

## Lactose free diet

Lactose is the simple sugar found in milk and milk products. It can also be found in a variety of other foods and even as a filler in some pills and capsules. The enzyme lactase, present in the lining of the small intestine, splits lactose into two simple sugars. These simple sugars can then be absorbed by the body and used as nourishment.

In infants, milk is the main part of the diet, so it is natural and normal for lactase production to gradually decrease as the diet becomes more varied. This tends to occur in childhood and adolescence in African Americans, Native American Indians, Hispanics, Arabs, Jews, and Asians. Northern European white races seem to keep lactase production the longest.

When lactase is absent, lactose passes through the intestine to the colon (large bowel), carrying extra fluid with it. In the colon, bacteria break down lactose into lactic acid and certain gases. Lactic acid is an irritant and laxative. It can cause symptoms such as bloating, diarrhea, abdominal cramps, and gas or flatus.

Lactase activity is reduced in people with certain intestinal conditions such as Crohn's disease and celiac disease (gluten enteropathy). Patients taking certain drugs and alcoholic patients may also be lactose intolerant. Finally, patients with surgical removal of part of the stomach or a large portion of the small intestine may need to reduce lactose in the diet.

It is important to remember that while lactose intolerance can cause quite uncomfortable symptoms, it does not cause damage to the intestine. The purpose of this diet is to eliminate lactose or reduce it to tolerable levels.

## Nutrition Facts

Dairy products are important sources of calcium, riboflavin, and vitamin D. Some lactose-intolerant people are able to tolerate certain dairy products in small amounts, and their diets may provide enough of these nutrients. However, the physician or registered dietitian may recommend certain vitamin supplements and/or a calcium supplement for some patients.

Sample Menu-

Breakfast	Lunch	Dinner
orange juice, calcium fortified 1/2 cup oatmeal 1 cup Italian bread 2 slices jelly 2 tsp margarine 2 tsp coffee 1 cup sugar 1 tsp nondairy creamer	turkey 2 oz Italian bread 2 slices mayonnaise 1/2 Tbsp tossed green salad 1 cup oil & vinegar 2 tsp tomato 2 slices carrot 1 celery 1 stalk banana 1 lactose-free milk 1 cup	consommé 3/4 cup strained fruit juice 1 cup fruit ice 1/2 cup gelatin 1/2 cup hot tea with sugar & le

Group	Lactose-Free	Lactose-Containing
Milk & milk products	100% lactose-free milk, soy milk	milk: whole, skim, 1%, 2%; buttermilk; sweet acidophilus milk; lactose-reduced milk; evaporated milk; acidophilus milk; sweetened condensed milk; instant hot chocolate and cocoa mixes; cheese
Vegetables	fresh, frozen, and canned vegetables without added milk or milk products; tomato paste and purée; tomato and spaghetti sauces without cheese	creamed or breaded vegetables, packaged dried potato mixes, tomato and spaghetti sauce with cheese
Fruits	fresh, frozen, canned, and dried fruits	none

Breads & grains	water-based breads (Italian, French, Jewish rye), rice and popcorn cakes, graham crackers, rusks, Pareve-Jewish bakery products, cooked and dry cereals without added milk solids, pasta, rice, oats, barley, cornmeal, bulgar, and other plain grains	the following made with milk or milk products, breads, rolls, biscuits, muffins, pancakes, sweet rolls, waffles, crackers, instant and dry cereals with added milk products, some packaged grain mixes, packaged macaroni mixes
Meat or meat substitutes	plain beef; lamb; veal; pork; wild game; poultry; fish; shellfish; eggs; kosher prepared meat products; peanut butter; peas, beans, or lentils (dried, canned or frozen); all nuts and seeds; tofu	eggs, fish, meat, or poultry (breaded or creamed); luncheon meats; sausage; frankfurters; some brands of egg substitutes and powdered eggs
Fats & oils	bacon, butter, margarine without milk derivatives (whey), salad dressing without cheese or milk, vegetable oils, olives, most non-dairy creamers, mayonnaise, gravy made without milk or milk products	cream, half & half, sour cream, cream cheese, chip dips, some types of margarine, salad dressing with cheese or milk, whipped toppings
Sweets & desserts	angel food cake, gelatin, fruit ice, fruit popsicles, fruit roll ups, hard candy, gum drops, jelly beans, licorice, fruit pie fillings	ice cream, ice milk, some brands of sherbet, soufflé, mousse, pudding, custard, packaged dessert mixes, milk chocolate, toffee, caramel, butterscotch
Beverages	Postum, lactose-free nutritional supplements (Sustacal, Ensure, Nutren), vegetable juice, fruit juices and drinks, tea, carbonated beverages, beer, wine, distilled spirits (gin, rum, etc.), cocoa powder, most coffee	instant iced tea, instant coffee, Ovaltine, chocolate drink mixes, cordials, liqueurs, milk-based nutritional supplements (Carnation Instant Breakfast)
Soups	bouillon, broth, meat, or vegetable stock soups; bisques and chowders made with water, soy milk, or 100% lactose-free milk	cream soup, canned and dehydrated soup mixes containing milk products
Miscellaneous	popcorn, plain pretzels, plain potato and corn tortilla chips, salsa, mustard, ketchup, pickles, uncreamed horseradish, relish, sauces made without milk or milk products, sugar, honey, jams and jellies, maple and corn syrup, molasses, herbs, spices, salt, pepper	cream or cheese sauces, ranch-style or cheese-flavored snack pretzels or chips, cheese curls, sugar substitutes with lactose added, medications and vitamin/mineral supplements with lactose added