## Elimination Diet for Eosinophilic Esophagitis

## What is Eosinophilic Esophagitis (EoE)?

Eosinophilic esophagitis (EoE) is a chronic inflammatory disorder of the esophagus. It occurs when a large amount of white blood cells, called 'eosinophils' are present in the esophagus. Eosinophils can cause inflammation and are typically not found in the esophagus.

Treatment options include the use of medication like steroids (administered either with an inhaler or in a liquid form) and Proton pump inhibitors (acid suppressors) or dietary management (6 food elimination diet).

## Symptoms of EoE may include:

In Adults

- Difficult or painful swallowing
- Food impaction (food getting stuck in the esophagus)
- Reflux that does not respond to medication


## In Children

- Trouble swallowing
- Nausea and vomiting
- Abdominal pain


## What role does diet have with EoE?

Food and environmental allergies are common among individuals with EoE. It is thought that adverse reactions to food may actually trigger EoE symptoms. For that reason, it is helpful to identify any potential food triggers.

Those who complete an elimination diet may experience relief of their symptoms, if the food(s) that are causing the eosinophils to travel to the esophagus are identified and removed from the diet.

## Elimination Diet

The Elimination diet is used to determine if one or more of the 6 most common food allergens are a trigger for symptoms. The diet can be very effective but is a long process ( $\sim 42$ weeks) and requires multiple endoscopies. It will also result in life-long dietary changes. However, it addresses the source of the problem, is generally less expensive, and as no adverse effects when compared to other options.

## General Guidelines

1. The Elimination diet requires you avoid the top 6 food allergens (milk, wheat, soy, eggs, peanut/tree nuts, and fish/shellfish) for a period of 6-8 weeks.
2. After the elimination phase, an endoscopy is performed and biopsies are obtained to assess the response to the diet.
3. If biopsies confirm remission (<15 eos/HPF), eliminated foods are reintroduced to the diet 1-2 groups at a time for a 6 week period each.
4. An endoscopy is done after each reintroduction. All food groups will be reintroduced as there may be more than one trigger food. Challenge foods should be eaten daily during the reintroduction period.

## The Detailed Process:



## Allergen foods and ingredients that should be AVOIDED while on the diet:

| Food Group | Foods to Avoid | Ingredients to Avoid |
| :---: | :---: | :---: |
| Milk/Dairy | Butter <br> Buttermilk <br> Caramel <br> Cheese <br> Cottage Cheese <br> Cream <br> Cream cheese <br> Curds <br> Custard <br> Dry milk <br> Evaporated milk <br> Frozen Yogurt <br> Ghee <br> Half and Half <br> Ice Cream <br> Milk (cow, goat, sheep) <br> Milk chocolate <br> Nougat <br> Pudding <br> Powdered milk <br> Semi-Sweet chocolate <br> Sour Cream <br> Sweetened Condensed milk <br> Yogurt | Butter flavoring <br> Caramel flavoring <br> Casein <br> Casein hydrolysate <br> Caseinates (all forms) <br> Diacetyl <br> Lactalbumin <br> Lactalbumin phosphate <br> Lactoferrin <br> Lactose <br> Lactulose <br> Milk protein hydrolysate <br> Rennent Casein <br> Tagatose <br> Whey (all forms) <br> Whey protein hydrolysate |
| Wheat | Bread <br> Bread crumbs <br> Bulgur <br> Cereals <br> Crackers <br> Couscous <br> Farina <br> Farro <br> Flour tortillas <br> Kamut <br> Pasta <br> Pizza crust <br> Puffed wheat | Durum <br> Einkorn <br> Flour (all purpose, bread, cake, enriched, graham, high gluten, instant, pastry, self-rising, soft wheat, stone ground, whole wheat) Hydrolyzed wheat protein <br> Seitan <br> Semolina <br> Spelt <br> Sprouted wheat <br> Triticale <br> Vital wheat gluten <br> Wheat (bran, berries, durum, germ, <br> gluten, grass, malt, sprouts, starch) |


| Soy | Edamame <br> Miso <br> Natto <br> Soya <br> Soy products (cheese, ice cream, milk, <br> and yogurt) <br> Soybean <br> Soy nuts <br> Soy sauce <br> Tamari <br> Tempeh <br> Tofu <br> Quorn | Soy <br> Soy fiber <br> Soy flour <br> Soy protein (concentrate, hydrolyzed, <br> isolate) <br> Textured vegetable protein (TVP) |
| :--- | :--- | :--- |
| Eggs | Eggs (dried, powdered, whole) <br> Egg whites/substitute | Eggnog <br> Egg sauces (Bearnaise/Hollandaise <br> sauce) <br> Mayonnaise <br> Meringue |
| Peanut/Treenut | All types of nuts <br> All types of nut milks <br> All types of nut spreads <br> Artificial nuts <br> Lychee <br> Pesto | Albumin (albumen) <br> Globulin <br> Livetin <br> Lysozyme <br> Words starting with "ovo" or "ova" <br> Vitellin |
| Fish/Shellfish | All types of fish <br> Barnacle <br> Caviar <br> Clams, mussels <br> Crab <br> Crawfish <br> Krill <br> Lobster | Marzipan/almond paste <br> Octopus <br> Nut extracts (almond extract) |
| Oysters |  |  |
| Scallops |  |  |
| Shrimp, prawns |  |  |
| Snails (escargot) |  |  |
| Squid (calamari) |  |  |$\quad$| Nut paste |
| :--- |
| Nut pieces |

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## Enlist the help of a Registered Dietitian

If it is determined that a 6 food elimination diet would be beneficial to you, consulting a Registered Dietitian (RD) who specializes in gastrointestinal nutrition can increase the likelihood of your success. A dietitian can help to ensure adequate nutrition is maintained while on the diet and can help with label reading and meal planning.

## What CAN I eat on an elimination diet?

- Chicken
- Beef
- Pork
- Turkey
- Game Meats
- Lamb
- Beans (except soy)
- Split peas
- Lentils
- Legumes
- Rice (brown, white, wild)
- Potatoes (white, red, sweet)
- Quinoa
- Millet
- Amaranth
- Buckwheat
- Gluten-free oats
- All fresh, frozen, canned and dried fruits
- All fresh, frozen, and canned vegetables
- Seeds (sunflower, pumpkin, sesame)
- Oils (avocado, olive, coconut, sunflower, canola)
- Dairy free milk (rice, coconut, oat, hemp, pea)
- Sweeteners
- Condiments (vinegar, spices)
- Beverages (water, coffee, tea, soda, sparkling water, juice


## Allergen Friendly Brands

The following companies manufacture or sell products that may be suitable for a 6 food elimination diet:

## - Flours/Baking

O Arrowhead Mills: Select products from the gluten-free product line.
o Bob's Red Mill: Gluten free products, baking mixes, grains, and seeds.
o Cherry Brook Kitchen
o Cravings Place: Baking mixes free of the top 8 allergens.
o King Arthur: Gluten free baking mixes.
o Namaste Foods: Baking mixes and pasta meals free of wheat, gluten, soy, dairy, and peanut/tree nuts.

- Dairy substitutes
o Daiya: Cheese, yogurt, and other products free of the top 8 allergens.
o Earth Balance: Vegan, gluten-free mayonnaise and margarine. This product line includes a soy-free and egg-free mayonnaise, as well as a soy-free and dairy-free margarine.
o So Delicious: Dairy free products (coconut and oat products only).
o Pacific Foods: Dairy free beverages (hemp, rice, coconut products only).
o Soy-Free Vegenaise: Soy free and Egg free mayonnaise.
o Ripple milk: Pea protein milk.
- Bread/Pasta/Cereals

O Food for Life: Select from the gluten-free product line.
o BFree bread: Bread, rolls, and wraps that are free of soy, gluten, dairy, eggs, and nuts.
o Eden Foods: Grains and 100\% buckwheat noodles.
O Ener-G: Select from their gluten free and vegan line of products.

- Snacks
o Enjoy Life Foods: Snack bars, cookies, granola, and chocolate free of the top 8 food allergens.
o Sun Butter: Seed spread that is gluten and peanut/tree nut free.
o $\mathbf{8 8}$ acres: Seed spreads, bars, and granola free from the top 8 allergens.
- Frozen/quick meals
o Allergaroo: Ready-made microwavable pasta dishes free of wheat, milk, soy, egg, fish/shellfish, peanut/tree nut, and mustard.
o lan's Natural Foods: Frozen meals and snacks free of wheat, gluten, milk, eggs, nuts, and soy.


## Sample meal and snack ideas for an elimination diet:

## Breakfast:

- Oatmeal or cream of rice cereal with fruit
- B-Free or Food for Life bread toasted with 2 tablespoons Sunbutter or jelly
- Cheerios (plain) or Rice Chex cereal with rice milk and $1 / 2$ cup blueberries
- Banana Pancakes: Bisquick Gluten free Pancake Mix prepared with $1 / 2$ mashed banana, and cook as directed. Top with pure maple syrup.
- Coconut milk yogurt topped with berries
- Smoothie: 1 cup fresh or frozen fruit, 1 cup rice or coconut milk, $1 / 2$ cup coconut yogurt, 1 scoop brown rice protein powder (NutraBiotic)


## Lunch and Dinner:

- "Rice Bowl": scoop of rice, grilled chicken, topped with lettuce, salsa, and guacamole. Add fresh lime juice and olive oil drizzle for dressing.
- Tacos with ground meat or beans and corn tortilla; top with lettuce, salsa, avocado, etc.
- Spaghetti made with gluten free pasta - add ground beef or ground turkey for protein (or mushrooms if vegetarian)
- Stuffed peppers: Brown and cook thoroughly ground turkey or beef. Season with sea salt \& pepper. Toss with equal amounts of cooked rice or quinoa. Stuff peppers and bake in covered casserole dish until peppers are soft.
- Homemade soup: chicken and rice, vegetable, chili, tomato, black bean soup, lentil soup
- "PB \& J" sandwich - use Sunbutter in place of peanut butter and a suitable allergen friendly bread option


## Snacks

- Rice cake topped with Sunbutter
- Hummus or bean dips with veggies, rice crackers, or corn chips
- Guacamole or salsa with veggies, rice crackers, or corn chips
- Fresh fruit
- Vegetables
- Applesauce
- Homemade granola bars with gluten free oats and dried fruit
- Popcorn
- $1 / 2$ sandwich with BFree or Food for Life rice bread with sliced chicken, lettuce and tomato slice.


[^0]:    *All FDA-regulated manufactured food products that contain a "major food allergen" (milk, wheat, soy, egg, peanuts/ tree nuts, and fish/ shellfish) as an ingredient are required by law to list that allergen on the food label.

