

Egg- Free-from Diet Instructions

Please use this diet sheet under the supervision of a registered dietitian

Egg Allergy

The major proteins responsible for egg allergy are present in egg white and are ovalbumin, conalbumin (ovotransferrin), and ovomucoid. Some proteins in egg yolk may also induce the production of IgE antibodies, and antigenic cross-reactivity may occur between egg yolk and egg white proteins. In addition, proteins in eggs from different bird species sometimes cross-react antigenically. Cooking denatures many egg proteins, so that cooked eggs may be tolerated in cases where raw egg causes an allergic reaction. Some egg proteins, especially ovomucoid, are heat stable and persons allergic to this component react to both cooked egg and raw egg.

In most cases of egg allergy, IgE antibodies are produced specifically to egg proteins, which differ from the proteins in chicken flesh. It should be noted that livetins, which are proteins found in egg yolk, are derived from the blood of the hen. Thus, IgE antibodies to these proteins can result in allergy to both egg and chicken.

Foods Containing Eggs

Avoidance of egg as an individual food in a meal (e.g., scrambled, boiled, fried, or as an omelette) is relatively easy. However, eggs are frequently included as an ingredient in prepared foods, and as such may not be easily recognized. Both the practitioner and allergy sufferer need to be aware of the foods traditionally made with eggs. As well, they need to read food labels and become familiar with terms indicating the presence of egg protein. Egg proteins added to exclude egg from the diet.

Method: Egg-free Diet

All products containing egg or components of egg must be avoided.

Other sources of egg include: eggnog, omelette, custard, soufflé, quiche, egg noodles, angel food cake, Caesar salad, some salad dressings, sauces such as Hollandaise, Béarnaise, and Newburg, battered foods such as fritters, pancakes, and waffles, egg whirl and wonton soup, candy made with egg such as nougat and divinity, candy brushed with egg white to give it a shine, some ice creams, cream pies, meringue pies, meringues, pavlova, and some packaged dessert mixes.

Eggs are frequently used as a garnish and as a binding agent in meat loaves, sausages, etc. Egg may be used as a clarifier in consommé, soft drinks (root beer) or beer and wine.

Several non-food items may also contain egg. Including:

- Egg shampoo
- Sensitized photographic film
- Printed natural fabrics, which have not been washed
- Some fur garments
- Vaccinations should be discussed with your doctor as traces of egg may be present in some live vaccines.

Eggs in Recipes

Eggs have various purposes in recipes:

- Leavening agent
- Binding agent
- Source of liquid
- Glaze on baked goods.

See the Substitutes section for substitutes.

Feeding the Egg Allergic Infant

Egg proteins in the mother's diet can pass into the breast milk and cause a reaction in the egg allergic infant. If the breast-fed infant is allergic to egg protein, the elimination of all eggs and egg containing products from the mother's diet should be beneficial. If egg elimination only partially eases the infant's distress, exposure diaries carefully kept by the mother may isolate other possible dietary or medication irritants.

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	Foods Allowed	General Foods Restricted
Milk and Dairy:	Milk Frozen yoghurt (made without egg) Cheese Butter	Milk drinks (containing egg) Frozen desserts (containing egg) Butter (dairy) Ice cream cone / Cornet
Bread and Cereal:	Bread (baked without egg) Buns (baked without egg) Baked goods (baked without egg) French or Italian bread Soda Crackers Plain cooked grains Plain oatmeal Ready-to-eat cereals made without egg Egg-free pasta Egg-free baking mixes	Commercial or homemade baked goods made with egg Instant oatmeal All baking mixes containing egg or baking powder Egg noodles and macaroni Cake flour Creamy fillings Breakfast cereals made with egg French toast Pasta
Vegetables:	All vegetables and their juice extracts are allowed in an egg free diet unless prepared or combined with egg (see specific foods restricted - vegetables).	Vegetable dishes made with egg Battered vegetables Breaded vegetables Creamed vegetables Scalloped Vegetables
Legumes:	All legumes are allowed in an egg free diet unless prepared or combined with egg (see specific foods restricted - legumes). Plain tofu Plain peanut butter	Legume dishes prepared with egg
Fruit:	All fruit and their juice extracts are allowed in an egg free diet unless prepared or combined with egg (see specific foods restricted - fruit).	Lemon curd
Meat, Poultry & Fish:	All fresh, frozen or canned meat, poultry and fish unless prepared or combined with egg e.g. Battered or crumbed with eggs	Meat, poultry and fish prepared or combined with egg Check labels on processed meat Battered meat, poultry and fish Breaded meat, poultry and fish Creamed meat, poultry and fish

Egg - lysozyme
 Egg - ovomucoid
 Egg - white
 Egg - yolk
 Egg (processed / extender)
 Egg (scrambled mix)
 Egg roll
 Eggnog
 Meat (sausage)
 Scotch eggs

Nuts & Seeds:	All plain nut and seeds	Glazed or in baked goods with egg
Fats & Oils:	Margarine Shortening Butter Cream Pure vegetable oil Lard & meat drippings Gravy	Salad dressings that list egg in any form as an ingredient. Real mayonnaise Fat substitutes Margarine
Spices & Herbs:	All spices and herbs are allowed in an egg free diet.	None
Miscellaneous:	Tea, herbal tea, coffee Carbonated beverages	Bearnaise sauce Binders Bouillon Candy / sweets Eggnog Hollandaise Sauce Marshmallows Protein powder Provitamin A Souffles Batter / Battered food Cake (sponge) Cakes Custard Sweets / Candy

Unreferenced Sources / Other: Apovitellin
 Bread (some may contain egg, e.g., kitke bread)
 Certain cereal beverages are egg-free while others contain eggs, so check labels
 Croquettes (some may use egg as a binder)
 Egg may be used as a clarifier in consomme, soft drinks or beer and wine, so it is safer to make your own stock.
 Malted and chocolate drinks - read labels
 Ovoglobulin
 Ovotrans-ferrin
 Processed meat (some may use egg as a binder) e.g. meat loaves, sausages
 Salad dressings (if egg is an ingredient)
 Salads containing egg

Ingredient terms to avoid on labels

Albumin
Binder
Coagulant
Egg
Egg lecithin
Egg lysosome
Egg white
Egg yellow
Egg yolk
Globulin
Lecithin
Livetin
Lysozyme
Ovalbumin
Ovamucin
Ovamucoid
Ovomucin
Ovomucoid
Ovovitellin
Powdered egg
Vitellin
Whole egg

Label Alerts

CHECK LABELS ON ALL PROCESSED FOODS - if a food label is absent, unclear or vague it is best to avoid it. Read all labels, even familiar brands, as manufacturers may change suppliers or ingredients. Many manufacturers use egg to coat the outside of food such as baked products and deli meats - this may not appear on the labels.

See <http://AllAllergy.net> - Food Alerts, and, <http://www.safetyalerts.com>

Substitutes

Eggless egg replacers are available in many health food stores. These are different from the reduced-cholesterol egg products, which do contain eggs. Egg replacers are egg-free and are usually in a powdered form.

BAKING

Eggs in recipes can often be replaced by adding 2-3 extra tablespoons (30ml – 45ml) of water for each egg eliminated to balance the moisture content of the product.

Replace eggs in baking with a mixture of the powdered egg replacer and water according to package directions.

1 heaped tablespoon of soy flour or cornstarch plus 2 tablespoons of water per egg in a baked product.

30g (1oz) of mashed tofu per egg.

In muffins and cookies, ½ mashed banana can be used instead of an egg, though it will change the flavour of the recipe.

Equivalent to 1 egg, for baking:

1 tsp (5ml) unflavored gelatin
2 tblsp (30ml) + 1 tsp (5ml) boiling water
3 tblsp (45ml) cold water

BINDING

For vegetarian loaves and burgers, use any of the following to bind ingredients together: tomato paste, mashed potato, moistened breadcrumbs, rolled oats.

Each of these is the replacement of 1 egg as a binder:

- ½ large mashed banana
- ¼ cup (62½ ml) applesauce or pureed prunes
- 1 tblsp (15ml) ground flaxseed mixed with 3 tblsp (45ml) water
- 1½ tblsp (22½ml) water, 1½ tblsp (22½ml) oil, and 1 tsp (5ml) baking powder
- Combine one packet of unflavored gelatin with 1 cup (250ml) boiling water - 3 tblsp (45ml) of this mixture equal one egg
- 1 tblsp (15ml) apricot puree
- 1/4 cup (62½ml) of soft tofu
- 1/4 cup (62½ml) soymilk

LEAVENING

- 2 tblsp (30ml) carbonated water and 2 tsp (10ml) baking flour
- 1 tsp (5ml) baking powder, 1 tblsp (15ml) water, and 1 tblsp (15ml) vinegar (add vinegar separately at the end for rising)
- Dissolve 1 tsp (5ml) yeast in ¼ cup (62½ml) warm water
- 1 heaped tblsp (15ml) of soya flour and 1 tblsp (15ml) water
- 1 tblsp (15ml) bean flour and 1 tblsp (15ml) oil
- 1 tblsp (15ml) of arrowroot powder mixed with 3 tblsp (45ml) water
- 1 tblsp (15ml) cornstarch mixed with 3 tblsp (45ml) water
- 2 tblsp (30ml) gluten flour or unbleached white flour, 1½ tsp (7½ml) corn oil, ½ tsp (2ml) baking powder, and 2 tblsp (30ml) water

WHIPPING

-¼ tsp (1ml) xanthan gum with about ¼ cup (62½ml) of water. Let stand. It thickens, and can be whipped like an egg white.

COOKING

For each egg required in cooking the following substitutes can be used:

- 1.) One packet of plain gelatin mixed with 2 tblsp (30ml) of warm water. Do not mix gelatin with water until you are ready to use it or it will congeal, or
- 2.) 1 tsp (5ml) baking powder + 1 tblsp (15ml) liquid + 1 tblsp (15ml) vinegar, or
- 3.) 1 tsp (5ml) yeast dissolved in ¼ cup (62½ml) warm water, or
- 4.) 1 tblsp (15ml) of apricot puree, or
- 5.) 2 tblsp (30ml) of water + 1 tblsp (15ml) vegetable oil + 1 tblsp (15ml) baking powder

Reminders

Medic Alert

Cross-reactivity

Non-food items, e.g., shampoo, vaccinations, some fur garments, unwashed printed natural fabrics, sensitized photographic equipment.

Free-from Recipes and Related Information

http://allallergy.net/recipes/recipes_egg.cfm