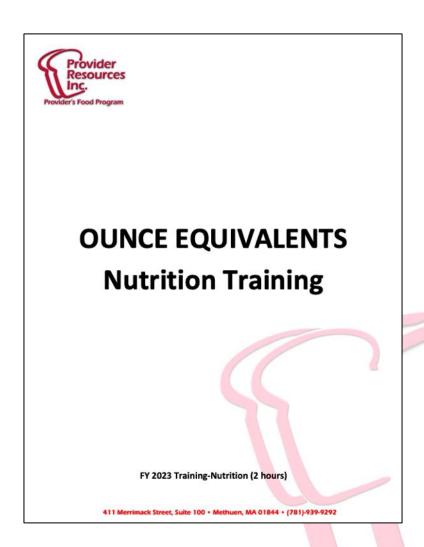


Ounce Equivalents Nutrition Training – 2 Hours (FY 2023)

To receive 2 hours credit for this training please do the following:

1. Read through the Training entitled "Ounce Equivalents".



2. After reading the training, answer all the Review questions on the Review Form (either on-line or by hand to mail in).

Enjoy using this training!

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mail: U.S. Department of Agriculture
 Office of the Assistant Secretary for Civil Rights
 1400 Independence Avenue, SW
 Washington, D.C. 20250-9410;

(2) fax: (202) 690-7442; or

(3) email: program.intake@usda.gov.

This institution is an equal opportunity provider.

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OUNCE EQUIVALENTS Nutrition Training

FY 2023 Training-Nutrition (2 hours)

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Serving Grains in your CACFP Program

- ❖ This training will introduce a few different methods and tools that will help you learn how to change to the Oz Eq measurement requirement.
- Prior to July 1,2022, when programs planned to serve grains, providers would determine the minimum amount to serve in terms of cups, servings, and/or slices
- ❖ Beginning July 1, 2022, providers must determine the amount of grains to serve in terms of ounce equivalents (Oz Eq), based on the specific item offered and the ages of participating children. Implementing the Oz Eq measurement method will require providers to change how they think about serving sizes and their approach to ensure that children are receiving correct serving sizes.
- Grains are an important part of meals and snacks in the Child and Adult Care Food Program (CACFP). To ensure children get enough grains at CACFP meals and snacks, required minimum amounts for grains are listed in the meal pattern as ounce equivalents (Oz Eq). Oz Eq tell you the amount of grain in a portion of a particular food.
- Using Regular Menus for children ages 1-12 years old: You do not need to write the serving sizes or portions served to children on your daily menu.
- Once you establish Oz Eq serving sizes for items that you serve on a regular basis, according to the ages of your children enrolled, you can just make note of the Oz Eq serving for those items and do not have to do any further calculations for those items.
- ❖ Participating Family Childcare Providers <u>do not</u> need to document which method they use to determine a grains Oz Eq. **However**, you should be able to communicate an understanding of your method in how a grain component meets the minimum standards if asked at a food review visit with your program monitor.

CACFP:

- Ounce equivalents (oz eq) are used to determine the amount of creditable grains.
- One-quarter ounce equivalent (0.25 oz eq) is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- ❖ Grain items must be made from grains that are whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product such as enriched bread or a fortified cereal.
- At least one serving of grains per day must be whole grain rich.
- Grain-based desserts cannot be credited towards the grain's component.
- Breakfast cereals must contain no more than 6 grams of sugar per dry ounce.

Overview of Different Methods for Calculating Ounce Equivalents of Grains

The following is an overview of 4 methods you can use to calculate ounce equivalents:

Method #1-

Using the USDA handout: "Using Ounce Equivalents for Grains in the Child and Adult Care Food Program"

This handout contains a chart listing specific grain products generically. It informs you of what the serving size of each product is based on grams and/or Oz. Eq. for the products listed. If a product that you want to serve is not on the list, you will need to use a different method and know how to calculate the OZ. Eq. This list will be expanded by USDA in the future to include more processed grain items.

Method #2-

Using the USDA handout: "Calculating Ounce Equivalents of Grains in the Child and Adult Care Food Program"

This handout outlines the calculation method using the information on an item's Nutritional Facts Label

Method #3-

Using the "Food Buying Guide for Child Nutrition Programs"

This is an online application that can be very helpful if there is a grain product that you like to use that is not on the chart of reference sheet in Method #1. Basically, you enter the products information from its Nutrition Facts label, and it will automatically calculate how many ounce equivalents are in one serving. You can also use the application's "Recipe Analysis Workbook" The Food Buying Guide (FBG) can be found at the following link: https://foodbuyingquide.fns.usda.gov/. You will need to create a free account to use it.

Method #4-

Using the USDA handout: "Determining Ounce Equivalents of Grains in Child and Adult Care Food Program Recipes"

This guide will help you figure out how to convert the grains in a recipe to the Oz. Eq. of grains in one serving of homemade grain products such as muffins, rolls, pizza crust or bread. There is a simple conversion process that guides you through the step by step of the conversion. A calculator is helpful and will make quick work of this process. Once you have calculated the Oz Eq of the grains in your favorite recipes you can note them on the recipe so that you do not have to repeat the calculation process each time you make that product.

Now let's look at these methods 1-by-1...

Method #1-

Using the USDA handout: "Determining Ounce Equivalents of Grains in the CACFP"

(Please Review Handout #1 found in the Appendix)

This method is the easiest and most useful method when feeding the children commonly served processed grain products. Because this method uses the Grain Measurement Chart that lists generic items that might be slightly different in size and/or weight it will be important to initially check their size or weight according to what is listed in the chart. Typically, CACFP for Day Care Homes only allows claims through a child's 12th birthday unless they have a documented, qualifying disability.

Also note that while each product has a column for specific age groups (i.e. 1-5 years) that show the Oz. Eq. servings for the products, according to DEEC and MA DESE/FNP, some of the products on the list are considered a choking hazard for children 1-4 years old and therefore not creditable (i.e. Popcorn).

Check by Using Size Qualifier:

Some processed grain products on the list will require you to learn the measure size of the product, (Ex. small square cheese crackers like Cheez-its, if measured are 1" by 1" per cracker, and would be in the category of Cracker, Cheese, Square, Savory). Then you would look at the column for the age group of your children and find the required serving sizing size for that product per age of participating children (10 crackers = $\frac{1}{2}$ oz eq for children 1-5-years-old, and you would double that to 20 crackers = 1 oz eq for children 6-18-years-old).

Check by Using Weight (in grams) Qualifier:

Some processed grain products on the list will require you to look at the products "Nutrition Facts" label and do some simple calculations to determine serving size in grams that will be approximately equal to oz eq serving for your participating age group (Handout #1-Page 5 will walk you through this simple process).

Please keep in mind that this chart was created for CACFP participants which includes other population ages.

Check when there isn't any Size or Weight Qualifier:

Some grain items such as oatmeal, rice and different types of cereal will not have a size or weight qualifier written next to them on the chart. When this is the case, you will simply look at the product description (cereal-flakes like Corn Flakes, or round like Cheerios, or puffed like Kix), then look at the column that represents the age group of children you are serving and measure out the amount of grain shown on the chart.

What if your Grain is Different and/or Not on the Chart?

Don't worry, you will just use one of the methods to find your ounce equivalent (oz eq) for your grain product!

Note: Handout #1 can be found in the Appendix

Method #2-

USDA Calculating Ounce Equivalents of Grains in the Child and Adult Care Food Program

(Please Review Handout #2 found in the Appendix)

This method should be used when you can't find a specific grain on the "Grain Measuring Chart". It requires you to learn and use a grains Nutrition Facts label to calculate the ounce equivalent is specific grains. Within this method there is also a simple chart that shows columns of different grains, increments of ounce equivalents which you would use depending on the age group and meal, and the serving size in grams for the correlating ounce equivalents. However, to determine the actual serving size of the portion (1/2 slice of bread, 5 crackers, etc.) appropriate by age group, you will need to do a simple calculation to convert the Nutrition Facts serving size and the weight in grams into what would be considered an oz eq serving size for your age group to meet the requirements.

The simple calculation for determining serving size from the nutrition facts to find the correct age serving size is simply (Handout #2 will give you a more in-depth instruction on this method):

Step #1- Find the grain item on the **Grains Ounce Equivalents Chart (pages 4-5),** look at the column that shows the appropriate grain Oz Eq for the age groups served.

Step #2- Find Nutrition Facts label of your grain product and look at how many grams per serving along with how many pieces in the serving size.

Step #3 - #of	grams divided by # of	_ items or serving size =	grams per item	
Step #4 -#of	grams required for that type o	of grain item divided by # of	grams per item =	_items

Step #5- The final # of items is the serving size for that particular grain item, for the age group that you are serving the grain to.

It is important to understand that the two age groups have different ounce equivalent requirements.

- Children 1 through 5 years of age (Breakfast, Lunch, Supper, and Snack) are required to have a minimum of a ½ Oz Eq.
- Children 6 through 12 years of age (Breakfast, Lunch, Supper, and Snack) are required to have a minimum of 1 Oz Eq.

As you practice doing these calculations, you will become more familiar and confident. Also, it is important to remember that once you do the calculations on products that you regularly serve the children, you can create a list so don't have to do the calculation every time you serve that product.

Remember, you do not need to write the amounts of grain served on your regular menus, but you must be able to explain to your monitor what method you use to get the correct Oz Eq serving size for the age group being served.

Note: Handout #2 can be found in the Appendix

Method #3-

Food Buying Guide for Child Nutrition Programs

This online application is an" Interactive Food Buying Guide" that allows for easy display, search, and navigation of food yield information. You will need to create a free account and can download it right to your cell phone to access it while shopping, it can be very helpful if there is a grain product that you like to use that is not on the chart discussed in Method #1.

Basically, you enter the products information from its Nutrition Facts label, and it will automatically calculate how many ounce equivalents are in one serving. You can also use this to create a favorite foods list and access other tools such as the application's "Recipe Analysis Workbook". The Food Buying Guide (FBG) can be found at the following link: https://foodbuyingguide.fns.usda.gov/ (NOTE: You will need to create an account to begin using this very helpful guide.)

Method #4-

Using the USDA handout: "Determining Ounce Equivalents of Grains in Child and Adult Care Food Program Recipes"

(Please Review Handout #3 found in the Appendix)

Homemade grain items such as muffins, fresh pancakes or waffles, and savory biscuits are just a few items that you might make with or for the children in your program. If you enjoy baking with or for the children, there are many benefits to these products as they are not mass produced and highly processed so that they have fewer additives in them.

The conversion guide in handout #3 will guide you in the process of converting cups of different types of grain to grams of grain using a set conversion factor for each grain. Once you have converted the cups of grain to grams of grain there are a few other steps to convert the grams of grain to the Oz Eq of the product to find the correct serving size for the children in your program.

If you make homemade grain products regularly, I encourage you to convert some of your recipes ahead of time and note the Oz Eq of the grain serving size right on your recipe.

Note: Handout #3 can be found in the Appendix

Resources:

https://teamnutrition.usda.gov/

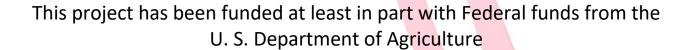
https://www.fns.usda.gov/

https://www.fns.usda.gov/cacfp/family-day-care-homes

MA DESE/FNP

For Providers that would like to learn more, there are additional resources available on our website:

https://www.providerresources.org/



APPENDIX

HANDOUT #1

USDA handout: "Determining Ounce Equivalents of Grains in the CACFP"

HANDOUT #2

USDA handout: "Calculating Ounce Equivalents of Grains in the Child and Adult Care Food Program"

HANDOUT #3

USDA handout: "Determining Ounce Equivalents of Grains in Child and Adult Care Food Program Recipes"







Food and Nutrition Service

Using Ounce Equivalents for Grains in the Child and Adult Care Food Program

Grains are an important part of meals in the Child and Adult Care Food Program (CACFP). To make sure children and adults get enough grains at CACFP meals and snacks, required amounts for the grains component are listed in the meal pattern as ounce equivalents (oz. eq.). Ounce equivalents tell you the amount of grain in a portion of food.

How Much Is 1 Ounce Equivalent?





20 cheese crackers (1" by 1") = 1 oz. eq.



12 thin wheat crackers (1 1/4" by 1 1/4") = 1 oz. eq.



5 woven whole-wheat crackers (1 ½" by 1 ½") = 1 oz. eq.

Using the Grains Measuring Chart

The Grains Measuring Chart on pages 2-4 tells you how much of a grain item you need to serve to meet CACFP meal pattern requirements. To use this chart:

- Find the grain you want to serve under the "Grain Item and Size" column.
- Check if the chart lists a size or weight by the name of the grain. If the chart:

Lists a weight for the grain, such as at least 56 grams, then use the Nutrition Facts label for the item you want to serve to make sure it weighs the same, or more than, the grain on the chart. See page 5.

Does not list a weight or size for the grain, then you do not need to check the size or weight of the product before using the chart.

Lists a size for the grain, such as *about* 1 ½" by 1½", then check if the item is the same size, or larger than, this amount. See page 6.

Find the column for the age of your participants and the meal or snack you are serving. This column lists the amount of a grain you will need to serve to meet the meal pattern requirement for grains.



Grain Item and Size

Pita Bread/Round (whole grain-rich or enriched) at least 56 grams*

Popcorn

Pretzel, Hard, Mini-Twist (about 1 1/4" by 1 1/2")** 1- through 5-year-olds at Breakfast, Lunch, Supper, Snack

Serve at Least ½ oz. eq., which equals about...

1/4 pita or 14 grams

1 1/2 cups or 14 grams

7 twists or 11 grams

More training, menu planning, and nutrition education materials for the CACFP can be found at https://teamnutrition.usda.gov.



Grains Measuring Chart for the Child and Adult Care Food Program



Grain Item and Size

Bagel (entire bagel) at least 56 grams* Bagel, Mini (entire bagel) at least 28 grams* Biscuit at least 28 grams* Bread (whole grain-rich or enriched) at least 28 grams* Bun or Roll (entire bun or roll) at least 28 grams* Cereal Grains (barley, bulgur, quinoa, etc.) Cereal, Ready-to-Eat: Flakes or Rounds Cereal, Ready-to-Eat: Granola Cereal, Ready-to-Eat: Puffed Corn Muffin at least 34 grams* Cracker, Animal (about 1 ½" by 1")** Cracker, Bear-Shaped, Sweet (about 1" by 1/2")** Cracker, Cheese, Square, Savory (about 1" by 1")** Cracker, Fish-Shaped or Similar, Savory

(about 34" by 1/2")**

Age Group and Meal

1- through 5-year-olds at Breakfast, Lunch, Supper, Snack
Serve at Least ½ oz. eq., which equals about
1/4 bagel or 14 grams
½ bagel or 14 grams
½ biscuit or 14 grams
½ slice or 14 grams
½ bun/roll or 14 grams
14 cup cooked or 14 grams dry
½ cup or 14 grams
⅓ cup or 14 grams
34 cup or 14 grams
½ muffin or 17 grams
8 crackers or 14 grams
12 crackers (~¼ cup) or 14 grams
10 crackers or 11 grams

21 crackers (~1/4 cup)

or 11 grams

6- through 18-year-olds at Breakfast, Lunch, Supper, Snack Adults at Snack only

Serve at Least 1 oz. eq., which equals about...

- ½ bagel or 28 grams
- 1 bagel or 28 grams1 biscuit or 28 grams
- 1 slice or 28 grams
- 1 bun/roll or 28 grams
- ½ cup cooked or 28 grams dry
- 1 cup or 28 grams
- 1 ¼ cup or 28 grams

14 cup or 28 grams

- 1 muffin or 34 grams
- 15 crackers or 28 grams
- 24 crackers (~½ cup) or 28 grams
- 20 crackers (~⅓ cup) or 22 grams
- 41 crackers (~½ cup) or 22 grams

Adults at Breakfast, Lunch, Supper

Serve at Least 2 oz. eq., which equals about...

- 1 bagel or 56 grams
- 2 bagels or 56 grams
- 2 biscuits or 56 grams
- 2 slices or 56 grams
- 2 buns/rolls or 56 grams
- 1 cup cooked or 56 grams dry
- 2 cups or 56 grams
- ½ cup or 56 grams
- 2 ½ cups or 56 grams
- 2 muffins or 68 grams
- 30 crackers (~1 cup) or 56 grams
- 48 crackers (~1 cup) or 56 grams
- 40 crackers (~3/3 cup) or 44 grams
- 81 crackers (~1 cup) or 44 grams

^{*}Check that the item you want to serve weighs this amount, or more. See "Using the Nutrition Facts Label" on page 5 for more information.

^{**}Check that the item you want to serve is about this size or larger. See "Grains Measuring Tools" on page 6 for more information.

Grains Measuring Chart for the Child and Adult Care Food Program

De la companya del companya de la companya del companya de la comp	Age Group and Meal		
	1- through 5-year-olds at Breakfast, Lunch, Supper, Snack	6- through 18-year-olds at Breakfast, Lunch, Supper, Snack Adults at Snack only	Adults at Breakfast, Lunch, Supper
Grain Item and Size	Serve at Least ½ oz. eq., which equals about	Serve at Least 1 oz. eq., which equals about	Serve at Least 2 oz. eq., which equals about
Cracker, Graham (about 5" by 2 1/2")**	1 cracker or 14 grams	2 crackers or 28 grams	4 crackers or 56 grams
Cracker, Round, Savory (about 1 ¾" across)**	4 crackers or 11 grams	7 crackers or 22 grams	14 crackers or 44 grams
Cracker, Saltine (about 2" by 2")**	4 crackers or 11 grams	8 crackers or 22 grams	16 crackers or 44 grams
Cracker, Thin Wheat, Square, Savory (about 1 1/4" by 1 1/4")**	6 crackers or 11 grams	12 crackers or 22 grams	23 crackers or 44 grams
Cracker, Woven Whole- Wheat, Square, Savory (about 1 ½" by 1 ½")**	3 crackers or 11 grams	5 crackers or 22 grams	10 crackers or 44 grams
Croissant at least 34 grams*	½ croissant or 17 grams	1 croissant or 34 grams	2 croissants or 68 grams
English Muffin (top and bottom) at least 56 grams*	1/4 muffin or 14 grams	½ muffin or 28 grams	1 muffin or 56 grams
French Toast Stick at least 18 grams*	2 sticks or 35 grams	4 sticks or 69 grams	8 sticks or 138 grams
Grits	14 cup cooked or 14 grams dry	½ cup cooked or 28 grams dry	1 cup cooked or 56 grams dry
Melba Toast (about 3 ½" by 1 ½")**	2 pieces or 11 grams	5 pieces or 22 grams	8 pieces or 44 grams
Muffin and Quick Bread (banana, etc.) at least 55 grams*	½ muffin/slice or 28 grams	1 muffin/slice or 55 grams	2 muffins/slices or 110 grams

Oatmeal

Pancake at least 34 grams* ½ cup cooked or

28 grams dry

1 cup cooked or

2 pancakes or 68 grams

56 grams dry

½ pancake or 17 grams | 1 pancake or 34 grams

14 cup cooked or

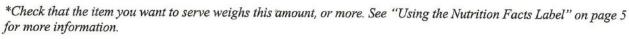
14 grams dry

^{*}Check that the item you want to serve weighs this amount, or more. See "Using the Nutrition Facts Label" on page 5 for more information.

^{**}Check that the item you want to serve is about this size or larger. See "Grains Measuring Tools" on page 6 for more information.

Grains Measuring Chart for the Child and Adult Care Food Program

		Age Group and Meal	
	1- through 5-year-olds at Breakfast, Lunch, Supper, Snack	6- through 18-year-olds at Breakfast, Lunch, Supper, Snack Adults at Snack only	Adults at Breakfast, Lunch, Supper
Grain Item and Size	Serve at Least ½ oz. eq., which equals about	Serve at Least 1 oz. eq., which equals about	Serve at Least 2 oz. eq., which equals about
Pasta (whole grain-rich or enriched, all shapes)	14 cup cooked or 14 grams dry	½ cup cooked or 28 grams dry	1 cup cooked or 56 grams dry
Pita Bread/Round (whole grain-rich or enriched) at least 56 grams*	¼ pita or 14 grams	½ pita or 28 grams	1 pita or 56 grams
Popcorn	1 ½ cups or 14 grams	3 cups or 28 grams	6 cups or 56 grams
Pretzel, Hard, Mini-Twist (about 1 1/4" by 1 1/2")**	7 twists (~1/3 cup) or 11 grams	14 twists (~2/3 cup) or 22 grams	27 twists (~1 cup) or 44 grams
Pretzel, Hard, Thin Stick (about 2 ½" long)**	16 sticks or 11 grams	31 sticks or 22 grams	62 sticks or 44 grams
Pretzel, Soft at least 56 grams*	¼ pretzel or 14 grams	½ pretzel or 28 grams	1 pretzel or 56 grams
Rice (all types)	¼ cup cooked or 14 grams dry	½ cup cooked or 28 grams dry	1 cup cooked or 56 grams dry
Rice Cake at least 8 grams*	1 ½ cakes or 11 grams	3 cakes or 22 grams	5 ½ cakes or 44 grams
Rice Cake, Mini (about 1 ¾" across)**	7 cakes or 11 grams	13 cakes or 22 grams	25 cakes or 44 grams
Taco or Tostada Shell, Hard at least 14 grams*	1 shell or 14 grams	2 shells or 28 grams	4 shells or 56 grams
Tortilla, Soft, Corn (about 5 ½")**	¾ tortilla or 14 grams	1 ¼ tortillas or 28 grams	2 ½ tortillas or 56 grams
Tortilla, Soft, Flour (about 6")**	½ tortilla or 14 grams	1 tortilla or 28 grams	2 tortillas or 56 grams
Tortilla, Soft, Flour (about 8")**	¼ tortilla or 14 grams	½ tortilla or 28 grams	1 tortilla or 56 grams
Waffle at least 34 grams*	½ waffle or 17 grams	1 waffle or 34 grams	2 waffles or 68 grams



^{**}Check that the item you want to serve is about this size or larger. See "Grains Measuring Tools" on page 6 for more information.

Are There Other Menu Planning Considerations?

If you serve an item that is larger, or weighs more, than what's listed on the Grains Measuring Chart, then you might serve more grains than required by the CACFP meal pattern. The Grains Measuring Chart can help make serving enough grains easier. However, the tools described under "What If My Grain Is Different?" can also help you determine how much of an item to serve to meet the meal pattern without serving more than what is needed.

What If My Grain Is Different?

Is the grain item you want to serve:

- · Smaller than the item listed on the Grains Measuring Chart?
- · Lighter in weight than the item listed on the Grains Measuring Chart?
- Not listed on the Grains Measuring Chart?

If so, you will need to use another way to tell how much to serve in order to meet CACFP meal pattern requirements. You could:

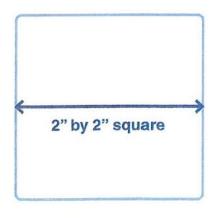
- Enter information from the Nutrition Facts label into the *Food Buying Guide for Child Nutrition Program's (FBG) Exhibit A Grains Tool.**This tool will let you know how many ounce equivalents of grains are in one serving of the item.
- Use the FBG Recipe Analysis Workbook (RAW)* to determine the ounce equivalents per serving for standardized recipes.

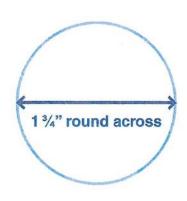


Grains Measuring Tools

Compare your food to the guides below to see if it is the same size or larger than the item listed on the Grains Measuring Chart.

Guides appear as actual size when this worksheet is printed at 100% on standard 8 1/2" by 11" paper.







0 1" 2" 3" 4" 5" 6" 7" 8"

^{*}Available at https://foodbuyingguide.fns.usda.gov.

Using the Nutrition Facts Label

Some items on the Grains Measuring Chart may have weights listed by the name of the item. Follow the steps below to see if your grain meets the minimum weight listed in the chart:

Find the grain item and its minimum weight in the Grains Measuring Chart.

> For example, the minimum weight for a pancake is at least 34 grams.



1- through 5-yearolds at Breakfast, Lunch, Supper, Snack

Serve at Least 1/2 oz. eq., which equals about... ½ pancake or 17 grams

Age Group and Meal

6- through 18-yearolds at Breakfast, Lunch, Supper, Snack Adults at Snack only

Serve at Least 1 oz. eq., which equals about...

1 pancake or 34 grams

Adults at Breakfast. Lunch, Supper

Serve at Least 2 oz. eq., which equals about...

2 pancakes or 68 grams

- Look at the Nutrition Facts label of the grain you wish to serve. Find the weight of the serving size (usually provided as grams (g)). One serving of Brand P pancakes weighs 117 grams.
- Using the Nutrition Facts label, find how many items are in one serving. There are three pancakes in one serving of Brand P pancakes.
- If there is more than one of an item in a serving, you will 4 need to divide to find the weight of each item. For example, the serving size of Brand P pancakes is three pancakes.

Divide the serving weight by the number of items in one serving to find the weight of each item.

Nutrition	Facts
4 servings per conta Serving size 3 Panca	
A SECULAR PROPERTY AND A SECURITARY AND A SECURITA	SI MATERIA DI PARA
Amount per serving Calories	280
	280 % Daily Value*

39 grams per pancake 117 grams 3 pancakes

Serving Weight

Serving Size

Weight of Each Item

Trans Fat 0g

Compare the weight of one item to the minimum weight listed in the Grains Measuring Chart (from Step 1). Is your item the same weight as, or heavier than, the minimum weight?



Yes: Use the Grains Measuring Chart to see how much of your grain to serve to meet CACFP meal pattern requirements. In the example above, pancakes must weigh at least 34 grams in order to use the Grains Measuring Chart. Because each Brand P pancake weighs 39 grams, you may use the chart as a guide to the minimum serving amount.



No: Use another method to determine how much of a grain item to serve. See "What If My Grain Is Different?" on page 6 for more information.







Food and Nutrition Service

Calculating Ounce Equivalents of Grains in the Child and Adult Care Food Program

Grains are an important part of meals in the Child and Adult Care Food Program (CACFP). To make sure children and adults get enough grains at CACFP meals and snacks, minimum required amounts for grains are listed in the meal pattern as ounce equivalents (oz eq). Ounce equivalents tell you the amount of grain in a portion of food.



Below are three ways you can determine how much of an item you need to serve at CACFP meals and snacks:

- Grains Measuring Chart for the CACFP: This chart shows the amount of common grain items equal to a ½ ounce equivalent, 1 ounce equivalent, and 2 ounce equivalents. Find the chart in the "Using Ounce Equivalents for Grains in the Child and Adult Care Food Program" worksheet at fns.usda.gov/tn/meal-pattern-training-worksheets-cacfp.
- Food Buying Guide for Child Nutrition Programs (FBG): Use this application's "Exhibit A Grains Tool" to enter information from the Nutrition Facts label of the grain product. It will calculate how many ounce equivalents are in one serving. Use the application's "Recipe Analysis Workbook" to determine the ounce equivalents of grains in a serving of a standardized recipe. The FBG is available at foodbuyingquide.fns.usda.gov.
- Calculation Method: Use the information on the item's Nutrition Facts label, and follow the steps for "Calculating Ounce Equivalents for Grains" beginning on page 2 of this worksheet.



Calculating Ounce Equivalents for Grains What is the requirement?

1

Determine the minimum amount of grains you need to serve. Look at the table below. Find the age group of your participants and the meal or snack you are serving.

Write the minimum amount of grains required here: ___ ounce equivalent(s).

Example: You want to serve grains at lunch to 4-year-olds. The minimum amount of grains required at lunch for 1- through 5-year-olds is a ½ ounce equivalent.



Age Group and Meal	Minimum Amount of Grains Required
1- through 5-year-olds at Breakfast, Lunch, Supper, and Snack	½ ounce equivalent
6- through 18-year-olds at Breakfast, Lunch, Supper, and Snack	1 ounce equivalent
Adults at Snack	1 ounce equivalent
Adults at Breakfast, Lunch, and Supper	2 ounce equivalents

Find the grain item you are serving on the Grains Ounce Equivalents Chart on pages 4 and 5.

Next, find the amount of required ounce equivalent(s) (from Step 1).

Write the weight of the required ounce equivalent(s) here: ____ grams (g)

ITEM	1/4 oz eq equals	½ oz eq equals	³¼ oz eq equals	1 oz eq equals	2 oz eq equals
Bread Sticks (hard)	6 g	11 g	17g	22 g	44 g
Bread-Type Coating	6 g	11 g	17g	22 g	44 g
Chow Mein Noodles	6 g	11 g	17g	22 g	44 g
Crackers, Savory	6 g	11 g	17g	22 g	44 g

Example:

You are serving savory whole-wheat crackers at lunch to 4-year-olds.

Step 1 shows that you must serve at least a ½ ounce equivalent of grains at lunch.

The Grains Ounce Equivalents Chart shows that a ½ ounce equivalent of savory crackers weighs 11 grams.



Calculating Ounce Equivalents for Grains How much is needed to meet the requirement?

Brand C Cheese Crackers

Nutrition Facts about 16 servings per container Serving Size 16 pieces (32g) Calories Total Fat 5g Saturated Fat 0.5g 3% Trans Fat 0g Cholesterol 0mg 8% Sodium 150mg Total Carbohydrate 48g 8% 7% Dietary Fiber 2g Total Sugars 4g Includes 4g Added Sugars 8% **Protein 2g** 0% Vitamin D 0mcg Calcium 32mg 4% Iron 0.87 mg Potassium 90mg *The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

More training, menu planning, and nutrition education materials for the CACFP can be found at TeamNutrition.USDA.gov.

Now look at the Nutrition Facts label of the grain item you are serving. Find the serving size. Write the weight of one serving here:

32 grams

One serving of these crackers weighs 32 grams.

Find the number of items or pieces in one serving. Write the number of items here:

1 items

There are 16 crackers (pieces) in one serving.

Divide the weight (grams) of one serving (from Step 3) by the number of items (pieces) in one serving (from Step 4):

32 grams ÷ 16 items = 2 grams per item

32 grams ÷ 16 crackers = 2 grams per cracker

Divide the weight of the required ounce equivalent(s) (from Step 2) by the weight per item (from Step 5):

 $\underline{11}$ grams ÷ $\underline{}$ grams per item = $\underline{5.5}$ items

11 grams ÷ 2 grams per cracker = 5.5 crackers

[As Needed] If the answer in Step 6 ends in a fraction (such as 5 ½) or a decimal (such as 5.5), round the number up to the next whole number.

Five and a half (5.5) rounds up to 6 crackers. Serve at least 6 Brand C cheese crackers to 4-year-olds to meet the minimum amount of grains required at lunch for this age group in the CACFP.

Grains Ounce Equivalents Chart



ITEM	1/4 oz eq equals	1/2 oz eq equals	³¼ oz eq equals	1 oz eq equals	2 oz eq equals
Bagels	7 g	14 g	21 g	28 g	56 g
Batter-Type Coating	7 g	14 g	21 g	28 g	56 g
Biscuits	7 g	14 g	21 g	28 g	56 g
Bread Sticks (hard)	6 g	11 g	17 g	22 g	44 g
Bread-Type Coating	6 g	11 g	17 g	22 g	44 g
Breads	7 g	14 g	21 g	28 g	56 g
Bulgur/Cracked Wheat*	7 g	14 g	21 g	28 g	56 g
Buns	7 g	14 g	21 g	28 g	56 g
Cereal, Breakfast (all types, including grits, oatmeal, ready-to-eat, etc.)*	7 g	14 g	21 g	28 g	56 g
Cereal Grains (barley, quinoa, etc.)*	7 g	14 g	21 g	28 g	56 g
Chow Mein Noodles (ready-to-eat)	6 g	11 g	17 g	22 g	44 g
Corn Muffins	9 g	17 g	26 g	34 g	68 g
Cornbread	9 g	17 g	26 g	34 g	68 g
Crackers, Savory	6 g	11 g	17 g	22 g	44 g
Crackers, Sweet	7 g	14 g	21 g	28 g	56 g
Croissants	9 g	17 g	26 g	34 g	68 g
Croutons	6 g	11 g	17 g	22 g	44 g

oz eq = ounce equivalent(s)

g = grams

*Weights listed refer to the dry/uncooked version of the item. For example, 28 grams of uncooked barley, breakfast cereal, rice, etc. equals 1 ounce equivalent of grains.



Grains Ounce Equivalents Chart

ITEM	1/4 oz eq equals	½ oz eq equals	³¼ oz eq equals	1 oz eq equals	2 oz eq equals
Egg Roll Wrappers	7 g	14 g	21 g	28 g	56 g
English Muffins	7 g	14 g	21 g	28 g	56 g
French Toast	18 g	35 g	52 g	69 g	138 g
Muffins (all, except corn)	14 g	28 g	42 g	55 g	110 g
Pancakes	9 g	17 g	26 g	34 g	68 g
Pasta (whole grain-rich or enriched; all types)*	7 g	14 g	21 g	28 g	56 g
Pie Crust (for savory pies)	9 g	17 g	26 g	34 g	68 g
Pita Bread	7 g	14 g	21 g	28 g	56 g
Pizza Crust	7 g	14 g	21 g	28 g	56 g
Pretzels, Hard	6 g	11 g	17 g	22 g	44 g
Pretzels, Soft	7 g	14 g	21 g	28 g	56 g
Rice*	7 g	14 g	21 g	28 g	56 g
Rolls	7 g	14 g	21 g	28 g	56 g
Stuffing (weights apply to bread in stuffing)*	6 g	11 g	17 g	22 g	44 g
Taco Shells	7 g	14 g	21 g	28 g	56 g
Tortilla Chips	7 g	14 g	21 g	28 g	56 g
Tortillas	7 g	14 g	21 g	28 g	56 g
Waffles	9 g	17 g	26 g	34 g	68 g

oz eq = ounce equivalent(s) g = grams

*Weights listed refer to the dry/uncooked version of the item. For example, 28 grams of uncooked barley, breakfast cereal, rice, etc. equals 1 ounce equivalent of grains.



Try It Out!

Follow the steps on pages 2-3 to answer the questions below.



You want to serve **Brand P hard pretzels** at snack at your afterschool center to children ages 7 to 10 years old. How many pretzels do you need to serve to meet the minimum amount of grains required for this age group?

Nutrition Facts

11 Servings Per Container

Serving Size

20 Pretzels (30g)



B

You want to serve brown rice and **Brand T soft flour tortillas** at supper to your adult participants. You will serve 1 ounce equivalent of brown rice. How many tortillas do you need to serve to meet the remaining 1 ounce equivalent of grains required?

Nutrition Facts

10 Servings Per Container

Serving Size

2 Tortillas (56g)



is a whole number; no rounding needed

1 tortilla (28 grams ÷ 28 grams)

28 grams ÷ 2 tortillas)

2 tortillas

6 9g

6 82

bə zo ı

You need to serve 1 Brand 1 soft flour tortills to meet the remaining 1 ounce equivalent of grains required at supper for this age group.

15 pretzels

14.6 pretzels (22 grams ÷ 1.5 grams)

smeng 6. f (sləstənq 02 ÷ smeng 08)

20 pretzels

30 მ

5,7,8

bə zo [

You need to serve at least 15 Brand P hard pretzels to meet minimum serving amounts for grains at snack for this age group.

[As Needed] Round Up Items

(tem)

Number of Items to Serve (Weight of Required Oz Eq + Weight of One

Weight of One Serving ÷ Number of Items)

4 Number of Items in One Serving

3 Weight of One Serving of Grain Item

Meight of Required Oz Eq

Minimum Amount of Grains Required

Step

6



Answers











Grain items prepared from scratch can be a wonderful addition to Child and Adult Care Food Program (CACFP) menus. These items may count toward the minimum amount of grains required at CACFP meals and snacks, which are listed in ounce equivalents (oz eq). One ounce equivalent (oz eq) is equal to 16 grams of grains.

To determine how many oz eq of grains are in one serving of a recipe, you can:



Complete the Homemade Grains Worksheet on page 6.

Or

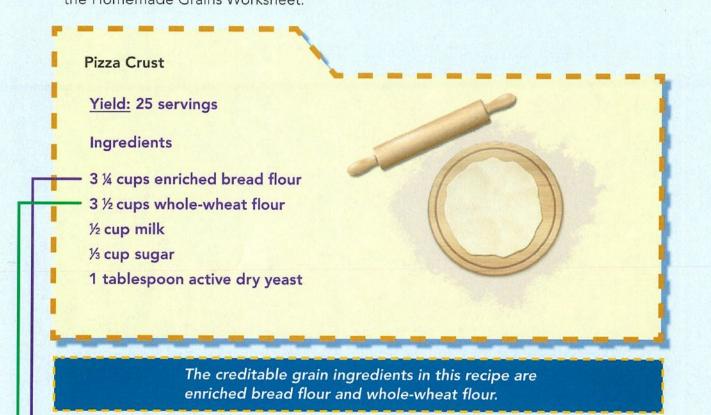


Weigh one serving of the grain item. Compare the weight of the item to what's listed in the "Using Ounce Equivalents for Grains in the CACFP" worksheet at <u>TeamNutrition.USDA.gov</u>. You can also compare the weight of the item to what's listed in "Exhibit A: Grains Requirements for Child Nutrition Programs" at <u>foodbuyingguide.fns.usda.gov</u>.

Using the Homemade Grains Worksheet

You can use the Homemade Grains Worksheet on page 6 to help determine how many oz eq of grains are in one serving of your recipe. Complete the worksheet by following the steps below:

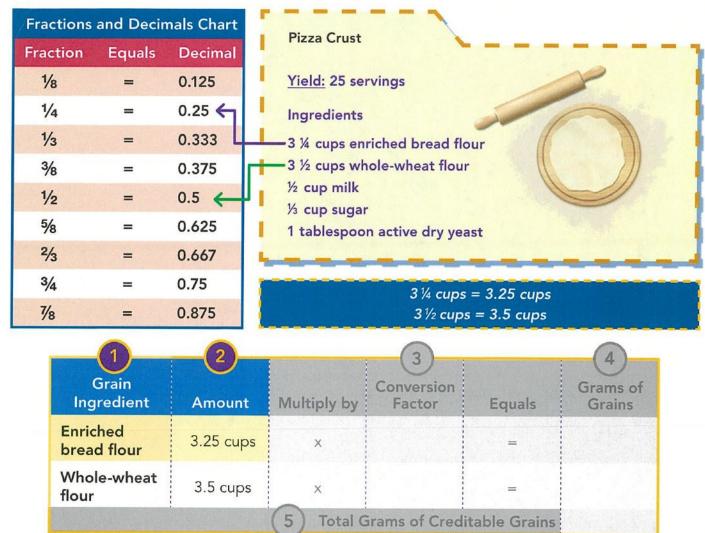
Write the name of the recipe on the line after "Homemade Grains Worksheet." Then, list each creditable grain ingredient in the recipe. Creditable grains include whole grains, enriched grains, bran, and germ. See the Grains Conversion Chart on page 5 for a list of commonly used grain ingredients. If an ingredient in your recipe is not creditable, do not include it in the Homemade Grains Worksheet.



Homemade Grains Worksheet: Pizza Crust

Grain Ingredient	2 Amount	Multiply by	Conversion Factor	Equals	Grams of Grains
Enriched bread flour		×		=	
Whole-wheat flour		×		=	
		5 Total C	irams of Credit	table Grains	

List the amount of each creditable grain ingredient in the recipe. If amounts are listed as fractions, change the amounts to decimals by using the Fractions and Decimals Chart below.



If the recipe lists the amount of grain ingredients in grams (g), skip to Step 5. If amounts are listed as cups, ounces, or pounds, you will need to change these measurements to grams. To do so, use the Grains Conversion Chart on page 5 to find the conversion factor for each grain ingredient. Write the conversion factor for each grain ingredient on the worksheet. If the recipe has a creditable grain ingredient that is not listed in the chart, you will need to weigh your ingredient in grams.

1	2		3		4
Grain Ingredient	Amount	Multiply by	Conversion Factor	Equals	Grams of Grains
Enriched bread flour	3.25 cups	x	137 g	=	
Whole-wheat flour	3.5 cups	х	120 g	=	

Multiply the amount of the creditable grain ingredient by the conversion factor to determine grams of the ingredient. If you have weighed the ingredient, enter the weight under the "Grams of Grains" column.

					4
Grain Ingredient	Amount	Multiply by	Conversion Factor	Equals	Grams of Grains
Enriched bread flour	3.25 cups	×	137 g	=	445.25 g
Whole-wheat flour	3.5 cups	×	120 g	=	420 g
		5 Total C	Grams of Credi	table Grains	

Add the grams of all creditable grain ingredients to determine the total grams of creditable grains in the recipe.

(1)	(2)		(3)		4
Grain Ingredient	Amount	Multiply by	Conversion Factor	Equals	Grams of Grains
Enriched bread flour	3.25 cups	х	137 g	=	445.25 g
Whole-wheat flour	3.5 cups	Х	120 g	=	420 g
		5 Total Grams of Creditable Grains			865.25 g

 $\underline{445.25}$ grams of enriched bread flour + $\underline{420}$ grams of whole-wheat flour = $\underline{865.25}$ grams of creditable grains

Divide the total grams of creditable grains in the recipe (from Step 5) by the number of servings (yield) in the recipe. This tells you the amount of creditable grains per serving.

865.25 grams of creditable grains \div 25 servings = 34.61 grams of creditable grains per serving

Divide the grams of creditable grains per serving (from Step 6) by 16 grams. This tells you how many ounce equivalents of grains are in each serving.

34.61 grams of creditable grains per serving \div 16 grams = 2.16 oz eq of grains per serving

If the answer in Step 7 ends in a decimal, round the number **down** to the nearest 0.25 oz eq of grains.

2.16 rounds down to $\underline{2}$.

One serving of this pizza crust provides 2 oz eq of grains.

Grains Conversion Chart

Any ingredient: 1 pound (lb) = 453.6 g, 1 ounce (oz) = 28.35 g

Ingredient	Measurement Unit	Conversion Factor
All-Purpose Flour, Enriched, Bleached and Unbleached	1 Cup	125 g
Almond Flour (Not Creditable)	-	-
Bread Flour, Enriched	1 Cup	137 g
Bromated Flour (Not Creditable)	-	-
Chia Seeds (Not Creditable as a Grain)	-	-
Corn Fiber (Not Creditable)	-	-
Corn Masa, Enriched	1 Cup	114 g
Cornmeal, Degerminated (Not Creditable)	72	-
Cornmeal, Enriched, Degermed	1 Cup	138 g
Cornmeal, Whole Grain	1 Cup	122 g
Corn Flour, Yellow (Not Creditable)		-
Corn Flour, Whole Grain	1 Cup	117 g
Cracked Wheat	1 Cup	160 g
Flaxseed (Not Creditable as a Grain)	-	-
Lentil Flour (Not Creditable as a Grain)	-	-
Oat Bran	1 Cup	94 g
Oat Fiber (Not Creditable)	-	-
Oat Flour, Whole Grain	1 Cup	120 g
Oats, Quick-Cooking or Rolled	1 Cup	81 g
Rice Flour, Brown	1 Cup	158 g
Rice Flour, Enriched	1 Cup	160 g
Rice Flour, Unenriched (Not Creditable)	-	
Self-Rising Flour, Enriched	1 Cup	125 g
Sorghum Flour	1 Cup	121 g
Tapioca Flour (Not Creditable)	-	-
USDA Foods White Whole Wheat/Enriched 60/40 Blend	1 Cup	120 g
Wheat Bran	1 Cup	58 g
Wheat Flour, Unenriched (Not Creditable)	-	
Wheat Germ	1 Cup	115 g
White Flour, Enriched	1 Cup	125 g
White Flour, Unenriched (Not Creditable)	-	
Whole-Wheat Flour	1 Cup	120 g

Use the Homemade Grains Worksheet to determine how Try It Out! many oz eq of grains are in one serving of the recipe. Multigrain Muffins Yield: 15 servings 1 cup whole-wheat flour 1 cup oat bran ½ cup enriched all-purpose flour ☐ ⅓ cup flaxseeds **Homemade Grains Worksheet: Grain Ingredient Amount Conversion Factor Grams of Grains** X X = X Total Grams of Creditable Grains grams of creditable grains ÷ ____ number of servings = grams of creditable grains per serving grams of creditable grains per serving ÷ 16 grams of grains per oz eq = oz eq of grains per serving Round amount of oz eq down to nearest 0.25 oz eq = oz eq of grains per serving Round amount of oz eq down to nearest 0.25 oz eq = $\frac{1}{2}$ oz eq of grains per serving 18.43 grams of creditable grains per serving ÷ 16 grams of grains per oz eq = 1.15 oz eq of grains per serving 276.5 grams of creditable grains ÷ 15 number of servings = 18.43 grams of creditable grains per serving 276.5 Total Grams of Creditable Grains 6 76 dno L 6 76 62.59 dno z/ Enriched All-Purpose Flour 152 8 150 8 J cnb Whole-Wheat Flour 1500

Homemade Grains Worksheet: Multigrain Muffins

tnuomA

ANSWER KEY

Grain Ingredient

More training, menu planning, and nutrition education materials for the CACFP can be found at **TeamNutrition.USDA.gov**.

Conversion Factor

Grams of Grains

Ounce Equivalents – FY 2023

Training Review

This review MUST be sent in to the office to receive your 2-hour credit.

Provider Name (Printed):Site		#		
Please answer the following questions:	Circle	One		
1. Oz Eq is short for ounce equivalents.	Т	F		
2. Beginning October 1, 2022, providers must determine the amount of grains to serve in terms of ounce equivalents (Oz Eq)	Т	F		
3. Ounce equivalents (oz eq) are used to determine the amount of creditable grains in a serving.	Т	F		
4. The serving amount of Oz Eq grains do not need to be written on the regular menus that are for children ages 1 through 12 years old.	Т	F		
5. At least one serving of grain needs to be served a minimum of three times per week.	Т	F		
6. The USDA Ounce Equivalent Chart is a quick guide that lists specific grain products using qualifiers such as the size measurement and weight in grams to determine Oz Eq serving size.	Т	F		
7. A ½ Oz Eq of grains is the smallest amount of grains in a serving.	Т	F		
8. The Food Buying Guide is an Interactive Electronic Tool that you can download onto your cell phone and use while shopping.	Т	F		
9. There is a small cost to using the USDA Food Buying Guide.	Т	F		
10. Store bought, processed foods are best because you need to use USDA Ounce Equivalent Charts and Nutrition Facts Labels to determine Oz Eq.	Т	F		
11. When you make homemade baked grain products, you must convert the grain part of the recipe to find the "Grams of Grain."	Т	F		
12. Handout #3 shows you how to convert cups of flour and other grains into grams.	Т	F		
13. Homemade grain products require you to also know the number of servings of the baked grain product so that you can determine the Oz Eq per serving.	Т	F		
14. You do not have to explain how you figured out the serving Oz eq of a grain to your monitor during a food review visit.	Т	F		
15. PRI has additional resources on Ounce Equivalents on the website for providers who would like additional information.	Т	F		

Signature

Date