



GLUTEN FREE BAKING TIPS

**Newly diagnosed gluten free and a bit overwhelmed?
Here's a bit of information on gluten free baking to help you out.**

About Gluten Free Flours, Starches, and Mixes

Gluten free (GF) flours, starches, and flour blends differ from wheat flour in their protein, carbohydrate, and fat content. As a result, they behave differently than wheat flour. No one GF flour or starch replaces wheat flour cup for cup. It takes a BLEND of flours and starches to produce the texture, elasticity, and tenderness we desire in our breads, muffins, cakes and cookies.

One cup of traditional all purpose wheat flour weighs about 125 grams, contains around 12 grams of protein, and has gluten, which is a protein that provides structure and stability and elasticity.

If you are adventurous and want to create your own flour mix, bear in mind, the closer you can get to the protein content of wheat flour, the more likely that your baked product will rise well, having both the structure and stability you're seeking.

It's common to start with a "neutral" flavor flour like brown or white rice flour, and then add GF flours with higher protein content. Sorghum, teff, and millet flours are examples of gluten free flours with protein contents similar to wheat. Adding almond or other nut flours are also options. Adding eggs or dairy to a recipe can also increase the protein content.

For the "newly gluten free," purchasing a pre-packaged GF mix is a simple way to get started with GF baking. It does not require having multiple flours and starches on hand, and all your dry ingredients have been weighed and measured and are ready to go for the recipe on the package.

When choosing GF flour blends—whether store bought or homemade—you will notice a wide variance of flour/starch ratios in the ingredient list. You will need to experiment with different brands to find your favorite, but to help with the selection, here's a guideline:

- 50% flour/50% starch = lighter blend, usually thought of more like "cake flour."
- 60/40 = a good all-around blend, more like an all purpose flour.
- 70/30 = a heavier, hearty flour—more like using "whole wheat" in your baking.

Of course, we're partial and think the Eats & Treats Café All Purpose Flour Blend is the best. It is a 60/40 mix, with whole grains (brown rice and sorghum flours) comprising nearly 50% of the mix. It weighs 124 grams per cup and may be used cup-for-cup as a replacement for wheat flour.

Some GF flour blends on the market claim to be interchangeable with wheat flour, yet their products weigh considerably more than wheat flour. We've seen name brand packages of GF flour blends listing

136 and even 160 grams per cup. The heavier weight may throw off the delicate balance in GF baking of wet-to-dry ingredients.

You may modify your flour blend by adding more starch (cornstarch, potato starch, tapioca starch, arrowroot powder, etc.) when making delicate baked goods (cakes, tender cookies). Or, add more whole grain or higher protein flours for a heartier blend (artisan breads, hearty cookies, muffins).

GF starches have different properties: too much potato starch may cause things to crumble; too much tapioca starch could make things gummy. For those avoiding cornstarch, try substituting with ½ potato starch and ½ tapioca starch (other options: arrowroot powder or sweet potato starch).

The grind of GF flour (and often the weight) may differ between manufacturers, particularly rice or sorghum flours. Write down on your recipe which brand(s) you have used with success.

Purchase your flours and starches from manufacturers guaranteeing they are gluten free. Be cautious when buying from bulk bins, or from manufacturers who also process gluten containing grains.

Tips and Tricks When Converting Wheat-Based Recipes to Gluten Free

GF baking is a more exacting science/art and requires new baking techniques. Be gentle with yourself; everyone—even experienced GF bakers—have flops!

Typically GF baking requires more liquid than wheat recipes. More liquid increases steam, which helps with rise. Learn to be OK with this; if you add more flour to make the dough look like what you're used to (biscuits, for example) you'll create a very dense product.

More liquid means rethinking techniques and often the shapes of things (i.e. will you be able to make that crescent dinner roll, or should you do a cloverleaf in a muffin cup?)

Gluten free “pro” bakers weigh their ingredients. It's faster and more accurate, and accuracy is important in GF baking because slight changes in the ratio of wet-to-dry ingredients may challenge the whole recipe. Purchase a kitchen scale that weighs in ounces and grams (most do; grams are more precise). The nutrition label on a package tells you the weight of the product.

Gluten free starches don't absorb fats (butter, margarine, shortening, even cheese) as well as wheat flour, so consider slightly reducing the amount of fat in your recipe. Experiment with different fats, like oil instead of melted butter, or using an emulsified fat like sour cream or mayonnaise.

Gluten free yeast bread dough is able to rise once, but usually does not have enough dough strength to rise twice. This is why GF bread recipes rarely call for punching down risen dough and letting it rise again. You can usually, however, let GF yeast dough refrigerate overnight; the next morning shape your dough and let it rise.

Gluten is a protein; it gives wheat-based baked goods structure and elasticity. Without gluten, we look for other ways to build structure and stability. We often...

- Increase protein: use higher protein flours, or milk/dairy, eggs, or non-dairy milk powder.

- Add binding agents such as xanthan or guar gum to provide elasticity and improve texture. Consider adding ½ teaspoon of xanthan or guar gum per cup of gluten free dry ingredients (this may or may not be necessary in addition to any xanthan or guar gum that may already be in your flour blend—depends on what you are making).
- Psyllium husk powder is a soluble fiber that improves texture and flexibility in GF baking, especially in yeast breads. It is a binding agent similar to xanthan or guar gum, however replacing gums with psyllium husk powder is not a one-for-one substitution. It may take more psyllium husk powder than xanthan or guar gum to get the results you're seeking.

Gluten Free Baking Techniques

Why does my gluten free bread dough look more like a thick batter? It's supposed to! Gluten free baking requires a higher liquid content in order to produce steam which enables your bread loaf to rise.

Have your ingredients at room temperature, unless the recipe says otherwise. Eggs, butter, milk—set them out ahead of time. This gives batters and dough a fighting chance of rising and holding their structure, instead of expending energy to warm up the batter first.

Why does my GF yeast bread recipe call for apple cider vinegar or rice vinegar? Vinegar (as a mild acid) is a dough enhancer and is commonly added in small amounts to GF yeast dough to strengthen the protein structure, improving texture and shelf life.

With yeast breads, a little baking powder is sometimes added in addition to the yeast to improve the rise.

Resist the temptation to overbeat the batter. You don't have to worry about overbeating with respect to gluten (i.e. no tunnels or peaks in muffins) but overbeating may exhaust all the air bubbles in the batter.

Letting quick bread, muffin, cake, or pancake batters “rest” for 20-30 minutes before baking will hydrate the starches and avoid grainy textures.

Gluten free batters are wetter and want to spread out; you usually want them to bake UP. Use pans with good straight sides. If you've always used a standard 8x5-inch loaf pan, consider trading it for an 8 ½ x 4 ½-inch pan. This creates a beautiful sandwich loaf that rises up, instead of spreading out.

How to make nice, rounded rolls, buns, and cookies? Ice cream scoops of various sizes allow you to portion soft GF doughs in just the right sizes.

How to get a nice smooth cut through soft dough? Spray your knife with cooking spray first. Spray your rubber spatula with cooking spray before using it to shape the tops of things.

To help with browning: brushing with egg wash (a beaten egg) is a great help. At the Café we also spray the tops of things with cooking spray, or brush with melted butter.

Wetter batters can mean longer baking times: avoid overbrowning by covering the tops of things with foil toward the end of the baking time, as needed. Watch out for batter that is too wet—signs include caved-in cake tops, or baked goods that are too dense on the bottom.

It helps to have an instant-read thermometer. The internal temperature on baked goods is normally around 200 degrees. Become familiar with testing temperature as well as other doneness indicators.

Remember to let your loaf cool COMPLETELY before you slice it. Slicing any freshly baked loaf of GF bread that's still warm may lead to gummy texture. Enjoy the smells in the meantime; your patience will be rewarded.

Shelf Life and Storage

Once I make cinnamon rolls using the Eats & Treats Cinnamon Roll Mix, may I refrigerate the unbaked rolls overnight, nestled in their muffin cups, and bake them the next morning? Yes! Thoroughly cover the muffin tins with plastic wrap overnight. In the morning, remove the pans from the fridge and let the rolls rise (around 1 ½ hours), then bake.

Serve GF baked goods when freshly baked, especially soft dinner rolls and yeast breads. GF starches absorb moisture quickly and become stale, especially without preservatives.

Many Café customers slice their freshly baked and cooled loaves of GF bread and separate the slices with wax paper, plastic wrap or parchment paper, and then they freeze the whole loaf. When it's sandwich-making time, they just defrost the slices they need.

Refrigerating your freshly baked items tends to cause faster staling than if left on the kitchen counter, particularly with cakes and cupcakes. If the ingredients in your baked goods (or frosting) do not require refrigeration, leave it out.

Can I freeze GF baked goods? Yes, for a few weeks.

Storing GF flours and starches at room temperature is fine for frequent, regular use. For longer storage—especially products with whole grains—we suggest refrigerating or freezing. Remember to bring refrigerated or frozen items back to room temperature before measuring or weighing.

Eats & Treats Cafe is a dedicated gluten free eatery serving up just darn good food and serious BBQ in a relaxed, friendly atmosphere. Visit us at 1644 Main Street in Philomath, Oregon for the full line of Eats & Treats Café gluten free mixes, or contact us at eatsandtreats.brg@gmail.com.

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