

Hôpital de Montréal
pour enfants

Centre universitaire
de santé McGill



Montreal Children's
Hospital

McGill University
Health Centre

Dietary restrictions :

- Cow's milk protein
- Soy protein
- Bovine protein

This document has been prepared by the Clinical Nutrition Department for the use of emergency department, gastroenterology department and pediatricians for patients who have not been seen by a nutritionist.

INTRODUCTION

A food allergy is an adverse immune reaction to an antigen such as the protein present in dairy products, beef and/or soy.

The only treatment for food allergy is complete avoidance of the allergen(s) in question. In the case of severe food allergy, ingestion of a very small quantity or “trace” amount of the food(s) containing the allergenic protein can be enough to trigger a reaction. Such reactions can result in symptoms lasting up to 7 days.

There are two main classifications of allergic reactions: Type-1 allergy (IgE-mediated) and Type-4 allergy (non-IgE mediated). Type-4 allergies can also be referred to as intolerances. Although an immune response is elicited in both Type-1 and Type-4 reactions, the response mechanism differs depending on the category of reaction.

Non IgE-mediated allergy (also called Type-IV or milk intolerance) is generally due to the immaturity of the immune system, leading to a defense reaction against something that is normally inoffensive such as the protein(s) present in the allergenic food(s). This type of reaction tends to affect the gastro-intestinal tract with symptoms such as diarrhea, constipation, vomiting, reflux, failure to thrive, gas, irritability, etc...

IgE-mediated allergy (also called Type-I) involves a different type of immune system reaction. Type 1 reactions can cause gastro-intestinal problems, but can also affect the skin and/or the respiratory system.

In most cases, Type-4 allergies (non IgE-mediated) will be outgrown by the age of 12 months. Type-1 allergies (IgE-mediated), however, can persist for a longer period.

In either case, it is recommended that the introduction of solids be delayed to 4 months of age, or **ideally, around 6 months**. Delaying the introduction of foods considered allergenic - eggs, tree nuts, peanuts, fish and seafood, for example – is no longer recommended.

LABELLING:

Canadian food labelling guidelines require manufacturers to clearly identify the presence of priority food allergens (for example milk and soy) in their product formulation by either 1) declaring milk or soy **in** the list of ingredients, or 2) in a separate “contains:” statement immediately following the list of ingredients.

Certain imported food products may not conform to Canadian labelling regulations; therefore it is important to be extra vigilant when reading those ingredient labels.

NOTE:

The following words are NOT key words to indicate the presence of MILK despite similar sounding terminology. These ingredients are allowed in a milk-free diet.

Lactic acid

Lactate

“Butters” of specified provenance: cocoa butter, nut butter, coconut milk.

CROSS REACTIVITY:

Individuals with cow’s milk allergy may also experience reactions to the milks of other ruminant animals whose proteins are similar. This is called an allergic cross-reaction or cross reactivity.

Here are some examples of foods with the potential for cross-reactivity:

Milk allergy:

Avoid goat’s milk, sheep’s milk and buffalo milk (i.e mozzarella di bufala)

Beef allergy:

Avoid bison

PHARMACEUTICAL PRODUCTS:

Pharmaceutical products (medications) can contain lactose and caseinates. These ingredients are generally purified and are therefore safe. Nevertheless, proceed with caution and if in doubt, always check with the pharmacist.

KEY WORDS

Despite improved labelling laws and the presence of allergen information on food labels, **it is still necessary to read the complete list of ingredients on the label.**

Start by avoiding cow's milk protein, soy and beef (or as per physician's recommendation). After 2 to 4 weeks following symptoms resolution, beef, veal and bison may be reintroduced; monitor symptoms.

Subsequently, it may be possible to reintroduce products with traces of soy followed by soy. Always monitor symptoms and readjust diet as needed.

Concentrated sources of cow's milk

Buttermilk
Cream: (table cream, whipping cream, Ice cream, sour cream, crème fraîche)
Milk and dairy drinks
(cow, goat, sheep)
Cheese
Yogurt /kefir

Other sources of milk

Butter
Curd
Casein /Caseinate
Lactalbumin
Lactoglobulin
Lactoferrin
Lactoserum
Ghee
Milk solids

Traces of milk

Added lactose
Foods with precautionary labelling:
"may contain traces of milk" or
"manufactured on shared equipment
with milk"

Concentrated sources of soy (or soya)

Soy beverages
Soy flour
Soy beans
Edamame
Bean sprouts of unspecified origin
Miso
Tempeh
Tofu

Other sources of soy

Soy protein
Soy sauce

Traces of soy

Soy oil
Soy lecithin

Foods with precautionary labelling:
"may contain traces of soy"

Sources of beef

Bison / Buffalo
Gelatin of unspecified origin
Suet
Veal

Always read food labels carefully. These brands names and products are for information purposes only. Since they often change, it is very important to always validate that they are still safe for your child to consume. Always choose age-appropriate textures for your child.

Food groups	<u>Recommended foods</u>	<u>Foods to avoid</u>
Grain products	Baby cereals; dairy-free and soy-free Hot cereals : oatmeal, cream of wheat or rice without milk Some cold cereals Regular pasta and rice (white or brown), egg noodles Some commercial cake and muffin mixes Some breads : white, whole wheat, french or italian baguette, pita, hot-dog, hamburger, english muffins Some crackers and cookies	Baby cereals containing cow's milk or soy Prepared cereals, cold cereals containing milk or soy Oatmeal, cream of wheat or rice made with milk Soy flour Ready-to-serve rice mix Pasta enriched with milk protein Pancake mix Cones Bread made with milk or containing soy lecithin Most crackers Teething cookies
Milk and dairy products	Breast milk of a mother following cow's milk, bovine protein and soy free diet. Formulas: Alimentum, Nutramigen, Puramino, Neocate / Neocate Junior, Pregestimil Coconut milk, almond milk, rice milk Homemade desserts made with special milk/formula Pudding mixes	Infant formula: Enfamil, Enfamil Soy, Enfacare, Similac, Isomil, Neosure, Good Start, Alsoy Cow's milk: whole 3,25%, 2%, 1%, skim, evaporated, condensed, powdered Cream: 10%, 15%, 35%, sour cream Milk or cream substitutes Cream soup, sauces Cheeses and substitutes Goat's milk and products Yogurt, milk desserts (pudding, custard, flan) Ice cream, frozen yogurt, milk or tofu

Food groups	<u>Recommended foods</u>	<u>Foods to avoid</u>
Meat and Alternatives	<p>Lamb, pork and ham, horse meat, wild meat</p> <p>Poultry: chicken, turkey, goose, quail.</p> <p>Sausages : pork, chicken, turkey</p> <p>Fish and seafood</p> <p>Bacon, cretons</p> <p>Eggs</p> <p>Legumes/beans**: peas, lentils, kidney beans, lima beans, chick peas, peanuts, hummus</p>	<p>Beef, veal, bison and their products (liver, patés...)</p> <p>Turkey injected with butter (Butterball)</p> <p>Soy beans, soy nuts, soy proteins</p> <p>Tofu</p> <p>Sausages: beef, veal, tofu.</p> <p>Crab flavoured pollock</p> <p>Cold cuts containing milk or soy</p>
Fruits and Vegetables	<p>All vegetables and fruits : Fresh, puréed, plain baby foods, canned, frozen, dried and juices</p> <p>Mashed potatoes without milk, butter or cream</p>	<p>Desserts for babies containing milk or cream</p> <p>Some baby food : vegetable and meat or pasta mixture containing beef, veal, milk or TVP</p> <p>Vegetable gum, vegetable starch when source is unknown</p>
Fats and others	<p>Oils : Canola, olive, sunflower, corn, safflower, cotton, palm</p> <p>Mayonnaise, salad dressing and vinaigrette without soy</p> <p>Lard, whipped cream substitutes.</p> <p>Sugar, maple or corn syrup, honey**, molasses, jelly, jam, marmalade</p> <p>Condiments, salt, pepper, spices, herbs</p> <p>Sauces, certain chicken and vegetable broths</p>	<p>Soy oil</p> <p>Butter, margarine, tallow</p> <p>Some salad dressings and vinaigrettes</p> <p>Soy sauce, Teriyaki sauce, Worcestershire sauce, miso</p> <p>Oil in aerosol (PAM)</p> <p>Some candies, marshmallow, chocolate bars, BBQ chips</p> <p>Chocolate or caramel spreads</p> <p>Sauces and beef or veal broths, commercial soups</p> <p>Gelatin / Jello</p> <p>Oils from unidentified sources can come from soy.</p>

** TO AVOID IN SOME CASES (due to potential cross contamination or because not suitable for young children/infants).

RECOMMENDATIONS:

- ❖ Offer a vitamin D supplement (and consider a calcium supplement as needed)
- ❖ Choose calcium-fortified orange juice
- ❖ If child's special formula is not available, give Pedialyte (or other oral rehydrating solution), water or juice until you get some. Never give regular formula, not even for one feed. Better to plan ahead...

SUBSTITUTIONS:

To substitute 1 tablespoon of soy sauce:

2 teaspoons of molasses + 1 tablespoon hot water + ¼ teaspoon salt

To substitute 200 ml of sour cream:

175 ml water + 50 ml vinegar + 50 ml corn starch

Milk in desserts can be substituted with an equivalent quantity of water or fruit juice

Milk in sauces can be substituted with an equivalent quantity of chicken or vegetable stock

NOTES:

Adapted from a document produced by the Allergy Committee nutritionist workgroup (June 2014): Marie-Eve Besner (Montreal Children's Hospital/MUHC), Nathalie Béland (CHU de Québec), Eve-Emmanuelle Brochu (CHUS), Valérie Vaillancourt (CHU Ste-Justine), Isabelle Lecours (Hôpital Maisonneuve-Rosemont), Association québécoise des allergies alimentaires (AQAA) and from a document produced by the Clinical Nutrition Department at Montreal Children's Hospital.

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