Lactose Free Diet

Lactose is a carbohydrate that is found mainly in milk and milk products, as well as in foods with added milk or whey. Lactose must be digested by the enzyme in order to be used by the body. Lactose intolerance occurs when there is a shortage of lactase.

When your body is not able to digest lactose, you may feel sick to your stomach (*nausea*), bloating, cramping, gas and diarrhea.

TYPES OF LACTASE DEFICIENCY

- **Primary lactase deficiency.** This is the most common type. It is characterized by a slow decrease in lactase activity.
- **Secondary lactase deficiency.** This occurs following injury to the small intestinal mucosa as a result of diseases such as celiac disease, nontropical sprue, infectious gastroenteritis (stomach virus), malnutrition, parasites, or inflammatory bowel disease. It can also occur after treatment with medications that kill germs (*antibiotics*) or cancer drugs, or as a result of surgery.

Tolerance to lactose varies widely, and each person must determine how much milk can be consumed without developing symptoms. Drinking smaller portions of milk throughout the day may be helpful. Some studies suggest that slowing gastric emptying may help increase tolerance of milk products. This may be done by:

- Consuming milk or milk products with a meal rather than alone.
- Using milk with a higher fat content.

There are many dairy products that may be tolerated better than milk by some people:

- Cheese (especially aged cheese) - the lactose content is much lower than in milk.
- The use of cultured dairy products such as yogurt, buttermilk, cottage cheese, and sweet acidophilus milk (Kefir) for lactase-deficient individuals is usually well tolerated. This is because the healthy bacteria help digest lactose.
- Lactose-hydrolyzed milk (Lactaid®) contains 40-90% less lactose than milk and may also be well tolerated.

ADEQUACY

These diets may be deficient in calcium, riboflavin, and vitamin D, according to the Recommended Dietary Allowances of the National Research Council. Depending on individual tolerances and the use of milk substitutes, milk, or other dairy products, these recommendations may be met.

SPECIAL NOTES

- Lactose is a carbohydrates. The major food source is dairy products. Reading food labels is important. Many products contain lactose even when they are not made from milk. Look for the following words: whey, milk solids, dry milk solids, nonfat dry milk powder. Typical sources of lactose other than dairy products include breads, candies, cold cuts, prepared and processed foods, and commercial sauces and gravies.
- All foods must be prepared without milk, cream, or other dairy foods.
- A vitamin/mineral supplement may be necessary. Consult your physician or Registered Dietitian.
- Lactose also is found in many prescription and over-the-counter medications.
- Soy milk and lactose-free supplements may be used as an alternative to milk.

FOOD GROUP	ALLOWED/RECOMMENDED	AVOID/USE SPARINGLY

BREADS / STARCHES *4 servings or more**	Breads and rolls made without milk. French, Vienna, or Italian bread.	Breads and rolls that contain milk. Prepared mixes such as muffins, biscuits, waffles, pancakes. Sweet rolls, donuts, French toast (if made with milk or lactose).
Crackers:	Soda crackers, graham crackers. Any crackers prepared without lactose.	Zwieback crackers, corn curls, or any that contain lactose.
Cereals:	Cooked or dry cereals prepared without lactose (read labels).	Cooked or dry cereals prepared with lactose (read labels). Total®, Cocoa Krispies®. Special K®.
Potatoes / Pasta / Rice:	Any prepared without milk or lactose. Popcorn.	Instant potatoes, frozen French fries, scalloped or au gratin potatoes.
VEGETABLES *2 servings or more*	Fresh, frozen, and canned vegetables.	Creamed or breaded vegetables. Vegetables in a cheese sauce or with lactose-containing margarines.
FRUIT *2 servings or more*	All fresh, canned, or frozen fruits that are not processed with lactose.	Any canned or frozen fruits processed with lactose.
MEAT & SUBSTITUTES *2 servings or more* *(4 to 6 oz. total per day)*	Plain beef, chicken, fish, turkey, lamb, veal, pork, or ham. Kosher prepared meat products. Strained or junior meats that do not contain milk. Eggs, soy meat substitutes, nuts.	Scrambled eggs, omelets, and souffles that contain milk. Creamed or breaded meat, fish, or fowl. Sausage products such as wieners, liver sausage, or cold cuts that contain milk solids. Cheese, cottage cheese, or cheese spreads.
MILK	None. (See “BEVERAGES” for milk substitutes. See “DESSERTS” for ice cream and frozen desserts.)	Milk (whole, 2%, skim, or chocolate). Evaporated, powdered, or condensed milk; malted milk.
SOUPS & COMBINATION FOODS	Bouillon, broth, vegetable soups, clear soups, consommés. Homemade soups made with allowed ingredients. Combination or prepared foods that do not contain milk or milk products (read labels).	Cream soups, chowders, commercially prepared soups containing lactose. Macaroni and cheese, pizza. Combination or prepared foods that contain milk or milk products.
DESSERTS & SWEETS *In moderation*	Water and fruit ices; gelatin; angel food cake. Homemade cookies, pies, or cakes made from allowed ingredients. Pudding (if made with water or a milk substitute). Lactose-free tofu desserts. Sugar, honey, corn syrup, jam, jelly; marmalade; molasses (beet sugar); Pure sugar candy; marshmallows.	Ice cream, ice milk, sherbet, custard, pudding, frozen yogurt. Commercial cake and cookie mixes. Desserts that contain chocolate. Pie crust made with milk-containing margarine; reduced-calorie desserts made with a sugar substitute that contains lactose. Toffee, peppermint, butterscotch, chocolate, caramels.

FATS & OILS *In moderation*	Butter (as tolerated; contains very small amounts of lactose). Margarines and dressings that do not contain milk, Vegetable oils, shortening, Miracle Whip®, mayonnaise, nondairy cream & whipped toppings without lactose or milk solids added (examples: Coffee Rich®, Carnation Coffeemate, Rich's® Whipped Topping, PolyRich®). Bacon.	Margarines and salad dressings containing milk; cream, cream cheese; peanut butter with added milk solids, sour cream, chip dips, made with sour cream.
BEVERAGES	Carbonated drinks; tea; coffee and freeze-dried coffee; some instant coffees (check labels). Fruit drinks; fruit and vegetable juice; Rice or Soy milk.	Ovaltine®, hot chocolate. Some cocoas; some instant coffees; instant iced teas; powdered fruit drinks (read labels).
CONDIMENTS / MISCELLANEOUS	Soy sauce, carob powder, olives, gravy made with water, baker's cocoa, pickles, pure seasonings and spices, wine, pure monosodium glutamate, catsup, mustard.	Some chewing gums, chocolate, some cocoas. Certain antibiotics and vitamin / mineral preparations. Spice blends if they contain milk products. MSG extender. Artificial sweeteners that contain lactose such as Equal® (Nutra-Sweet®) and Sweet 'n Low®. Some nondairy creamers (read labels).

* These amounts indicate the minimum number of servings needed from the basic food groups to provide a variety of nutrients essential to good health. A maximum amount is listed if intake of certain foods must be controlled. Combination foods may count as full or partial servings from the food groups. Dark green, leafy, or orange vegetables are recommended 3 or 4 times weekly to provide vitamin A. A good source of vitamin C is recommended daily. Potatoes may be included as a serving of vegetables.

SAMPLE MENU*

- Breakfast
  - Orange Juice.
  - Banana.
  - Bran flakes.
  - Nondairy Creamer.
  - Vienna Bread (toasted).
  - Butter or milk-free margarine.
  - Coffee or tea.
- Noon Meal
  - Chicken Breast.
  - Rice.
  - Green beans.
  - Butter or milk-free margarine.
  - Fresh melon.
  - Coffee or tea.
- Evening Meal
  - Roast Beef.
  - Baked potato.
  - Butter or milk-free margarine.
  - Broccoli.
  - Lettuce salad with vinegar and oil dressing.
  - Angel food cake.
  - Coffee or tea.

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