

# DETERMINING THE SERVING SIZE FOR A NUTRITION LABEL USING REFERENCE AMOUNT CUSTOMARILY CONSUMED (RACC)



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## INTRODUCTION

Setting the appropriate serving size for your product is an important step to ensure you are meeting U.S. Food and Drug Administration (FDA) regulations and consumer expectations. The FDA sets standards for the serving sizes of foods called “Reference Amount Customarily Consumed” (RACC). The RACC refers to the amount of that particular food that an average person would typically eat in one sitting. These amounts are based on data about the consumption habits of the general population. Since nutritional values of food are based on the serving size, standardization is important to ensure that consumers receive consistent and comparable nutrition information across different brands. Although the terms “serving size” and “RACC” are often used interchangeably, there are situations where they may differ. The serving size is the specific amount of food that the manufacturer suggests as a single serving and it may be different from the RACC to reflect the packaging and marketing strategy of the product. [1] It is important to note that if any nutrient content or health claims are made, the food typically must meet the claim based on the RACC, which may not be the same as the serving size. [2]

## HOW TO SET YOUR SERVING SIZE BASED ON RACC

To set your serving size, refer to the published RACC guidelines that specify the reference serving amounts by product category for a wide range of foods and beverages. [3] The guidance also includes several examples for each category. One table is provided for food intended for infants and young children, and another table is provided for the general food supply.

Locate the appropriate table and follow these general steps [1]:

- Identify the appropriate category for the product.
- Find the RACC value or the reference serving size amount for the product.
- Consider the package size; if the product’s package size is close to the RACC, it may be practical to use the RACC as the serving size. However, if the package size significantly differs from the RACC, adjustments may be necessary. For example, if a manufacturer is selling a 3 oz or 85-gram muffin in a single-serve package, the serving will be 1 muffin (85 g) even though the RACC for a muffin is 110 grams. See the explanation below for products sold as discrete units.
- Ensure clarity and honesty. The serving size should reflect a realistic quantity that consumers are likely to eat, ensuring that the nutritional information is both useful and honest.

Although the RACC typically specifies a gram weight, the serving amount needs to be described in a common household measure, such as cups or pieces. The measure should be followed by the equivalent metric quantity in grams or milliliters. For example, the RACC for a salad dressing is 30 grams but the label would state 2 TBSP (30 g). If a product is being sold in a single-serve container, the manufacturer may declare “1 container” as the measure. For products in large discrete units that are usually divided up for consumption, such as cake, pie, or pizza, the serving size must be the fraction of the product that is closest to the RACC for that product [3], for example, 1/4 pie (125 g).

There are specific rules for products that are sold as discrete units such as muffins or sliced bread [3]:

- If a single unit weighs less than 50% of the RACC, the serving size will be the number of whole units closest to the RACC for that product.
- If a unit weighs more than 50% but less than 67% of the RACC, you may declare one or two units as the serving size.
- If a single unit weighs more than 67% but less than 200% of the RACC, then the serving must be declared as one unit.
- If a single unit weighs more than 200% and up to and including 300% of the RACC, the serving size must be the proportion of the unit that approximates the reference amount.

## DUAL COLUMN LABELING REQUIREMENTS

Products that are packaged and sold individually and that contain at least 200% and up to and including 300% of the RACC must provide an additional column within the nutrition facts label that lists the nutritional information for a serving of the product as well as for the entire container [3].

## EXAMPLE SERVING SIZE CALCULATIONS BASED ON RACC:

### Chocolate Coated Toffee

This product fits best under the “All Other Candies” product category in the General Food Supply table of the RACC [3]. The RACC for this product category is 30 grams expressed as piece(s) (\_ g). Our example is chocolate-coated toffee pieces, which are variable in size but weigh about 11.67 grams on average. Three pieces of the toffee would be 35 grams which is closer to the RACC of 30 grams than two pieces at 23.3 grams. Therefore, our serving size will be stated: 3 pieces (35 g). In this case, the product comes in a 3 oz (85 g) bag, so we will declare “About 2.5 servings per container.” According to FDA serving size rounding rules, servings must be rounded to the nearest whole number except when servings are between 2 and 5, which must be rounded to the nearest 0.5 serving. [3]

### Pizza

This product fits best under the “Mixed Dishes,” and subcategory “Not measurable with cup” in the General Food Supply table of the RACC [3]. Our example is a frozen cheese and vegetable pizza that is 20.6 ounces or 584 grams. The RACC for this category is 140 grams. Our serving size will be the portion of the pizza that is closest to the RACC. A simple way to determine the fraction would be to divide the total weight by the RACC first and then use a common, consumer-friendly fraction that is closest to the result. In this case, 584 grams divided by 140 grams gives us 4.17 or about 4. Therefore, a serving is 1/4 pizza and will be stated: 1/4 pizza (146 g).

### Seasoning Mix

This product fits best under the “Miscellaneous” product category in the General Food Supply table of the RACC. Our example is an onion and herb seasoning mix for vegetables. The RACC for this category is the amount to make one reference amount of the final dish expressed in teaspoons or tablespoons. A bit more work is required to determine that the RACC for fresh or frozen vegetables is 85 grams (or about 3 oz). The product manufacturer recommends using 2 tsp of the seasoning for 3 oz of vegetables. Our serving size for the seasoning mix will then be stated as: 2 tsp (10 g).

Setting the serving size for a packaged food product can be complicated and require specific regulatory expertise, especially if you intend to make a claim or need a dual-column label. If you are unsure of how to do so, please contact AURI at [AURI.org](https://www.auri.org) for guidance.

## REFERENCES:

1. <https://foodlabelmaker.com/regulatory-hub/fda/racc/>
2. <https://www.fda.gov/files/food/published/Food-Labeling-Guide-%28PDF%29.pdf>
3. <https://www.fda.gov/media/102587/download>