quinoa salad - Grapefruit
Afternoon snack	<ul style="list-style-type: none"> - Infusion - Chocolate chip cookies 	<ul style="list-style-type: none"> - Almond drink - Rice cookie 	<ul style="list-style-type: none"> - Infusion/ Mate - Chocolate chip cookies 	<ul style="list-style-type: none"> - Almond drink - Rice cookie 	<ul style="list-style-type: none"> - Infusion/ Mate - Chocolate chip cookies 	<ul style="list-style-type: none"> - Almond drink - Rice cookie 	<ul style="list-style-type: none"> - Infusion - Chocolate chip cookies
Dinner	<ul style="list-style-type: none"> - Chicken and eggplant muffins - Baked pumpkin slices 	<ul style="list-style-type: none"> - Carrot noodles - Meatballs 	<ul style="list-style-type: none"> -Pork rib -Pumpkin puree 	<ul style="list-style-type: none"> -Pizza with tuna dough, grated carrot and cucumber salad 	<ul style="list-style-type: none"> - Pork croquettes stuffed with spinach 	<ul style="list-style-type: none"> -Chorizo steak -Baked pumpkin slices 	<ul style="list-style-type: none"> - Meatballs with rice - Tomato and grated carrot salad



Table 2. Low FODMAP menu for 7 days adjusted to the Colombian gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	Beverage options: – Chocolate made with pure cocoa and lactose-free milk sweetened with stevia – Hot oatmeal made with lactose-free milk sweetened with stevia – Infusion, tea or coffee sweetened with stevia – Natural fruit juice (allowed fruits) Food options: – Rib broth with potato – Chicken broth with potato – Corn <i>arepa</i> with parrot eggs – Corn <i>arepa</i> with fresh lactose-free cheese – Corn <i>arepa</i> with fried egg in olive oil – Homemade <i>tamale</i> (without garlic and onion) – Gluten-free bread with fresh lactose-free cheese						
Midday & Afternoon snack	One option: – Chocolate made with pure cocoa and lactose-free milk sweetened with stevia accompanied by fresh cheese without lactose – Fruit plate (allowed fruits) – Fruit salad (allowed fruits) with lactose-free yogurt – Fruit salad (allowed fruits) with grated lactose-free fresh cheese – Gluten-free bread with pure cocoa chocolate and lactose-free milk sweetened with Stevia – Homemade <i>pandebono</i> with fresh lactose-free cheese (no margarine / butter) – Homemade <i>almojábana</i> with fresh lactose-free cheese (no margarine / butter)						
Lunch	– Rice with chicken and vegetables (carrot, tomato, green beans and celery)	– Beef stew with vegetables (carrot, zucchini, tomato) – Creole potato purée	– Baked <i>majarra</i> with coconut rice – Tomato soup	– Chicken <i>sancocho</i> made with yucca and <i>arracacha</i> – Spinach, tomato and grated carrot salad	– Mixed grill of beef and pork loin with grilled cob – <i>Ahuyama</i> purée	– Seafood casserole with baked <i>patacón</i> – Cucumber, tomato and grated carrot salad	– Beef rib <i>sancocho</i> with mixed potatoes – Carrot and green beans stir fry
Dinner	– Grilled white fish with lemon – Sautéed vegetables with spices (carrot, eggplant, zucchini)	– Egg omelette with vegetables (chard, zucchini and carrot) – Gluten-free bread	– <i>Mondongo</i> soup with vegetables (carrot, green beans, celery) – Radish, spinach and tomato salad	– Beef tenderloin in goulash with carrot and tomato – <i>Ahuyama</i> cream	– Chicken cream with vegetables (tomato, carrot, chard, zucchini)	– Pork chop with orange – Spinach, strawberry and grated carrot salad	– Chicken <i>sudado</i> – Baked aubergines au gratin with fresh lactose-free cheese

* Lunches and meals can be accompanied by water, infusions or tea without added sugar, allowed fruit juices diluted in water and no added sugar.
 * Spices and herbs to flavour preparations: oregano, salt, pepper, rosemary, turmeric, honey, thyme.
 * Maximum 3 tablespoons a day of virgin olive oil to cook or consume raw.
 * Salad vinaigrettes: White / balsamic vinegar with Dijon mustard. Stevia. Lemon juice. Natural lactose-free yogurt-based vinaigrette with lemon.



Table 3. Low FODMAP menu for 7 days adjusted to the Ecuadorian gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	Beverage options: – Lactose-free yogurt – Infusion / tea / coffee / lactose-free milk with dark chocolate Food options: – Cassava omelette / <i>bolón de verde</i> with olive oil / oat pancakes with homemade strawberry/guava/pineapple/fig jam – Allowed fruit (banana, tangerine, papaya, kiwi, melon, strawberry, orange) – Eggs and fresh lactose-free cheese without lactose						
Midday & Afternoon snack	– Allowed fruit (banana, tangerine, papaya, kiwi, melon, strawberry, orange) – Lactose-free yogurt						
Lunch	– Rice with lentil stew – Grilled sea bass in Creole sauce (tomato, radish, cucumber, lemon and coriander)	– Rice with shredded chicken, carrots, turnips and green beans	– <i>Fritada</i> : baked pork loin, cooked corn and creole sauce (tomato, radish, cucumber, lemon and coriander) – <i>Yapingacho</i> (potato omelette stuffed with lactose-free cheese)	– Shrimp <i>sango</i> : green banana, shrimp, tomato, celery, parsley stir fry – Beans and carrot salad	– <i>Balls</i> broth: green banana dough filled with meat, chopped eggs and carrots	– Ceviche mixed with tilapia and shrimp – 1 cup of popcorn	– <i>Hayaca</i> stuffed with chicken: shredded chicken, sliced carrot, cornmeal, annatto, hard-boiled egg, olives
Dinner	– <i>Humita</i> (corn dough stuffed with lactose-free cheese) with egg omelette – Carrot cream	– Tuna salad with potato, cucumber, tomato, olives, celery	– Pumpkin cream – Grilled chicken and tomato, beans and corn salad	– Beef stew: meat, potatoes, beans and carrots	– Chicken <i>seco</i> with rice – Chard, carrot and celery salad	– Cassava puree with hamburger – Swiss chard and spinach cream	– Green banana omelette with fried egg – Carrot and spinach cream



Table 4. Low FODMAP menu for 7 days adjusted to the Peruvian gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	Beverage options: – Soy milk or drinkable quinoa Food options: – Gluten-free bread with tuna / lactose-free cheese / scrambled egg – Chopped fruit: pineapple, melon, papaya, strawberries, kiwi and orange						
Midday	– Whole fruit – Quince compote – Oatmeal pancakes – Lactose-free yogurt						
Lunch	– <i>Pavita</i> fillet with spinach puree – Radish salad – Passion fruit drink	– Pickled bonito (without onion) with boiled cassava – Orange soda	– Vegetable soup (allowed veg) – Chicken stew with spinach, cucumber and tomato salad – Lemonade with stevia	– Vegetable cream – Grilled pork chop with Italian zucchini salad, carrot, peas – Pineapple water	– Noodles in red sauce (tomato and carrot) with baked turkey fillet – Passion fruit drink	– Grilled trout with parboiled potato and cucumber salad – Fruit (allowed)	– Chicken ceviche with quinoa stew
Afternoon snack	One option: – Tangerine or 100 g strawberries – Bread with frayed chicken without mayonnaise – 5 quail eggs – Passion fruit or fig <i>Mazamorra</i>						
Dinner	– Grilled hake fillet with tomato salad – Oatmeal with drinkable quince	– Quinoa burger with tuna – Soy milk	– Chicken thighs with orange – Boiled Italian zucchini – Quinoa with drinkable pineapple	– Baked <i>pavita</i> fillet with cooked vegetable salad – Soy milk	– Bonito fillet with fine herbs – Fresh salad – Oatmeal with passion fruit	– Rolled chicken breast with spinach, fig and ham – Cooked salad – Soy milk	– Rosemary chicken fillet with pineapple salad – Quinoa with quince



Table 5. Low FODMAP menu for 7 days adjusted to the Uruguayan gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> - Almond drink - Rice cookies with homemade strawberry jam - Banana 	<ul style="list-style-type: none"> - Rice drink or Infusion - Sweet potato pancake - Kiwi 	<ul style="list-style-type: none"> - Almond drink - Rice cookies with homemade strawberry jam - Banana 	<ul style="list-style-type: none"> - Rice drink or Infusion - Sweet potato pancake - Tangerine 	<ul style="list-style-type: none"> - Almond drink - Gluten-free bread with lactose-free cheese - Kiwi 	<ul style="list-style-type: none"> - Rice drink or Infusion - Quince muffins - Tangerine 	<ul style="list-style-type: none"> - Almond drink - Rice crackers with homemade strawberry jam - Kiwi
Lunch	<ul style="list-style-type: none"> - Grilled steak - Carrot, tomato and cucumber salad - Mashed potatoes - Tangerine 	<ul style="list-style-type: none"> - Baked hake - Baked zucchini and aubergines - loquat 	<ul style="list-style-type: none"> - Broth - Pork ribs with applesauce - Baked quince 	<ul style="list-style-type: none"> - Pumpkin soup - Quinoa pizza - Kiwi 	<ul style="list-style-type: none"> - Salmon with tomato with oregano, carrot and peas - Grapefruit 	<ul style="list-style-type: none"> - Polenta with tomato sauce - Carrot and boiled beans - Kiwi 	<ul style="list-style-type: none"> - Chicken breast - Salad with grated carrot, radishes and quinoa - Orange
Afternoon snack	<ul style="list-style-type: none"> - Infusion - Coconut cookies 	<ul style="list-style-type: none"> - Almond drink - Quince muffins 	<ul style="list-style-type: none"> - Infusion/ Mate - Coconut cookies 	<ul style="list-style-type: none"> - Almond drink - Quince muffins 	<ul style="list-style-type: none"> - Infusion - Coconut cookies 	<ul style="list-style-type: none"> - Almond drink - Quince muffins 	<ul style="list-style-type: none"> - Infusion - Coconut cookies
Dinner	<ul style="list-style-type: none"> - Scrambled eggs with spinach and boiled potatoes 	<ul style="list-style-type: none"> - Chicken with <i>wok</i> zucchini and aubergines 	<ul style="list-style-type: none"> - Sole - Tomato, carrot, cucumber and red lentil salad 	<ul style="list-style-type: none"> - Zucchini stuffed with quinoa with pumpkin puree 	<ul style="list-style-type: none"> - Chicken curry with sweet potato and caramelized carrot 	<ul style="list-style-type: none"> - Chard and spinach soup - Pumpkin, zucchini, carrot and tofu <i>wok</i> 	<ul style="list-style-type: none"> - Pumpkin stuffed with meat - Quinoa paste



Table 6. Low FODMAP menu for 7 days adjusted to the Venezuelan gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast 7-8 am	<ul style="list-style-type: none"> – Roasted corn <i>arepa</i> with buffalo or goat ricotta cheese – Low fat margarine – Melon – Black coffee 	<ul style="list-style-type: none"> – Gluten-free toast – Scrambled egg whites – Low fat margarine – Tangerine – Black coffee 	<ul style="list-style-type: none"> – Corn <i>cachapa</i> (natural) – Buffalo or goat ricotta cheese – Low fat margarine – Papaya – Black coffee 	<ul style="list-style-type: none"> – Gluten-free Andean <i>arepas</i> – Turkey ham – Buffalo or goat curd cheese – Low fat margarine – <i>Cambur</i> (banana) – Black coffee 	<ul style="list-style-type: none"> – <i>Ocumo</i> (arrowleaf elephant ear) or sweet potato <i>arepa</i> – Ground beef – Low fat margarine – Orange – Black coffee 	<ul style="list-style-type: none"> – Roasted corn patties with fish sauce – <i>Cambur</i> (banana) – Black coffee 	<ul style="list-style-type: none"> – Cassava fritters stuffed with shredded chicken – Natural orange juice – Black coffee
Midday 10 am	<ul style="list-style-type: none"> – Rice crackers – Turkey ham – Eggplant cream – Ginger and lemon infusion 	<ul style="list-style-type: none"> – <i>Casabe</i> with guava jam with no sugar – Ginger with chamomile infusion 	<ul style="list-style-type: none"> – Coconut yogurt 	<ul style="list-style-type: none"> – Gelatine (no sugar) 	<ul style="list-style-type: none"> – Melon 	<ul style="list-style-type: none"> – Coconut yogurt 	<ul style="list-style-type: none"> – Gluten-free cake
Lunch 12-1 pm	<ul style="list-style-type: none"> – Vegetable cream – Grilled chicken <i>milanesa</i> – Green plantain toast – Rice with pods – Milk – Chamomile and lemon infusion 	<ul style="list-style-type: none"> – Bone broth – Tuna croquettes – Steamed cassava – Sautéed zucchini – <i>Parchita</i> delicacy (cornstarch + passion fruit juice + stevia) – Lemon grass infusion 	<ul style="list-style-type: none"> – Herb chicken – Rice with carrot – Steamed banana – Papaya – Lemon balm infusion 	<ul style="list-style-type: none"> – Bone broth – Grilled steak – Steamed potatoes – Sautéed <i>chayote</i> – Melon – Linden tea 	<ul style="list-style-type: none"> – Beef soup – Stuffed fish – Roasted aubergines – Boiled white rice – <i>Churros</i> – Natural infusion 	<ul style="list-style-type: none"> – Chicken consommé – Gluten-free pasta with beef Bolognese – Green plantain <i>tostón</i> – Strawberries – Chamomile infusion 	<ul style="list-style-type: none"> – Chicken rolls with vegetables (carrot, green dressings) – Steamed cassava – Papaya – Natural infusion
Afternoon snack 3 pm	<ul style="list-style-type: none"> – Gluten-free pancakes – Strawberry jam with no sugar – Turkey ham – Water 	<ul style="list-style-type: none"> – Gluten-free chocolate cake with vegetable milk – Chamomile tea 	<ul style="list-style-type: none"> – Gluten-free zucchini cupcakes – Water 	<ul style="list-style-type: none"> – <i>Cocada</i> (coconut drink) without milk 	<ul style="list-style-type: none"> – Gluten-free cake – Natural infusion 	<ul style="list-style-type: none"> – Hot chocolate (no milk, no sugar) 	<ul style="list-style-type: none"> – Rice pudding with coconut milk
Dinner 6-7 pm	<ul style="list-style-type: none"> – Zucchini canoes stuffed with chicken – Steamed <i>ocumo</i> – Linden tea infusion 	<ul style="list-style-type: none"> – Baked chicken – Stewed quinoa – Sautéed pods – Cayenne infusion 	<ul style="list-style-type: none"> – Mixed grill (chicken and meat) – Salad (potato, carrot and coriander) – Jamaica flower infusion 	<ul style="list-style-type: none"> – Roasted corn <i>arepa</i> – Shredded meat – Linden tea 	<ul style="list-style-type: none"> – Grilled steak – Stewed quinoa – Zucchini salad – Natural infusion 	<ul style="list-style-type: none"> – Chicken croquettes – Sautéed vegetables – Steamed potatoes – Natural infusion 	<ul style="list-style-type: none"> – Cassava <i>arepa</i> with fish sauce – Sautéed spinach – Jamaica infusion



Table 7. Low FODMAP menu for 7 days adjusted to the El Salvador gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> - Sautéed bananas with strained ground beans (not fried) - Fresh cheese - Almond milk 	<ul style="list-style-type: none"> - Scrambled eggs - Toast - Bread with jam - Apple juice 	<ul style="list-style-type: none"> - Pancakes with honey - Rice drink 	<ul style="list-style-type: none"> - Crepes (homemade bread flour) with strawberries - Skim milk - Banana with granola 	<ul style="list-style-type: none"> - Rancher's eggs with fresh salsa, - Bread - Orange juice 	<ul style="list-style-type: none"> - Fruit with Greek yogurt - Bread with mozzarella cheese and ham - Coffee with skim milk with <i>Splenda</i> 	<ul style="list-style-type: none"> - Oatmeal with apple juice - Coffee with <i>Splenda</i>
Midday	<ul style="list-style-type: none"> - Whole wheat bread - Mozzarella cheese - Natural orange juice 	<ul style="list-style-type: none"> - Granola bar - Greek yogurt 	<ul style="list-style-type: none"> - Jam and seeds on bread 	<ul style="list-style-type: none"> - Greek yogurt - Whole wheat bread with turkey - Chopped apple 	<ul style="list-style-type: none"> - Banana smoothie with lactose-free milk 	<ul style="list-style-type: none"> - Granola seed bar - Fruit nectar (your choice) 	<ul style="list-style-type: none"> - Yogurt and mango smoothie sweetened with <i>Splenda</i>
Lunch	<ul style="list-style-type: none"> - Roast chicken breast - Cooked rice with vegetables - Fresh salad - Natural soda 	<ul style="list-style-type: none"> - Potato, steamed broccoli - Roast beef - Natural soda 	<ul style="list-style-type: none"> - Caesar Salad: fresh salad (tomato, celery, cucumber, lettuce, carrot), shredded mozzarella cheese, avocado, grilled chicken breast, Italian or ranch dressing - Natural soda 	<ul style="list-style-type: none"> - Meatballs - Pasta with fresh tomato sauce - Fresh salad - Natural soda 	<ul style="list-style-type: none"> - Fresh vegetables - Grilled fish fillet - Toasted tortilla - Lemon soda sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Rice with shrimp and vegetables: cooked rice, <i>camores</i>, vegetables. - Natural soda sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Vegetables: corn, peas, carrot, broccoli - Mashed potatoes - Needle tenderloin - Toast with garlic and butter - Natural soda sweetened with <i>Splenda</i>
Afternoon snack	<ul style="list-style-type: none"> - Chopped tropical fruit (pineapple, grape, tangerine and strawberries) 	<ul style="list-style-type: none"> - Chopped fruit - Bread with cheese (mozzarella) 	<ul style="list-style-type: none"> - Rice pudding (without sugar) - Whole wheat bread 	<ul style="list-style-type: none"> - Tropical cup: green mango, cucumber, <i>jicama</i> on medium sticks 	<ul style="list-style-type: none"> - Grapes and granola 	<ul style="list-style-type: none"> - Peach and Greek yogurt ice cream 	<ul style="list-style-type: none"> - Chopped fruit with seeds
Dinner	<ul style="list-style-type: none"> - Chicken and apple salad - Hot or cold drink 	<ul style="list-style-type: none"> - Green beans with egg - Bread with butter - Chopped fruit - Green tea infusion with <i>Splenda</i> 	<ul style="list-style-type: none"> - Spinach with mushrooms and breaded chicken pieces, almond seeds - Toast - Natural drink sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Sautéed vegetables (carrot, potato, green bean, peas) seasoned to taste - Mashed potatoes - Natural drink, sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Sliced fresh tomatoes - Whole beans or pasta - Coriander - Bacon - Chopped lettuce, onion, bell peppers - Corn - Panela cheese - Natural drink, sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Vegetable and beef skewers: beef, onion, bell peppers, eggplant, pineapple - Natural soda, sweetened with <i>Splenda</i> 	<ul style="list-style-type: none"> - Vegetable muffin: Arab bread, turkey ham, lettuce, tomato, mozzarella cheese, dressings - Carrot juice sweetened with <i>Splenda</i>



Table 8. Low FODMAP menu for 7 days adjusted to the Guatemalan gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	Drink options: – <i>Atoles: mosh</i> with lactose-free milk, lactose-free rice pudding – Infusion / tea / coffee Food options: – Tortilla or corn toast – Breakfast cereals (puffed rice, corn flakes) – Allowed fruit (banana, tangerine, coconut, kiwi, papaya, melon) – Egg: scrambled, starry, hard, with vegetables. You can use tomato, celery or natural tomato sauce – Low lactose cheese						
Midday & Afternoon snack	Options: – Corn toasts with tomato sauce – Lactose-free rice pudding or almond drink – Allowed fruit: papaya, melon, grapefruit, banana (plantain), tangerine, strawberries, orange, pineapple – Yucca pancakes						
Lunch	– Chicken stew: chicken broth, chicken piece, potato, sweet potato, zucchini, pumpkin and carrot	– Rice with vegetables: celery, carrot, tomato sauce – Stewed chard – Beef steak	– Rice soup or watered down rice: rice, potato, chili, red pepper, carrot, tomato sauce, chicken leg or breast	– Steamed potatoes – Sautéed spinach – Baked tilapia with vegetables (tomato slices, carrot)	– <i>Hilachas: bolovique</i> or shredded beef, carrot, green bean, potato, natural tomato sauce seasoned with pepper and coriander	– Cooked cassava – Radish mince – Pork <i>Milanesa</i> (ribbon loin)	– Corn baked toast – Vegetable soup – Shrimp ceviche (without onion)
Dinner	– Stewed potato with egg – Chicken broth with vegetables	– Tortilla soup: add low-lactose cheeses – Green beans stewed with beef or pork	– Rice with vegetables – Stewed chard – Cheese <i>Doblada</i> (corn tortilla with low lactose cheese)	– Carrot and celery soup – Omelette with vegetables and mozzarella cheese	– Green beans wrapped in egg – <i>Camote</i> or sweet potato	– Vegetable soup (allowed) – Mashed potatoes (with water or lactose-free milk)	– <i>Guicoyitos</i> stuffed with chicken and low lactose cheese, tomato

* Food could be accompanied by corn tortillas. You may also include a dessert (without lactose, sugar, fructose, etc.). At lunch, you could include Jamaica rose soda with cinnamon (without sugar), plain water, herbal infusions or tea



Table 9. Low FODMAP menu for 7 days adjusted to the Honduran gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> – Lactose-free rice pudding – ½ banana – 2 corn tortilla rolls with egg 	<ul style="list-style-type: none"> – Chamomile tea without sugar – Fruit cocktail (melon, papaya, pineapple) 	<ul style="list-style-type: none"> – Oatmeal with lactose-free milk + fig to sweeten – Baked corn toast with tuna 	<ul style="list-style-type: none"> – Chamomile tea without sugar – Corn tortilla – Egg with potato 	<ul style="list-style-type: none"> – Soy drink – Gluten-free bread with margarine 	<ul style="list-style-type: none"> – Lactose-free rice pudding – ½ banana – 2 corn tortilla rolls with egg 	<ul style="list-style-type: none"> – Lactose-free rice pudding – ½ banana – 2 corn tortilla rolls with egg
Midday	<ul style="list-style-type: none"> – Lactose-free plain yogurt 	<ul style="list-style-type: none"> – Melon with grated coconut 	<ul style="list-style-type: none"> – Tangerine – Oatmeal cookie 	<ul style="list-style-type: none"> – Guava – Oatmeal cookie 	<ul style="list-style-type: none"> – Carrot and cucumber 	<ul style="list-style-type: none"> – Soy yogurt – Oatmeal cookie 	<ul style="list-style-type: none"> – Lactose-free plain yogurt
Lunch	<ul style="list-style-type: none"> – Chicken breast – Natural mashed potatoes – Spinach salad with tomato 	<ul style="list-style-type: none"> – Chicken broth with rice – Baked corn <i>salmas</i> – Radish with lemon 	<ul style="list-style-type: none"> – Aubergines stuffed with pork, vegetables (allowed), Parmesan cheese and olive oil 	<ul style="list-style-type: none"> – White or blue fish fillet (allowed) with lemon 	<ul style="list-style-type: none"> – Yucca with ground pork – Spinach, carrot and tomato salad 	<ul style="list-style-type: none"> – Fried corn cakes with chicken and Swiss chard – Natural tomato sauce and parmesan cheese 	<ul style="list-style-type: none"> – Chicken breast – Natural mashed potatoes – Spinach salad with tomato
Afternoon snack	<ul style="list-style-type: none"> – Lactose-free plain yogurt 	<ul style="list-style-type: none"> – Melon with grated coconut 	<ul style="list-style-type: none"> – Tangerine – Oatmeal cookie 	<ul style="list-style-type: none"> – Guava – Oatmeal cookie 	<ul style="list-style-type: none"> – Carrot and cucumber 	<ul style="list-style-type: none"> – Soy yogurt – Oatmeal cookie 	<ul style="list-style-type: none"> – Lactose-free plain yogurt
Dinner	<ul style="list-style-type: none"> – Baked corn <i>salmas</i> with tuna – Tangerine 	<ul style="list-style-type: none"> – Baked corn toast with tuna salad – Lactose-free yogurt 	<ul style="list-style-type: none"> – Cooked potato wedges + <i>comal</i> chicken breast pieces – Chamomile tea 	<ul style="list-style-type: none"> – Baked corn <i>salmas</i> with tuna – Tangerine 	<ul style="list-style-type: none"> – Baked corn toast with sweet potato deep – Lactose-free yogurt 	<ul style="list-style-type: none"> – Baked corn toast with tuna salad – Lactose-free yogurt 	<ul style="list-style-type: none"> – Baked corn <i>salmas</i> with tuna – Tangerine



Table 10. Low FODMAP menu for 7 days adjusted to the Mexican gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> - Melon - <i>Rancheros</i> eggs 	<ul style="list-style-type: none"> - Papaya - Pumpkin flower quesadillas 	<ul style="list-style-type: none"> - Kiwi and strawberries - Chicken <i>Enjimatadas</i> 	<ul style="list-style-type: none"> - Pineapple - Eggs with <i>nopales</i> 	<ul style="list-style-type: none"> - Orange or tangerine juice - Egg with dried meat 	<ul style="list-style-type: none"> - Papaya, melon and pineapple fruit cocktail with orange juice - <i>Chilaquiles</i> with chicken in green sauce 	<ul style="list-style-type: none"> - Inflated amaranth with lactose-free milk, banana and strawberries
Lunch	<ul style="list-style-type: none"> - <i>Nopales</i> soup - Chicken in <i>tinga</i> with white rice or corn tortillas - Banana snow with strawberry - Lemon water with chia 	<ul style="list-style-type: none"> - Zucchini soup with coriander - Shrimp <i>aguachile</i> toasts - Guava <i>ate</i> - Tangerine water 	<ul style="list-style-type: none"> - <i>Chayote</i> salad with apple cider vinegar and olive oil - Beef cured meat tacos with corn tortilla - Dark chocolate - Jamaica water 	<ul style="list-style-type: none"> - Radish salad with lemon and salt - Pork loin with fine herbs and mashed potatoes - Custard apple (seasonal) - <i>Horchata</i> water 	<ul style="list-style-type: none"> - Spinach salad with cherry tomatoes - Chicken fajitas with corn tortilla and steamed purslane - Guavas with cinnamon - Guava water 	<ul style="list-style-type: none"> - Leek and potato soup - Veracruz style fish with white rice - Chocolate amaranth wafers - Lemon water with chia 	<ul style="list-style-type: none"> - <i>Pozole</i> with corn and pork or chicken - Kiwi snow with strawberries - Jamaica water
Dinner	<ul style="list-style-type: none"> - Natural turkey breast rolls with rice cakes and figs 	<ul style="list-style-type: none"> - Chicken broth with rice (without chickpeas) 	<ul style="list-style-type: none"> - Fresh tuna toast with seedless cucumber and fried leek, olive oil and grain salt 	<ul style="list-style-type: none"> - Inflated amaranth with skim lactose-free milk - Banana 	<ul style="list-style-type: none"> - Fish cocktail with seedless cucumber and baked corn toast 	<ul style="list-style-type: none"> - Roasted <i>nopales</i> and rice cake with dark chocolate and strawberries 	<ul style="list-style-type: none"> - Corn tortillas with natural gluten-free turkey breast and pineapple slices



Table 11. Low FODMAP menu for 7 days adjusted to the Panamanian gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast	<ul style="list-style-type: none"> - Roasted cassava omelette with scrambled patio egg - Strawberries 	<ul style="list-style-type: none"> - Scrambled eggs with mushrooms and cherries tomatoes - Melon 	<ul style="list-style-type: none"> - Roasted banana - Minced meat + mushrooms 	<ul style="list-style-type: none"> - <i>Carimañola</i> with chicken 	<ul style="list-style-type: none"> - Roasted corn roasts with turkey sautéed with celery and peppers 	<ul style="list-style-type: none"> - Spinach omelette with quinoa toast or brown rice - Primitive banana 	<ul style="list-style-type: none"> - Roasted cassava dumplings stuffed with chicken
Lunch	<ul style="list-style-type: none"> - Minced steak meat with zucchini and <i>chayote</i> - Banana 	<ul style="list-style-type: none"> - Roast chicken with 1 roasted potato and carrot sautéed with olives and <i>chayote</i> 	<ul style="list-style-type: none"> - Spring rice - Grilled sea bass fillet + carrot and mushrooms 	<ul style="list-style-type: none"> - Pumpkin puree - Pork chop with zucchini + spinach 	<ul style="list-style-type: none"> - Quinoa spaghetti with chicken or ground beef - Zucchini and coriander salad 	<ul style="list-style-type: none"> - Baked chicken with potatoes sautéed with vegetables (carrot and beans) 	<ul style="list-style-type: none"> - Grilled fish - Pumpkin puree - Arugula salad
Dinner	<ul style="list-style-type: none"> - Vegetable soup with chicken 	<ul style="list-style-type: none"> - <i>Carimañolas</i> with tuna 	<ul style="list-style-type: none"> - Ripe banana balls with ground beef 	<ul style="list-style-type: none"> - Chicken <i>enyucado</i> with zucchini and carrot 	<ul style="list-style-type: none"> - Zucchini soup with balls of ground veal 	<ul style="list-style-type: none"> - Grilled tuna with baby corn salad (preserves) and peppers 	<ul style="list-style-type: none"> - Shrimp cocktail with celery and carrot sticks



Table 12. Low FODMAP menu for 7 days adjusted to the Spanish gastronomy

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Breakfast, Midday & Afternoon snacks	Beverage options: – Vegetable drink of rice or coconut with pure cocoa with stevia – Infusion / tea / coffee Food options: – Gluten-free bread with olive oil with or without crushed tomato – Gluten-free bread with homemade blueberry / raspberry / strawberry jam – Mix of breakfast cereal flakes (puffed rice, quinoa flakes, buckwheat flakes, corn flakes) – Allowed fruit (banana, tangerine, coconut, kiwi, papaya, melon) – Lactose-free cold cuts – Fresh cheese without lactose						
Lunch	– Soupy rice with vegetables (green beans, carrots), clams, squid and turmeric	– Homemade chicken burger with oil-fried Swiss chard – Homemade mashed potato	– Red lentil paste with vegetables – Grilled emperor	– Stewed beef or stewed ribs with potato, beef broth, and zucchini, tomato, carrot sauce, seasoned with oregano, pepper, and rosemary	– Vegetable stew with zucchini, eggplant, tomato, carrot – Hake (with fish soup)	– Spanish potato omelette without onion – Baked or grilled chicken	– Galician octopus (with cooked potato, chard, oil and paprika)
Dinner	– Baked turkey sirloin – Cream (puree) of zucchini and Swiss chard	– Green bean, carrot and hard-boiled egg salad	– Grilled zucchini – Baked chicken wings with spices	– Lamb's lettuce, pomegranate and vinegar salad – French omelette	– <i>Salmorejo</i> (cold tomato soup) with oil, vinegar, gluten-free breadcrumbs and pieces of hard-boiled egg and Serrano ham	– Grilled baby squid – Fish broth with allowed vegetables, soft fish and gluten-free noodles	– Eggplant stuffed with minced meat – Spinach, tomato and lactose-free fresh cheese salad

* Non-wheat or non-rye bread and a dessert (without lactose, sugar, or fructose) may be added to lunch and dinner



Reintroduction of food

The FODMAP diet reintroduction phase involves reintroducing foods back into the diet in a methodical way to determine which foods and FODMAPs trigger symptoms and which do not. Each FODMAP subgroup should be reintroduced separately while the background diet remains low in FODMAPs. The reintroduction step is also best completed under the guidance of a dietitian, therefore, advice has been given by each country on when to reintroduce, which foods to reintroduce, the amount of the reintroduction food to have, and some recipes containing the reintroducing foods (Tables 14-24). A break of a few days between reintroduction of foods is taken to avoid any crossover effects. It takes around 6 to 12 weeks to complete the reintroduction step.

That step sometimes is complicated, unplanned and not guided by a fodmap diet nutrition expert. This, together with the lack of consensus, helps the result in practice to be frequently criticized by other professionals and scientists, who are partly right.

Starting from the low fodmap foods, the foods to be reintroduced are clearly and simply the opposite (Table 13). For what they have mostly and as an example, the following foods:

Table 13. List of reintroduction foods according to the FODMAPs:

FODMAP	Food
Fructose	Fruits: apple, pear, melon, nashi pear, peach, mango, grape, cherry, watermelon Sweeteners: honey, fructose, jam with fructose Vegetables: asparagus, artichokes, peas.
Lactose	Milk (cow, goat and sheep), yogurt Ice cream, cream Soft and fresh cheese (ricotta, cottage, mascarpone)
Fructans	Cereals: wheat, rye, barley (bread, pasta, cookies) Vegetables: onion, shallot, garlic, beets, Brussels sprouts, cabbage, broccoli, fennel, leeks, endive Fruits: persimmon Nuts: walnuts, hazelnuts, pistachios
Galactans	Legumes: beans, chickpeas, lentils, soy
Polyols	Fruits: nectarine, apricot, plum, blackberries, avocado Vegetables: cauliflower, mushrooms, green bell pepper Sweeteners: sorbitol, mannitol, xylitol, maltitol, isomaltitol and others that end in "ol".



Table 14. List of Argentinian and Uruguayan foods to be reintroduced to the Argentinian and Uruguayan diet after a low FODMAP diet

Food	Recipes
cherry	Home made snowy cherry muffins
Onion	<i>Pancitos saborizados</i>
Cheese (lactose) and	Meatloaf with cheese and carrot
Legumes: beans	Legume dumplings with beans
Cauliflower	Cauliflower dough pizza

Table 15. List of Colombian foods to be reintroduced to the Colombian diet after a low FODMAP diet

Food	Recipes
Avocado	<i>Bandeja paisa</i> ; soups.
Cheese (lactose)	Arepa with cheese (<i>queso doble crema</i>)
Garlic	<i>Tamal</i>
Onion	Sancocho: beef rib, green plantains "viches", yucca, potatoes, corn on the cob, onions, coriander, tomatoes
Peas	Ajiaco: chicken, <i>dry guascas</i> (colombian plant), <i>papa criolla potato</i> (yukon gold), <i>papa sabanera</i> (white potatoes), corn on the cob, chicken soup, green peas or peas (no onion or garlic)

Table 16. List of Ecuadorian foods to be reintroduced to the Ecuadorian diet after a low FODMAP diet

Food	Recipes
Mango	Mango juice or smoothie with lactose free yogurt / mango salad (lettuce, tomato, cucumber and mango)
Ricotta cheese	<i>Patacones</i> with ricotta cheese / vegetable soup with ricotta cheese
Curd	<i>Patacones</i> with curd / vegetable soup with curd
Onion, garlic	<i>Refrito / tigrillo / encebollado</i>
Chickpeas	Hummus
Raisins	<i>Caldo de bola</i> with raisins/ cabbage and raisins salad
Avocado	Ceviche with avocado / avocado, black beans, corn, tomato salad

Table 17. List of Peruvian foods to be reintroduced to the Peruvian diet after a low FODMAP diet

Food	Recipes
Pore	Leek cream: leek chunks, Italian zucchini, <i>zapallo macre</i> (pumpkin), pinch of salt
Pear	Pear <i>Mazamorra</i> : peeled pears, cinnamon, <i>chuño</i> (thickener)
Goldenberry	Goldenberry jam: goldenberry, Stevia, lemon
Yellow Peper	Causa limeña
Onion or green onion	<i>Ceviche or Tacu Tacu</i>



Table 18. List of Venezuelan foods to be reintroduced to the Venezuelan diet after a low FODMAP diet

Food	Recipes
Mango, Plum, Watermelon,..	<i>Jugo</i> (common way of taking it) Alone, in compote or juice
Avocado	Reina pepiada (Arepa)
Mushrooms	Steamed or sautéed or cream soup
Red and green peppers	<i>Pabellón criollo</i> (<i>ajíes dulces verdes y rojos</i>)
Rye	Rye mixed with corn flour in arepa and cheese
Beans (<i>frijoles bayos /rojos</i>)	Pique llanero

Table 19. List of Salvadoran foods to be reintroduced to the Salvadoran diet after a low FODMAP diet

Food	Recipes
Onion	Radish leaf stew cakes: radish leaves, 2 eggs, tomatoes, onion.
Peppers	Tamales Salvadoreños (con chiles verdes)
Letucce	Panes de gallina or “panes migueleños”
Avocado	Enchiladas (with cheese)
Beans	<i>Empanadas</i> made with a dough made from a ripe banana puree, with which rounded tortillas are made and stuffed with ground <i>frijoles</i> , and fried.

Table 20. List of Guatemalan foods to be reintroduced to the Guatemalan diet after a low FODMAP diet

Food	Recipes
Yogurt and cheese	Combined with cereal, fruit smoothies with milk or yogurt, <i>atoles</i> such as mosh with milk, rice pudding
Leek	Leek soup, cream
Cabbage	Tortillas with loroco and cheese and cabbage
Avocado	Natural, simple <i>guacamole</i> , <i>guacamole</i> combined with tomato
Beet	<i>Enchilada</i> corn toast with minced meat, cheese, egg, cheese and beetroot
Red Chili pepper	Chili stuffed with beef, chili pepper salad, add to traditional foods that carry chili pepper

Table 21. List of Honduran foods to be reintroduced to the Honduran diet after a low FODMAP diet

Food	Recipes
Black Beans	<i>Baleadas</i> (<i>Tortillas with Beans and Cheese without lactose</i>)
Beans or kidney beans	Blended beans toast
Onion or green onion	<i>Montucas</i>
Avocado	<i>Guacamole</i> : 1 diced avocado, 2 boiled eggs in pieces, lemon and salt
Skim milk	Skim milk with blended fruits (banana, strawberries, papaya)

Table 22. List of Mexican foods to be reintroduced to the Mexican diet after a low FODMAP diet

Food	Recipes
Avocado	<i>Guacamole</i>
Pepper and onion	Frequent in <i>enchilada</i> , <i>tamales</i> , <i>pozole</i> ...
Beans, lentil, chickpeas	Beans with chicken <i>tinga</i>
Wheat Bread	<i>Bolillo</i>
Panela cheese, plain yogurt or cream	Grilled Panela cheese with roasted Tomatillo and Poblano Salsa
Cheese (lactose)	<i>Quesadilla</i>



Table 23. List of Panamanian foods to be reintroduced to the Panamanian diet after a low FODMAP diet

Food	Recipes
Beans	<i>Gallo Pinto</i> (rice with frijoles)
Onion	<i>Mondongo</i>
Pepper, garlic	Tamal
Cheese (lactose)	Boiled cassava with goat cream cheese Corn patty with roast beef, cheese egg and orange
Chickpeas	Chickpeas stewed with Serrano ham, potato
Peas	<i>Patacones</i> + fish + tomato and cucumber salad Stewed shrimp with tomato, garnished with peas and sweet potatoes

Table 24. List of Spanish foods to be reintroduced to the Spanish diet after a low FODMAP diet

Food	Recipes
Wheat	Wheat bread toast with ham and tomato (<i>tumaca</i>)
Green asparagus	Grilled vegetables (asparagus, zucchini, aubergine, natural tomato) <i>Serrano</i> ham dices
Green onion or onion	Spanish omelette
Lentils	Stewed lentils with potatoes and carrot
Red pepper	Seafood paella

Discussion

Numerous studies in other countries have reported the use of the FODMAP diet⁽³⁷⁾. However, the information available in Spanish is scarce⁽³⁸⁾ and there are barely no local studies that have estimated the applicability and effectiveness of this strategy on the symptoms and the health-related quality of life in patients in the Hispanic setting.

The benefits of restricting dietary FODMAPs appears to be durable⁽³⁴⁾. The nature of the diets used, however, is generally poorly defined. While all FODMAP are potentially important in the genesis of symptoms, the relative contribution of different subgroups of FODMAP varies across ethnic and dietary groups due to the dose delivered in the diet⁽²⁾. In Western European and Central and South American diets, fructose and fructans are by far the most widespread in the diet and therefore the ones to which nearly all patients with IBS are exposed in their everyday diet⁽²⁾.

Using a well-defined diet, restriction of fructose and fructans, together with general avoidance of other FODMAP leads to impressive global symptoms response⁽³⁵⁾. There are limitations in developing tables of FODMAP-rich and FODMAP-poor foods. Published lists of foods are generally limited in the description of FODMAP content. This limitation has been assisted by the development of methodologies to measure FODMAP content, together with a systematic examination of fruits, vegetables and cereals⁽³⁶⁾. The cut-off levels of FODMAP content, which dictates whether it is classified as 'high' or not, are not clearly defined. This is further complicated by the fact that the total of FODMAPs ingested (not the individual FODMAP) at any one meal is a major factor in determining whether symptoms will be induced or not.



More studies are needed on the use of the FODMAP diet. The current criticism towards the FODMAP diet and the lack of evidence and robustness for its clinical and dietary use seems to be justified. There is a great variation between the different lists of FODMAP content in foods. The intervention studies are mostly of short duration, usually less than 3-6 months. Besides, the necessary trained professionals are not always available in hospitals and primary care, therefore, the recommendation of the diet is limited.

In resume, defining qualitatively the typical eating practices and style of the patient and the subsequent adaptation of the diet to local gastronomy is pertinent, as it provides the basis for a better understanding of food choice and may increase the likelihood of durable adherence. An understanding of the dietary principles and allocation of time to work on applying the diet are also important to ensure success.

This publication is merely intended as a guide to help professionals manage the FODMAP diet.

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