Whole Grains
And Whole Grain Rich
Whole Grains for Health

According to the USDA, “CACFP provides aid to child care institutions...for the provision of nutritious foods that contribute to the wellness, healthy growth, and development of young children.”
Agenda

✓ The Grains Group – what and why
  • ABCs
  • CACFP Guidance & Proposed Changes
  • Label Reading Savvy
  • Adding Whole Grains
  • FAQs
Foods in the Grains Group:

• Food made from wheat, rice, oats, cornmeal, barley, or another cereal grain

• **Examples:** bread, pasta, oatmeal, breakfast cereals, tortillas and grits

**Not potatoes!**
Grains are Essential

- Grains, especially whole grains, provide health benefits and carbohydrates for energy
- Whole grains as part of a healthy diet may reduce risk of some chronic diseases
  - e.g. heart disease
Nutrients

• Whole grains are important sources of many nutrients, including...
  – Dietary fiber
  – B vitamins
  – Iron
  – Magnesium
  – Selenium
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ABC’s of Grains

Two Types

• Whole grains  
• Refined grains
Whole grains contain the entire grain: bran, endosperm & germ

Examples:
- Oatmeal
- Brown rice
- Whole wheat flour
Only endosperm

Lose B-vitamins, iron, fiber

Examples:
- White flour
- White bread
- White rice
## Nutrient Comparison

<table>
<thead>
<tr>
<th></th>
<th>Bran: fiber &amp; B vitamins</th>
<th>Germ: vitamin E, B vitamins &amp; antioxidants</th>
<th>Endosperm: energy, carbohydrates &amp; protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole grain</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Refined grain</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
What are whole grains?

1. Grains that are darker in color.
2. Grains that are low in carbohydrates.
3. Grains that contain the bran, germ and endosperm.
4. Grains that have been fortified.
5. Both “1” and “3”.

Quiz Time!
Agenda

- The Grains Group – what and why
- ABCs of Grains
- ✔ CACFP Guidance and Proposed Changes
- Label Reading Savvy
- Adding Whole Grains
- FAQs
CACFP Guidelines

• Grains and breads must be enriched OR whole-grain or made from enriched or whole-grain meal or flour.

• Ready-to-eat breakfast cereals must be enriched, whole-grain, or fortified.
Recommendations:

• At least half whole grain
• Limit grains high in solid fats, added sugar and sodium
  – Donuts
  – Toaster pastries
  – Sugary breakfast cereals
WEIGHT TABLE FOR GRAINS/BREADS

Some of the following foods, or their accompaniments, may contain more sugar, salt and/or fat than others. This should be a consideration when deciding how often to serve them.

<table>
<thead>
<tr>
<th>Group A</th>
<th>Minimum Serving Size for Group A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breading type coating</td>
<td>1 serving = 20 gm or 0.7 oz</td>
</tr>
<tr>
<td>Bread sticks - hard</td>
<td>3/4 serving = 15 gm or 0.5 oz</td>
</tr>
<tr>
<td>Chow mein noodles</td>
<td>1/2 serving = 10 gm or 0.4 oz</td>
</tr>
<tr>
<td>Crackers - saltines and snack crackers</td>
<td>1/4 serving = 5 gm or 0.2 oz</td>
</tr>
<tr>
<td>Croustines</td>
<td></td>
</tr>
<tr>
<td>Pretzels - hard</td>
<td></td>
</tr>
<tr>
<td>Stuffing - dry (weights apply to bread in stuffing)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B</th>
<th>Minimum Serving Size for Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagels</td>
<td>1 serving = 25 gm or 0.9 oz</td>
</tr>
<tr>
<td>Battering type coating</td>
<td>3/4 serving = 19 gm or 0.7 oz</td>
</tr>
<tr>
<td>Biscuits</td>
<td>1/2 serving = 13 gm or 0.5 oz</td>
</tr>
<tr>
<td>Breads - white, wheat, whole wheat, French, Italian</td>
<td>1/4 serving = 6 gm or 0.2 oz</td>
</tr>
<tr>
<td>Buns - hamburger, hotdog</td>
<td></td>
</tr>
<tr>
<td>Crackers - graham (all shapes), animal crackers</td>
<td></td>
</tr>
<tr>
<td>Egg roll skins</td>
<td></td>
</tr>
<tr>
<td>English muffins</td>
<td></td>
</tr>
<tr>
<td>Pita bread - white, wheat, whole wheat</td>
<td></td>
</tr>
<tr>
<td>Pizza crust</td>
<td></td>
</tr>
<tr>
<td>Pretzels - soft</td>
<td></td>
</tr>
<tr>
<td>Rolls - white, wheat, whole wheat, potato</td>
<td></td>
</tr>
<tr>
<td>Tortillas - wheat or corn</td>
<td></td>
</tr>
<tr>
<td>Tortilla chips - wheat or corn</td>
<td></td>
</tr>
<tr>
<td>Taco shells</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group C</th>
<th>Minimum Serving Size for Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cookies * - plain</td>
<td>1 serving = 31 gm or 1.1 oz</td>
</tr>
<tr>
<td>Cornbread</td>
<td>3/4 serving = 23 gm or 0.8 oz</td>
</tr>
<tr>
<td>Corn muffins</td>
<td>1/2 serving = 16 gm or 0.6 oz</td>
</tr>
<tr>
<td>Croissants</td>
<td>1/4 serving = 8 gm or 0.3 oz</td>
</tr>
<tr>
<td>Pancakes - purchased</td>
<td></td>
</tr>
<tr>
<td>Pie crust - dessert pies*, fruit turnovers*, meat/meat alternate</td>
<td></td>
</tr>
<tr>
<td>Waffles - purchased</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group D</th>
<th>Minimum Serving Size for Group D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doughnuts ** - cake and yeast, raised, unfrosted</td>
<td>1 serving = 50 gm or 1.8 oz</td>
</tr>
<tr>
<td>Granola bars ** - plain</td>
<td>3/4 serving = 38 gm or 1.3 oz</td>
</tr>
<tr>
<td>Muffins - all except corn</td>
<td>1/2 serving = 25 gm or 0.9 oz</td>
</tr>
<tr>
<td>Sweet roll ** - unfrosted</td>
<td>1/4 serving = 13 gm or 0.5 oz</td>
</tr>
<tr>
<td>Toaster pastry ** - unfrosted</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group E</th>
<th>Minimum Serving Size for Group E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cookies * - with nuts, raisins, chocolate pieces and or fruit - purees</td>
<td>1 serving = 63 gm or 2.2 oz</td>
</tr>
<tr>
<td>Doughnuts ** - cake and yeast, raised, frosted or glazed</td>
<td>3/4 serving = 47 gm or 1.7 oz</td>
</tr>
<tr>
<td>French toast</td>
<td>1/2 serving = 31 gm or 1.1 oz</td>
</tr>
<tr>
<td>Grain fruit bars **</td>
<td>1/4 serving = 16 gm or 0.6 oz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group F</th>
<th>Minimum Serving Size for Group F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cake * - plain, unfrosted</td>
<td>1 serving = 75 gm or 2.7 oz</td>
</tr>
<tr>
<td>Coffee cake **</td>
<td>3/4 serving = 56 gm or 2 oz</td>
</tr>
<tr>
<td></td>
<td>1/2 serving = 38 gm or 1.3 oz</td>
</tr>
<tr>
<td></td>
<td>1/4 serving = 19 gm or 0.7 oz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group G</th>
<th>Minimum Serving Size for Group G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brownies * - plain</td>
<td>1 serving = 115 gm or 4 oz</td>
</tr>
<tr>
<td>Cake * - all varieties, frosted</td>
<td>3/4 serving = 86 gm or 3 oz</td>
</tr>
<tr>
<td>Cereal bars</td>
<td>1/2 serving = 58 gm or 2 oz</td>
</tr>
<tr>
<td></td>
<td>1/4 serving = 29 gm or 1 oz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group H</th>
<th>Minimum Serving Size for Group H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>1 serving = 1/2 cup cooked or 25 gm dry (0.9 oz)</td>
</tr>
<tr>
<td>Breakfast cereals *** - cooked</td>
<td>1/2 serving = 1/4 cup cooked or 13 gm dry (0.5 oz)</td>
</tr>
<tr>
<td>Bulgur or cracked wheat</td>
<td></td>
</tr>
<tr>
<td>Macaroni - all shapes</td>
<td></td>
</tr>
<tr>
<td>Noodles - all varieties</td>
<td></td>
</tr>
<tr>
<td>Pasta - all shapes</td>
<td></td>
</tr>
<tr>
<td>Ravioli - noodles only</td>
<td></td>
</tr>
<tr>
<td>Rice - enriched white or brown</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group I</th>
<th>Minimum Serving Size for Group I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast cereal *** - dry</td>
<td>1 serving = 3/4 cup or 1 oz, whichever is less</td>
</tr>
</tbody>
</table>

* Snack only
** Breakfast or Snack only
*** Refer to Food Chart for appropriate serving size served to children ages 1 through 5 and adult participants in CACFP.
Proposed Changes

• At least one serving daily must be whole grain rich

What is whole grain rich?

• 8 grams or more whole grains per serving
• Has FDA whole grain claim on packaging
• Ingredient list has “whole” grain first
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• The Grains Group – what and why
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• CACFP Guidance and Proposed Changes

✓ Label Reading Savvy
• Adding Whole Grains
• FAQs
Label Reading Savvy

- 100% whole wheat
- Stone-ground
- Organic
- Bran
- Wheat flour
- Multigrain
- High fiber
- 12-Grain
Whole Grain Stamp

Basic Stamp:
At least 8g (1/2 serving) of Whole Grains

EAT 48g OR MORE OF WHOLE GRAINS DAILY

Source: wholegrainscouncil.org
Whole Grain Stamp

100% Stamp:
NO refined grain
AND
at least 16g
(1 serving) of Whole Grains

EAT 48g OR MORE OF WHOLE GRAINS DAILY
Ingredient lists for whole grains

• Labels aren’t always truth tellers
• Ingredients lists tell the whole story

Ingredients: whole grain **wheat** flour, sugar, soybean oil, cornstarch, malt syrup (from corn and barley), salt, invert sugar, leavening (calcium phosphate and/or baking soda), vegetable color (annatto extract, turmeric oleoresin).
Which bread is whole grain?

A: Wheat flour, water, high fructose corn syrup, molasses, wheat bran …

B: Whole wheat flour, water, brown sugar …
FDA Whole Grain Health Claim

“Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat and cholesterol may reduce the risk of heart disease and some cancers.”

Examples:
Cheerios cereal
Quaker Oatmeal
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Quiz Time!

Which indicates whole grain?

1. Stoneground
2. Unbleached
3. Multigrain
4. Wheat
5. All of the above
6. None of the above
Color: Who Cares?

• Color is not an indication of a whole grain

• Bread can be brown because of molasses or other added ingredients

• Read the ingredient list to see if the grain is a whole grain
## Nutrition Facts Labels: Dietary Fiber

- Dietary fiber not always indication of whole grain content
Quiz Time!

Which is always a whole grain?

1. Barley
2. Oatmeal
3. Enriched wheat flour
4. 100% wheat bread
5. All of the above
6. None of the above
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Whole Grains for Breakfast

• Whole wheat toast, pancakes, waffles
• Mix ‘n match whole grain cereals
• Oatmeal
  – add apples, berries, bananas, nut butter
Whole Grains for Lunch/Dinner

• Whole grain pastas
• Brown rice and/or barley
  – Add to meatballs
  – Add to soups, stews
  – Serve plain and sprinkle with shredded cheese
• Whole wheat black bean and cheese quesadillas
Whole Grain Snacks

• Whole grain tortilla chips
• Whole grain pretzels (unsalted)
• Whole grain dry cereal

• Whole grain mini bagel pizzas

• Brown rice pudding

[Snack mix]
White Whole Wheat Flour

• Lighter in color, sweeter taste than regular whole wheat flour
• Same fiber content, vitamins and minerals
• Reduce by 1 tablespoon for each cup of flour recipe calls for
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Whole Grain FAQ’s
What is gluten and is a gluten-free diet good for you?
Gluten

• A protein in wheat, rye & barley
• Elasticity & shape to baked goods
• Helps dough rise
• Chewy texture
• Added to some foods
  – Modified food starch
  – Gravies, dried fruits, caramel color, processed cheese, processed meat

Photo courtesy of zigazou76 at http://www.flickr.com/photos/zigazou76/5846255426/sizes/o/ (CC-BY NC 3.0)
Celiac Disease or Gluten Sensitivity?

• Celiac Disease
  – Autoimmune reaction to gluten
  – Damage & inflammation to lining of GI tract
    • Poor nutrient absorption = malnutrition
  – Symptoms: GI discomfort, rash, joint pain, tingling

• Non-Celiac gluten sensitivity
  – No immune system reaction
  – Less GI damage
  – Symptoms: headache, numbness
Gluten-free?

Only for participants with:

- Gluten sensitivity/intolerance
- Celiac Disease

Remember a Gluten-Free means:

- The elimination of several foods or an entire food group
- Unless medically necessary, gluten should NOT be removed - nutrient deficiencies could occur
It seems like a lot of whole grains are very expensive. Are there any low-cost options?
Lower Cost Whole Grain Options

• Brown rice
• Oatmeal
• Store brand dry whole grain cereals
• Buy day-old or on sale whole-grain bread (use quickly or freeze them)
• Frozen whole grain bread dough
Should I be purchasing organic whole grains?
Organic

- Personal preference
- No scientific evidence to support higher nutrients density than non-organic counterparts
Resources

- Understanding the food label, J. Anderson, L. Young and S. Perryman, [http://www.ext.colostate.edu/pubs/foodnut/09365.html](http://www.ext.colostate.edu/pubs/foodnut/09365.html)
- [http://www.choosemyplate.gov/food-groups/grains-why.html](http://www.choosemyplate.gov/food-groups/grains-why.html)

NEBRASKA DEPARTMENT OF EDUCATION
Questions?
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