

Tips for Baking Gluten Free

- Converting recipes: The easiest way to transition a gluten baking recipe to gluten free is to measure 1 for 1 gluten free flours for gluten containing and keep the other measurements the same. Always use a blend of gluten free flours for replacing gluten containing flours. Use lighter more starchy flours for cakes and cookies and high protein/fiber flours for breads, pie crusts and pizzas.
- Use a scale for the most accurate measurements. For example, for a gluten containing recipe, replace 1 cup of white flour with 140 grams of your gluten free mix.
- All purpose flour mix example from *Gluten-Free Makeovers* (Da Capo Press, Oct 2011):
 - 1¼ cups white rice flour (6.5 ounces)
 - 1 cup sweet white sorghum flour (4 ounces)
 - ¾ cup amaranth flour (3 ounces)
 - ¾ cup cornstarch (3.5 ounces) or potato starch (4 ounces)
 - ¼ cup tapioca starch/flour (1.1 ounces)
 - 2 tablespoons baking powder
 - 2 teaspoons xanthan gum
 - 1½ teaspoons salt
- Adding gums—use about 1tsp of xanthan and guar gum to every cup of flour for yeasted breads and ½ tsp for cakes or non-yeasted breads. Often it is not necessary to use them at all for cookies, though cookies will be a little more crumbly. If you can't do gums, try using arrowroot instead.
- Using whole grain gluten free flours—Amaranth, sorghum, quinoa, montina, teff, chickpea, almond and fava bean flours are much more nutritionally dense than starches (corn starch, potato starch, tapioca flour, arrowroot powder) or the white flours (white rice, corn flour, potato flour). They also contain more protein and fiber which is better for blood sugar. Also, the protein in these flours adds more elasticity making it act more similar to gluten (which is also a protein).
- Making pies – If wanting to use a flour blend, make sure to roll between parchment since GF flours are more sticky or press into a pie pan. Even easier is to make a nut crust by simply combining mixed nuts with a few dates and adding water until it holds—press into the pan.
- Making sauces/gravies--Sauces can be thickened with a mixture of cornstarch or arrowroot flour or potato starch or tapioca flour and water or a paste made from butter (or oil) and brown rice flour and whisked into a gravy. Do not boil the GF starches as they lose their elasticity. Make a slurry with the flour in cold water before adding into a hot pot to maintain a smooth consistency.
- Battering--Rice flour works well for replacing gluten containing flour when you need to dredge meats or fish or add a bit of flour to browned meat in a stew. Other great options include corn meal, shredded coconut or almond flour.

Gluten Free Flours

- **Amaranth flour** – The Aztecs used it to make flatbread.¹ It has a grassy/earthy, distinct, hearty, nutty flavor that best combines with other flours for flavor compliments. It makes for a slightly dry dough, requiring more liquid than wheat. It is a complete protein, rich in iron and contains more calcium, magnesium and silicon than milk.¹
- **Bean flours** (chickpea, fava, lentil, matpe, etc.) – Adds protein. Chickpea gives an eggy consistency, but is strong flavored. Buy at natural food stores or Indian markets.
- **Buckwheat** – flavorful. Great for pancakes. It contains starch that behaves similar to gluten cooking, which makes it more difficult to digest for some people, but can be used alone unlike most GF flours.
- **Carob** – Naturally sweet, with similar flavor to chocolate. Great in desserts.
- **Corn flour/masa harina/corn meal** – make tortillas, corn bread, muffins and pancakes with it. The blue corn and corn flour have a less gritty texture than masa or corn meal making them more adaptable.
- **Gums** - Guar gum and xanthan gum in small amounts (1tsp or less to a cup of flour), can be a somewhat effective binder, mimicking some of the effects of gluten.
- **Millet** – slightly sweet, compliments accompanying flavors, adds a crumbly, crunchy texture to breads and muffins, and it is especially good in quick breads. Too much will dry out baked goods.
- **Nut flours** (almond, hazelnut, chestnut, etc.) – Adds protein and nutty flavor. Chestnut results in a milk chocolate brown batter. It adds sweetness and a hint of chocolate flavor. It makes baked goods more creamy and light, but is too soft to stand alone.
- **Potato flour** – Different than potato starch. This is just ground, dried potatoes giving a potato flavor to the foods.
- **Quinoa** is nutty, a little bitter and strong flavored. The texture adds density to baked goods. Quinoa flours, flakes, tortillas, pancakes and puffed grains are produced commercially in Peru and Bolivia. It is 16-23% protein, which is twice the amount of most other grains and has a better amino acid profile than most, being high in lysine, methionine, and cystine.² It is also higher in calcium and iron than most grains and higher in calcium, magnesium and silicon than milk.¹
- **Rice flours** – short grain is preferable for its starchiness. Sweet brown rice is good for thickening sauces and gravies. Brown rice used alone results in a spongy texture, crystalline texture with a light color and pleasant taste. It adds a crisp quality that is nice with pie crusts, crisp toppings and cookies when combined with other flours. It soaks up less liquid than wheat flour, so makes for a wetter batter and requires less liquid.
- **Sorghum** is one of the closest in texture and taste to traditional wheat flour, minor bitterness.
- **Soy** has a nutty flavor, but is difficult to digest for most people.
- **Starches:** Arrowroot flour is best used as a thickener, for rouxs and sauces, and fillings for fruit pies. Corn and potato starch don't taste like where they come from and help with binding (what gluten also does) and thickening. , kudzu root, agar agar. Tapioca flour/starch adds chewiness to baked goods.
- **Teff** comes from Ethiopia and is used to make the thin, fermented GF flatbread, injera. It provides a pleasant nutty, chocolaty taste. It requires more liquid, as it results in a drier dough than wheat. When cooked, its texture can be glutinous and sticky.
- **Others Flours** – pea, mesquite, soy, Montina, nuts, seeds, all beans and all grains.

Workable flour mixtures to replace glutinous flour

- Always combine several flours, since none exactly approximate gluten characteristics.
- Always include a starch or a gum to provide cohesion and binding in combination with other flours.
- The Gluten Free Gourmet has a lot of flour mixes that work in all of her cookbooks.

¹ McCarty, Meredith. Sweet and Natural. St. Martin's Press: New York, NY, 1999.

² Ad Hoc Panel of the Advisory Committee on Technology Innovation, Board on Science and Technology for International Development, National Research Council. Lost Crops of the Incas: Little-Known Plants of the Andes with Promise for Worldwide Cultivation. The National Academies Press: Washington DC, 1989.

Gluten Free Meal Suggestions

Small, quick breakfast ideas:

- **No sugar added whole milk yogurt with fruit and nuts or seeds**
- **Smoothie made with Vital Scoop, hemp protein, or whey protein; fruit; flax oil or ground seeds; nuts, coconut and water or coconut milk.**
- **Cottage cheese, tomatoes, walnuts, seaweed powder, and cucumbers.**
- A slice of cheese and a handful of nuts or seeds.

Bigger breakfast ideas:

- Quinoa, nuts, seeds, cinnamon, raisins, and bananas.
- Quiche (crustless or make a press dough made from teff or other gluten free grains into a pie pan) slices made with spinach, feta, vegetables, eggs (and cheese and meat if you would like).
- Pancakes made w/ eggs and bean flour
- Breakfast burrito using corn or brown rice tortillas, eggs, vegetables, yogurt and salsa.
- Veggie Frittata (see accompanying recipe)
- Poached eggs and greens (see accompanying recipe)
- Huevos Rancheros with corn tortillas or brown rice tortillas

Mid morning and mid afternoon snacks ideas:

- **Celery sticks with nut or seed butter**
- Hard boiled eggs
- Quinoa Salad
- Nori wraps - nori wrapped around cucumber, avocado, beans, and vegetables, etc
- Hummus with cut up vegetables.
- Cheese and apple slices
- Raw nuts and seeds
- Yogurt with nuts or seeds and fruit
- Cottage cheese with vegetables and seeds

Lunch ideas:

- Green leafy salads, topped with nuts and/or seeds, egg and/or cooked beans and/or anchovies or turkey, avocado slices, and vegetable slices.
- Spring rolls filled with seeds, avocado, rice or mung bean noodles, shrimp or other fish or tempeh, sliced carrots and/or cucumber and/or radishes. Served with a dipping sauce (nut butter, tamari, lime juice, and a few drops of honey).
- Dinner leftovers from previous evening
- Kidney bean salad (see accompanying recipe)
- Quinoa salad
- Nori rolls
- Lettuce rollups with hummus, sliced vegetables and fish of choice
- Lettuce rollup with tuna, tomato, carrots, and avocado

Dinner ideas

- Quinoa, choice of beans, chicken, veggies, and cashews stir fried and served with salsa, guacamole, and yogurt
- Chili, made with bison, choice of beans, tomatoes, cilantro, and yogurt. Served with cornbread and butter.
- Halibut with avocado salsa (see accompanying recipe)
- Black bean burrito (see accompanying recipe)
- Lasagna using thinly sliced eggplant or zucchini as the “noodles.” Use gluten free, sugar free tomato or pasta sauce, mushrooms, spinach, and cheese. Serve with salad of raw greens and vegetables, drizzled with olive oil and balsamic vinegar.

Dessert ideas (when necessary) and immediately following a meal:

- Quinoa, amaranth, or teff with cooked fruit, nuts, cinnamon, and honey. Served with yogurt or milk.
- Yogurt with nuts, seeds, and fruit
- Banana with nut butter
- Unsulphured, dried fruit mixed with nuts and seeds
- Coconut, nut butter balls with honey

Cooking Gluten Free Grains

	Yield	Ratio of Grain:Liquid (over 3 cups dry grain, decrease liquid in ratio by ¼ cup per cup of dry grains)*	Cook Time*
Millet	1 cup dry = 3 cups cooked	1:3.25	40 minutes
Quinoa	1 cup dry = 4 cups cooked	1:1.75	15 minutes
Amaranth	1 cup dry = 2 cups cooked	1:1.75	30 minutes
Teff	1 cup dry = 2 cups cooked	1:1.75	20 minutes
Buckwheat	1 cup dry = 4 cups cooked	1:1.75	15 minutes
Rice	1 cup dry = 3 cups cooked	1:1.75	45 min for long-grain brown and 50 min for short-grain brown

*** These ratios and cooking times are only for steeping the grain (not baking, boiling or using a pressure cooker).**

Rinse the grain and strain. To increase digestibility, soak grain overnight (or 5+ hours) and strain away water. If soaking grain, decrease water ratio by half.

Add rinsed grain to cooking liquid (water, vegetable stock, nut/seed milk, vegetable juice, fruit juice, etc.). Optional: Add herbs, spices and flavorings to the cooking liquid. Bring liquid to a boil, reduce to a simmer and add tight fitting lid. Add sea salt after the grain is cooked.