

Texas Children's Hospital

Caring for Your Child's Health

Gluten-Free Diet

Children or adults with celiac disease need to follow a gluten-free diet. Other names for this condition are celiac sprue, nontropical sprue, gluten sensitive enteropathy and gluten intolerance. People with celiac disease cannot tolerate gluten. A gluten-free diet is the only treatment for celiac disease and must be followed for a lifetime. The gluten-free diet is a general diet with the elimination of all gluten-containing foods.

Gluten is a protein found in wheat, rye, barley and sometimes oats. Oats themselves do not contain gluten, but most oats are contaminated with gluten when they are processed. Gluten free oats are available. Talk to your dietitian and/or doctor about eating oats when you are on a gluten-free diet.

In a person with celiac disease, the small intestine, is damaged when gluten is eaten and makes it difficult for the body to absorb nutrients from food. Eating even the smallest amount of gluten can damage the small intestine.

Symptoms of celiac disease in infants and children include diarrhea, malnutrition, stomach pain, weight loss, feeling tired and delayed growth. Some people with celiac disease will have more symptoms than others. Following a gluten-free diet will stop the symptoms and heal the damage in the intestines. Removing gluten from the diet will also prevent further damage.

Individuals with severe symptoms may not be able to eat milk and cheese, until the intestines heal. Damaged intestines do not make enough lactase. Lactase is the enzyme that helps the body digest lactose, which is the natural sugar in milk. After the intestine heals, most people can drink milk or eat cheese in a few weeks.

Reading labels

All food labels must be read very carefully to find ingredients that contain gluten. Food companies often list when wheat is an ingredient, but it is important to read labels. You will find many different names for gluten-containing ingredients on food labels.

Ingredients to avoid are:

- Malt
- Durum
- Wheat, rye, barley
- Spelt
- Graham flour
- Kamut
- Farina
- Wheat gluten
- Couscous
- Semolina
- Matzoh

Other ingredients that may contain gluten include modified food starch, hydrolyzed vegetable protein (HVP), hydrolyzed plant protein (HPP), artificial color and flavoring, natural flavoring, maltodextrins, dextrins, mono and diglycerides and MSG (foreign source). Many of these foods are made from rice or corn in the US, but it is important to know that they may be made from wheat. Also, wheat flour may be added to powdered sugar and ground spices to prevent clumping.

There may also be hidden sources of gluten in processed foods and medicines. Check with the manufacturer of the company to find out for sure. Many companies now have allergy and gluten free information on their websites.

A gluten-free diet can be a well balanced diet. Fruits, vegetables, corn, potatoes, rice, beans, milk, yogurt, cheese, nuts, nut butters, seeds, eggs, fish, poultry and meat are naturally gluten-free and can be eaten by people with celiac disease. Potato, rice, soy, amaranth, pure buckwheat or bean flour can be used in place of wheat flour for baked goods, breads and

pastas. Gluten-free bread, pasta and other products can be bought in many grocery stores, in the "natural" section of your grocery store, or online (see below for resources for gluten-free products).

To learn more

- www.celiac.com
- Celiac Disease Foundation
www.celiac.org
- Houston Celiac-sprue support group
<http://www.houstonceliacs.org/>
713-783-7608
- Celiac Sprue Association/USA, Inc.
www.csaceliacs.org
- Friends of Celiac Disease Research, Inc.
www.friendsofceliac.com
- Raising our Celiac Kids (R.O.C.K.)
www.celiackids.com
- www.savorypalate.com
1-877-CSA-4CSA

Resources for gluten-free products

- Whole Foods Market
www.wholefoodsmarket.com/nutrition/gluten-free.php
- Gluten Free Houston
www.glutenfreehouston.com
- The Gluten-free Pantry
www.glutenfree.com
1-800-291-8386
- Specialty Food Shoppe
www.specialtyfoodshop.com
1-800-737-7976
- Laurel's Sweet Treats, Inc.
www.glutenfreemixes.com
- Ener-G Foods, Inc.
www.ener-g.com
1-800-331-5222

- Miss Roben's
www.missroben.com
1-800-891-0083
- Pamela's Products, Inc.
www.pamelasproducts.com
- Udi's Gluten Free Products
www.udisglutenfree.com

Books

- Case S. *The Gluten-Free Diet: A Comprehensive Resource Guide*. Regina, Saskatchewan, Canada: Case Nutrition Consulting; 2008.
- Fenster C. *Wheat Free Recipes & Menus: Delicious Dining Without Wheat or Gluten*. New York, NY: Penguin Group; 2004.
- Hagman B. *The Gluten Free Gourmet: Living Well Without Wheat*. Rev ed. New York: Henry Holt & Company; 2000.
- London M. *The Gluten free Kid: A Celiac Disease Survival Guide*. Bethesda, MD: Woodbine House; 2005.
- Dowler Shepard, Jules E. *The First Year: Celiac Disease and Living Gluten Free: An Essential Guide for the Newly Diagnosed*. Philadelphia, PA. Da Capo Press.
- Patin NM. *Gluten-Free Friends: An Activity Book for Kids*. Available on www.savorypalate.com.

FOODS	FOODS ALLOWED	FOODS TO AVOID
Breads, potatoes, pasta and other starches	Gluten-free bread mix; pure corn tortillas; breads specially prepared using only allowed flours (see below). White or sweet potatoes, yams, hominy, wild rice, rice noodles, pastas made with allowed flours, such as rice and corn; some oriental noodles, rice; cornstarch, flax, gluten-free oats	Commercial mixes for biscuits, cornbread, muffins, pancakes or waffles; wheat germ; breads made with low-gluten flour or spelt; rice cakes made with brown rice syrup, flour tortillas. Regular noodles prepared with rye, wheat, oats or barley flour; creamed or scalloped potatoes; commercial rice or pasta mixes; couscous; tabbouleh; conventional oats
Flours	Corn, rice (white, brown, sweet), potato, quinoa, sorghum, buckwheat, tapioca, arrowroot, soy, millet, teff, legume (bean, garbanzo or chickpea, garfava, lentil, pea) and cornmeal	Wheat, rye, oat, barley, kamut, durum, graham, wheat starch, bran, bulgur, triticale, bleached, brown, strong and whole-meal
Cereals	Puffed rice, rice flakes, corn, cream of rice, cream of buckwheat, cornmeal, hominy, grits, millet, quinoa flakes, puffed amaranth and soy cereals	Cereals containing malt flavoring, wheat, rye, oats, barley, bran, wheat germ, and bulgur, spelt; cereals made with low-gluten flours
Milk and dairy products	Milk, dry milk, buttermilk, rice milk, almond milk, soy milk, coconut milk and plain yogurt; cheese, cottage cheese, cream cheese; cream and whipping cream	Malted milk, sour cream made with wheat starch
Fruits	All fresh, frozen, canned; 100 percent fruit juices	Dried fruit dusted with wheat or oat flour
Vegetables	All plain, fresh, frozen or canned vegetables, except those listed as excluded	Any creamed or breaded vegetables thickened with wheat flour

FOODS	FOODS ALLOWED	FOODS TO AVOID
Meats and meat alternatives	All meats, chicken, turkey, fish, pork and shellfish; eggs; tofu; dried peas and beans; plain nuts; fish canned in water, oil, brine or vegetable broth; plain peanut butter; TVP made from pure soy protein	Any prepared with wheat, rye, oats, barley, gluten stabilizers or fillers, including some frankfurters, cold cuts, sandwich spreads, sausages and canned meats; any cheese or cheese spread containing wheat or a seasoning/flavoring made with wheat; canned pork and beans, turkey basted or injected with hydrolyzed or textured vegetable proteins (HVP, TVP); tuna canned with HVP; breaded fish or meats; imitation crab made with wheat starch; imitation meats with wheat gluten
Soups	Homemade broth, vegetable or cream soups made with allowed ingredients	Commercially prepared soups made with wheat, rye, oats or barley products; most canned soups and soup mixes; bouillon and bouillon cubes with HVP
Beverages	Tea, pure instant or ground coffee, decaffeinated coffee, carbonated drinks, fruit drinks	Grain beverages, herbal teas with barley or barley malt
Snacks	Popcorn, corn chips, potato chips, tortilla chips, cheese puffs, rice cakes, rice crackers and cracker jacks	Pretzels, animal cookies, graham crackers and crackers (unless gluten-free)
Desserts	The following made with allowed ingredients: ice cream, sherbet, sorbet, cakes, cookies, pies, pudding, gelatin desserts and fruit ice; custard; cornstarch, tapioca and rice puddings	Commercially prepared mixes of all kinds (unless gluten-free); commercial cakes, cookies, pies, doughnuts and pastries; ice cream cones; commercial pie fillings, bread pudding; pudding thickened with flour; products made with brown barley malt enzyme

FOODS	FOODS ALLOWED	FOODS TO AVOID
Fats	Butter or margarine, lard, shortening, homemade salad dressings, pure mayonnaise and vegetable oils	Commercial salad dressings and mayonnaise
Sweets	Sugar, most syrups, corn syrup, honey, jelly, marmalade, hard candies, plain chocolate, pure cocoa, coconut, molasses, meringues	Candies made with ingredients not allowed and licorice
Miscellaneous	Iodized salt, pure herbs and spices, food coloring, food flavoring extracts, gravies and sauces made with allowed flours and starches, baking soda, cream of tartar, mustard, ketchup, carob chips and carob powder, monosodium glutamate, yeast, pure cocoa, pure baking chocolate, chocolate chips, aspartame, brewer's yeast, plain pickles, olives, relish, tomato paste, vinegars (apple cider, balsamic, distilled, white grape, wine), gluten-free soy sauce, TVP made from pure soy protein	Any condiment prepared with wheat, rye, oats or barley; seasonings containing fillers, stabilizers or textured vegetable protein (TVP); sauces and gravies with gluten sources; communion wafers; imitation pepper; malt vinegar; soy sauce

Sample menu

<u>Breakfast</u>	<u>Lunch</u>	<u>Snack</u>	<u>Dinner</u>	<u>Snack</u>
2 eggs 1/2 cup grilled potatoes 1/2 cup sliced melon 1 cup milk	2 rice cakes 1-2 tablespoons peanut butter 1 tablespoon jelly 1 ounce potato chips Carrot sticks 1 apple 1 juice box	1 banana Yogurt (check label-some brands contain gluten)	3 ounces baked chicken 2 corn tortillas 1 ounce Cheddar cheese 1/2 cup green beans 2 teaspoons butter 1 cup milk	½ cup vanilla ice cream 2 gluten free cookies

Notes and questions

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Texas Children's Hospital®

Developed by the Nutrition Coordinating Council.

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