

**GLYCOGEN STORAGE DISEASE TYPE I
Sucrose, Fructose, Galactose Free Diet**

Food Group	Foods Permitted	Foods Need to be Omitted
Meat and Fowl	Plain beef, pork, chicken, turkey, lamb and veal. Use lean meats. Only permitted foods may be added when seasoning cooking. Limited cold cuts and hotdogs (beware of fillers). Bake meats breaded do not fry.	Cold cuts, hot dogs or any other food that contains sugar, honey, molasses, syrup or milk/milk products that have been added in processing or cooking. Creamed or breaded meat. Meats containing milk or milk products such as frankfurters.
Fish	Any fresh, frozen or canned fish	Processed fish with sugar; creamed or breaded fish
Cereal/Grains	Unsweetened cereal, puffed wheat, puffed rice, white rice, wheat bran, brown rice, Shredded Wheat, oatmeal, Cream of Wheat, Cream of Rice, whole grain cereals without sugar coating, Quinoa	Cooked or ready-to-eat cereals sweetened with sugar, fructose or sorbitol, wheat germ
Crackers/Snacks	Those made without sugar such as saltines, pretzels, rice cakes, potato chips	Any that contain sugar
Bread/Flour	Any bread that does not have sugar, fructose or sorbitol as an ingredient, white flour, rye flour, cornmeal, rice, bagels, English muffins, tortillas, grits, oatmeal, pretzels, rice cakes	Any sweet bread or others made with sugar, fructose or sorbitol; sugar-coated donuts and sweet rolls
Fruit	Avocado, rhubarb, lemon juice, raw lemons (limited), rhubarb, limited amounts of raspberries, gooseberries, strawberries, blackberries, cranberries, currants, pomegranates, limes	All fruits, fruit juices, fruit extracts and dehydrated fruit and products that contain fruit

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Potatoes	Most allowed (Small sweet potato)	Sweet potatoes (Large)
Vegetables	All allowed	Corn and green peas should be limited to 1c serving per day. Limit tomato pasta sauce to ¼ c. Limit ketchup to one packet per day.
Fat	Butter, margarine, oil, homemade mayonnaise, mustard and salad dressings without sugar and that do not contain any milk/milk products. Use mono/polyunsaturated fats such as olive oil or canola, corn, safflower or soybean oil, nonfat or low fat margarines, lard, nondairy coffee creamer free of fructose, high fructose syrup, honey, molasses and sugars. Use shortening, whipping cream, bacon, butter and regular margarine in moderation. Limit fat intake to 5-8 teaspoons a day.	Mayonnaise, mustard and salad dressings with sugar, added fructose, fruit, high fructose corn syrup, honey, molasses or sugar, milk products, sour cream.
Eggs	Any type	Raw eggs
Milk, Cheese and Milk Products	Special formula – as instructed by your dietitian; soy milk products made without sucrose or fructose, nondairy creamers (without sugar), aged cheese, butter, buttermilk (fermented), yogurt.	Milk and milk products with added fructose, sugar, ice cream, cream, sweet yogurt
Nuts	Any type, no more than 1 oz per day or 2 tablespoons of natural peanut butter (no sugar) per day, Hemp seed	Candy-covered nuts or nuts prepared with sugar, fructose or sorbitol

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Desserts	Unsweetened or artificially sweetened yogurt, cakes, cookies and ice creams made without sugar. Dietetic Jell-O, any dessert homemade from allowed ingredients.	Any dessert that contains sugar, fructose or sorbitol such as cake, pie, cookies, candy, puddings, Jell-O, ice cream, sherbet. Any dessert containing honey, fruit, chocolate or milk.
Sweeteners	Glucose, dextrose, dextrin, maltose, maltodextrin, corn syrup, glucose polymers, lactose, Truvia, Nutrasweet (aspartame), Stevia, Splenda, (sucralose), Sweetmate (acesulfame K) and Saccharin (Sweet'N Low) Manitol, Xylitol	Sugar, sucrose, fructose, sorbitol, beet sugar, cane sugar, powdered sugar, honey, maple syrup, molasses, invert sugar, levulose, mannose, high fructose corn syrup, agave nectar, Galalctose, Brown Sugar, Sorghum, Sorbitol
Others	Coffee, tea, diet soft drinks that contain artificial sweeteners, cocoa powder, plain gelatin, salt, pepper and other spices. Special formula, vegetable juices except tomato.	Ketchup, sauces that contain sugar, regular soft drinks, jellies, jams, marmalades, canned or bottled fruit preserves. Milk and milk containing drinks with added fructose, fruit or flavors that contain honey, molasses or sugar, beer, brandy, rum, vodka, carbonated beverages containing fructose, fruit juice or sugar, fruit juices or drinks containing fruit juice, liqueur, sherry, vermouth.
Miscellaneous	Peanut butter with no added sugar, honey, molasses or milk fillers; corn syrup; olives; aspartame; saccharine; pure spices and herbs; prepared mustard and vinegar, garlic, glucose, maltose, dextrose and starch, bakers cocoa, bitter chocolate, MSG, vitamin and mineral supplements not containing fructose or lactose	Carob powder, ketchup, chili sauce, chocolate milk or sweets, drugs and vitamin/mineral supplements containing fructose, sorbitol or sugar, seasonings containing added fructose, high fructose syrup, maple syrup, jam, jellies, preserves, honey, molasses, non-alcoholic beer , except Wurtzburger & Clausthaler

Menu Samples and Suggestions For Type I

Breakfast

Plain oatmeal	Eggs	Soy milk: plain, unsweetened (enriched)
Cream of Wheat/Rice	Cereal	Rice milk
Waffles/Pancakes	Grits	Almond milk
Yogurt (non-dairy)	Omelets	Toast
Quinoa	Hemp Seed	Vegetables

Snacks

Cheerios	Goat cheese	Cheese/cheese sticks (natural hard, not processed soft)
Pretzels	Potato chips	Crackers/Ritz (many to choose from)
Popcorn	Fritos	Sugar free peanut butter
Rice cakes	Breadsticks	Low fat Triscuits
Melba Toast	Sugar free Jell-O	Peanuts/Nuts not coated with sugar or honey roasted
Sugar free pudding	Goldfish	Corn Flakes (plain)
Cheez-its	Yogurt	Edamame
Pickles	Vegetables	Quinoa and Hemp Seed

Lunch/Dinner

Burritos/Tacos	Flour tortillas	All meats/poultry/fish
Hummus	Fish sticks	All pasta (Not stuffed)
French Fries	All rice	All vegetables
Chicken fingers	All beans	All Potatoes (Small Sweet Potato)
Tofu	Salads	Quinoa and Hemp Seed



The amount of each sugar in common foods can be found on the following website: <http://www.nal.usda.gov/fnic/foodcomp/search/>
http://www.waldenfarms.com/nutrition_facts.html (site for sucralose products)

Reminders:

Read the food label on each package to find brands with the lowest sugar content (i.e. preferably less than 5 grams per meal).

Our team’s recommended diet allows small amount of fructose and galactose to be consumed in order to diversify the diet and improve nutrition, but it is important to keep the amount of fructose + galactose to less than 2.5 grams per meal.

Some very common types of sugar alcohols are sorbitol, xylitol, mannitol, maltitol, lactitol, erythritol, isomalt (note that most sugar alcohol names end with **-ol**). You may also see the term “Hydrogenated Starch Hydrolysates” (HSH), which is a type of sugar alcohol.

Sorbitol is an exception, however. Our body changes sorbitol to FRUCTOSE during digestion. Therefore, if you have type Ia and Ib, please limit and/or avoid foods that have sorbitol listed in the ingredients.

Calcium Supplement and Multivitamin Suggestions in Type I GSD

<p>Calcium supplement Suggestions</p>	<ul style="list-style-type: none"> ❖ UpCal D (powder) – Global Health Products ❖ Cal-Quick (liquid) – Twin Lab ❖ Calci-Mix (powdered capsule) - Watson Pharmaceuticals ❖ CitraCal (tablet) or any type of calcium citrate ❖ Tums (tablet) – available in sugar-free ❖ Calcium Citrate is better absorbed than Calcium Carbonate
<p>Multivitamin Suggestions</p>	<ul style="list-style-type: none"> ❖ One-A-Day (sugar-free, children’s and adult varieties available) or generic equivalent ❖ Flintstone’s Complete (sugar-free available) ❖ Natrol for Children (liquid, non-sucrose in CVS & Walgreens) ❖ Poly-vi-sol (liquid for infants & Children) ❖ Centrum or generic equivalent (liquid form in Walmart) ❖ Reviva (sucralose, maltodextrin in Sam’s Club)
<p>Omega-3 Fish Oil</p>	<ul style="list-style-type: none"> ❖ Kids Smart by Bioglan grape flavored (liquid, Xylitol, Sucralose in Walgreens) ❖ Omega Smart, Kids DHA, fruit punch flavored softgel chew or swallow (Stevia leaf in Walgreens)

Important Notes about taking Multivitamins and Calcium:

- Ⓢ Better absorption of the multivitamin occurs when it is taken with food.
- Ⓢ Do not take more than 500 mg calcium at one time. If more than 500 mg calcium supplementation needed daily, separate each dose, and take with a meal.
- Ⓢ It is not recommended to take the multivitamin at the same time as the calcium supplement.
- Ⓢ It is also not recommended to take the calcium supplement at the same time as an iron supplement, as iron inhibits the absorption of calcium, causing less to be absorbed.
- Ⓢ For low iron, pull out the cast iron skillets and cook in them, iron transfers into the food. Better iron absorption occurs with vitamin C foods.

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