

# Whole Grain Baking 101

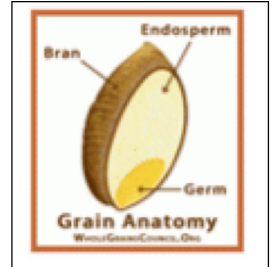
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**1. What is “whole grain baking”?** A: To bake a recipe with at least half (50% or more) whole grain flour, meal, or rolled grain and the remaining flour being enriched flour.

- **How to convert recipe to whole grains**, → Go to Educator Resources, YouTube at [HomeBaking.org](http://HomeBaking.org)

**2. Why bake with whole wheat flour?** A: Whole wheat flour is “nutrient dense,” containing all three parts of the grain kernel (bran, germ and endosperm), providing all the naturally occurring nutrients—including magnesium, potassium and antioxidants. Enriched white flour (all-purpose, bread, cake or pastry), contains the endosperm portion of the wheat kernel and provides the essential nutrients carbohydrates, protein, and is enriched with B-vitamins (niacin, thiamine, riboflavin), iron, and folic acid.

- Download **Grains 101** nutrition infographics → [Grainfoodsfoundation.org](http://Grainfoodsfoundation.org)
- See **Types of Flour; How Flour is Milled (Kids Zone)** → [Namamillers.org/education/](http://Namamillers.org/education/)



**3. How do I know flour is whole wheat or whole grain?** A: If the ingredient label says “whole wheat flour,” it’s 100% whole wheat flour, including the bran, germ and endosperm. Cornmeal and other grain meal or flour labels state if *whole* or *enriched*. Some gluten-free flours are *neither*.

- Cornmeal may be *degerminated* or *whole grain* → **All About Corn**, [Namamillers.org/education/](http://Namamillers.org/education/)
- *Quick* or *old-fashioned*, oatmeal is whole grain → [eatwheat.org/recipes/applesauce-oatmeal-muffins/](http://eatwheat.org/recipes/applesauce-oatmeal-muffins/)
- Get the scoop on whole grains. → **Whole Grains 101**, [Wholegrainscouncil.org](http://Wholegrainscouncil.org)

**4. Are all whole wheat flours the same?** A: Flour is never JUST flour. Six classes of wheat produce flours for a wide variety of products. Whole wheat flour may be milled from **red** or **white** wheat—**white wheat** will have a lighter color and sweeter flavor than **red wheat**. Either red or white may be **soft** (less protein/gluten) or **hard** (higher gluten or protein) wheat. Millers mill flour to be suited to the baker’s end uses—yeast breads, rolls, pizza, bagels, muffins, cakes, cookies, pastry—based on the wheat’s attributes.

- Whole wheat flour textures may be smooth to coarse whether they are “ancient” varieties (emmer, einkorn, spelt), “heirloom,” stone ground, graham or whole wheat. → Go to **Resources: WheatFoods.org**
- Red or white whole wheat flours are nutritionally equal. → Learn organic and GMO facts, [Foodinsight.org](http://Foodinsight.org)

**5. Can any recipe be baked with whole wheat flour?** A: Nearly **any** recipe (unless gluten-free) can be baked with whole wheat flour. Begin by using about half whole wheat flour, half enriched flour.

**Example, Bread Sticks (on back):** If a recipe calls for 4 cups (1 lb 1 oz) enriched white flour (all-purpose or bread), prepare recipe with 2 ¼ cups (9.5 oz/270g) whole wheat flour and 1 ¾ cups (7.4 oz) enriched flour. Bake with either *degerminated* (enriched, not whole grain) OR *whole grain cornmeal*, with no visual difference.

- **Product color too dark?** Choose a “white whole wheat” flour
- **Texture too coarse?** Ultra- to fine-textured whole wheat flours are available
- Use **soft** whole wheat flour in pastries, biscuits, cookies, cakes; **hard** whole wheat flour otherwise
- **100% whole wheat?** Better baked w/ buttermilk, grated carrots, zucchini, apple or a little added water
- **How-to videos**, Whole Wheat Bread; Pizza Crust-Educator resources, DIY Baking, [HomeBaking.org](http://HomeBaking.org)

## A Baker's Dozen Smart Snack Baking Recipes



Child Nutrition & Wellness, Kansas State Department of Education  
in collaboration with the non-profit Home Baking Association

**Bread Sticks** (on back), baked with 75% whole wheat flour and cornmeal provides 21 g or more whole grain per bread stick.

(Qualifies for Basic Whole Grain Stamp, [Wholegrainscouncil.org](http://Wholegrainscouncil.org) )

Source: *Baking with Friends* book

**For a whole grain Bread Stick culinary formula:**

→ Go to Educator Resources, [HomeBaking.org](http://HomeBaking.org) A Bakers Dozen Smart Snack recipes