



PATIENT EDUCATION HANDOUTS

Cow's Milk Allergy

What is a milk allergy?

A milk allergy is a reaction by your child's immune system to the protein in milk. Our immune systems normally respond to bacteria or viruses that attack the body. With a food allergy, the body's immune system attacks harmless things, such as the proteins found in cow's milk. Casein is the main protein found in milk. It is found in the solid part of milk (curd) when milk goes sour. Whey, the liquid that remains once the curd is removed, contains the rest of the proteins. Your child can be allergic to the proteins in curd, whey, or both.

In very young children, cow's milk is the leading cause of allergic reactions. Milk is one of the 8 foods that are responsible for most food allergies in children. The other foods include eggs, soy, peanuts, tree nuts (such as walnuts and cashews), wheat, fish, and shellfish. Most kids outgrow milk allergy by 2 or 3 years of age.

If you think your child is allergic to milk, dairy products or any other food, it is important to get a diagnosis from your healthcare provider or allergist.

What are the symptoms of an allergic reaction to milk?

Milk allergies are typically discovered very early in formula and breast-fed infants. If a mother drinks cow's milk, the milk protein also comes out in her breast milk. The symptoms seen in milk allergy depend on whether the child has a slow-onset or a rapid-onset reaction to milk. The slower reaction is more common and symptoms develop over time.

Symptoms that occur rapidly (within seconds to hours) may include:

- Wheezing
- Vomiting
- Skin reaction (hives).

Symptoms that occur slowly (several hours and sometimes days):

- Loose stools (sometimes containing streaks of blood and/or mucus)
- Diarrhea, abdominal cramping
- Intermittent cough, wheezing, runny nose, or sinus infection
- Skin rash
- Slowed gain in weight and/or height (failure to thrive).

A milk allergy is not the same as lactose intolerance. Lactose intolerance affects only the digestive tract. It causes symptoms such as bloating, gas and diarrhea.

Although rare, it is possible to have an allergic reaction called anaphylactic shock. This is a serious reaction that is sudden, severe, and can involve the whole body. It can cause swelling of the mouth and throat, dangerously lower blood pressure, and trouble breathing. This type of reaction is a medical emergency. It is treated with epinephrine (a medicine that is given by injection). Usually parents or caregivers of children who have severe allergic reactions carry their own shot kits, just in case of emergency.

What formulas are best for my baby?

Pediatricians typically recommend soy-based formulas. These formulas contain soybean proteins, and most are supplemented with vitamins and minerals making them nutritionally equal to milk-based formulas. The switch to soy formula helps for about half of babies allergic to milk. If the switch to soy doesn't help with your child's symptoms, the next step is to give your child a "hypoallergenic" formula. There are two types of hypoallergenic formulas:

- **Extensively hydrolyzed formulas:** The proteins in these formulas have been broken down so that they are more easily digested and less likely to cause a reaction. Brands include Nutramigen, Pregestimil, and Alimentum. Partially hydrolyzed formulas are not a good substitute.
- **Elemental formulas:** The proteins in these formulas are in the simplest form and are used when hydrolyzed formula continues to cause symptoms. Elemental formulas include Neocate and Elecare.

Can I still breast-feed?

Breast-feeding a baby with a milk allergy is sometimes recommended. As a mother, avoiding milk products in your diet may have a protective effect against allergy. If you decide to avoid cow's milk, you should take calcium plus vitamin D supplements. Talk with your healthcare provider about whether or not you should breast-feed.

How will this affect my older child's diet?

The only treatment for a child with a milk allergy is to completely avoid milk and foods that contain milk products. Many processed foods and restaurant foods contain milk or milk products. You will need to change the way you shop and prepare foods. The first step is to learn to read labels and become familiar with ingredients that contain milk or dairy products. Always ask about ingredients if you are not sure. Study the lists below to learn more about foods and ingredients to watch out for.

Foods and ingredients that contain milk:

- Milk (including milk from other animals such as goat)
- Yogurt
- Cheese
- Cottage cheese
- Half & half
- Cream
- Sour cream and solids
- Casein
- Whey products
- Butter, butterfat, butter oil, natural butter flavor, butter solids
- Artificial butter flavor

- Ingredients that begin with "lact" such as lactose, lactate, lactalbumin, and lactic acid
- Chocolate
- Custard
- Ghee
- Nougat
- Caramel
- Fat replacers such as Simplese
- Hydrolyzed milk
- High protein powders and flours often contain milk proteins
- Artificial and natural flavorings such as for meat, poultry, canned fish, and potato chips.

Foods labeled "nondairy" or "milk-free" may still contain milk proteins. You must read through the entire label. If you have any doubt about the product, it is best to call the manufacturer to be sure.

Milk products are a primary source of calcium, riboflavin, and vitamin D. It is important to either take supplements or substitute foods high in these nutrients. It is a good idea to have a registered dietitian evaluate your child's diet to make sure your child is getting adequate nutrition.

How do I avoid cross contamination?

Cross contamination occurs when a dairy food or something that has been used to process a dairy food comes in contact with your child's food. This can happen when eating out or at home.

To avoid this problem when dining out or buying food:

- Order simple dishes with only a few recipe ingredients.
- Avoid battered or fried foods. The oil is often used for many different items, some of which may contain milk.
- Tell the waiter or waitress about the allergy.
- Make sure the meat slicer at the deli counter is not also used to cut cheese.
- Be careful to separate cooking utensils, cutting boards, and dishes used to prepare dairy products from those used to prepare foods for your child.

How can I provide my child with a healthy diet that tastes good?

Your child can still have a nutritionally complete diet as well as continue to enjoy some kid favorites. The primary nutrients found in milk are protein, calcium, vitamin D, and riboflavin. There is a lot of protein in meat, poultry, pork, fish, beans, soy foods, legumes, nuts and seeds. Ask your provider about calcium and vitamin D supplements. Good sources of riboflavin are meat and eggs, whole-grain or enriched breads and cereals, and dark green leafy vegetables. Many foods (such as orange juice) are now supplemented with calcium and vitamin D.

How do I substitute milk and modify recipes?

There are several brands of soy and rice milks that are enriched with calcium. These can be used for drinking and to pour on cereal. If milk is part of a recipe just to provide liquid, you can substitute water. Soy and rice milk, as well as fruit juice work well as substitutes when baking. Oils, milk-free margarines or soy butter can take the place of butter. Vegan products, available in the health food section of grocery stores, are another option. These products do not contain eggs or milk.

It is also helpful to get cookbooks for people with food allergies, such as The Food Allergy and Anaphylaxis Network Cookbook. Visit the Web site at <http://foodallergy.org> or call 800-929-4040 to

order this cookbook and others. There are also Web sites where you can buy specialty foods online (such as <http://www.allergygrocer.com> ▶▶).

How can I keep my child safe at school?

- Teach your child not to eat foods unless they are safe. Even young children can grasp this concept, especially once they have gotten sick after eating a particular food.
- Prepare your child's lunch at home.
- Talk with teachers and the school administrator regarding your child's needs. Ask teachers to keep an eye out and explain the situation to other children if needed.
- Have the teacher call you if there is a special event or party planned so that you can bring a few modified treats that your child enjoys and can share with other kids.
- Make a card that lists foods and ingredients that should be avoided and give one to the teacher. The card can also be helpful to older children in making decisions when out with friends.

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Written by Terri Murphy, RD, CDE for McKesson Corporation

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