

## Industry Guidance for Cups vs. Servings Language for Fruit and Vegetable Products

### Goal

Provide guidance about how to move away from the term “servings” in the context of recommended amounts of fruits and vegetables, which is no longer used in the 2010 Dietary Guidelines for Americans or in MyPlate communications, and still provide consumers with information about the amount of fruit and vegetables contributed by an amount of a food or beverage typically consumed as a portion in relationship to food and dietary guidance for a day. Any use of the term “serving” should be a reference only to the labeled “serving size” and “servings per package” that are mandatory components of the Nutrition Facts Panel.

### Background

The Dietary Guidelines provides model USDA Food Patterns that embody the recommendations for amounts of food groups and food components. USDA’s Center for Nutrition Policy and Promotion (CNPP) has requested that food and beverage product manufacturers begin to use the USDA Food Pattern “cups” language instead of “servings” to describe the relationship between a certain quantity of their products and federal dietary recommendations or food guidance recommended amounts. Basically, to avoid confusion, the term “serving(s)” should no longer be used in relation to food group amounts provided by a packaged food or beverage product.

CNPP’s desired move toward this standard presentation of information in labeling and other marketing materials is based on its qualitative consumer research (specifically, focus groups conducted on the Food Guide Pyramid in 2002 and 2004) indicating that “servings” are poorly understood by consumers. Key findings from this research were:

- Consumers had definite opinions about the meaning of the term “servings,” although interpretations varied widely with respect to the relationship between “servings” and “portions,” whether “servings” is a specific or relative quantity, and whether the quantity associated with the term “servings” is regulated by the government consistently in all settings (e.g., restaurants, food labels, dietary recommendations).
- The range of servings displayed on the Food Guide Pyramid were interpreted as either representing the range that different people may need based on individual characteristics or as a range that any individual may consume.
- USDA definitions of “servings” for various foods were perceived as guidelines for meals and as unrealistically small.
- CNPP tested “cups” and “ounces” as a new way to describe recommended quantities of food and beverages. As with “servings,” consumers were initially confused by these terms. However, examples were given to explain how much a “cup” or “ounce” is for each food, which consumers accepted much more readily than they accepted similar information for “servings.”

CNPP has also stressed that “servings” with respect to food group contributions is no longer valid, as federal dietary and food guidance no longer defines food groups in terms of servings. However, the terms “serving size” and “servings per container” are mandatory components of the Nutrition Facts Panel (NFP) on packaged foods.

Note that statements about the amount of a food group contributed by a food, as it relates to USDA Food Patterns in the 2010 DGA, are voluntary (see ChooseMyPlate.gov). CNPP supports statements about food groups contributed in a labeled serving of a food because it gives consumers the context of a food’s contribution to a day’s recommendations for the food groups.

The USDA Food Patterns define a 1 cup equivalent of vegetables and fruits as: 1 cup raw or cooked vegetable or fruit; ½ cup dried vegetable or fruit; 1 cup (8 fl. oz.) 100% vegetable or fruit juice; 2 cups leafy salad greens.

USDA has developed a MyPyramid Equivalents Database (to be renamed Food Patterns Equivalents Database) for what counts as one cup equivalent of fruit or vegetable.

There is a desire to synchronize product messaging with dietary and food group recommendations when marketing fruits and vegetables (and decrease consumer confusion around servings). Specific issues are outlined below.

#### 100% Fruit or Vegetable Juice and Juice Blends

There are unique challenges faced by 100% fruit or vegetable juice (and juice blends), a significant source of key nutrients in the diet, when it comes to consumers making the appropriate selection based on the 2010 DGA or the messages supporting MyPlate. For example:

- Dietary Guidelines and MyPlate messaging encourages consumers to “make half their plate fruits and vegetables,” but it is difficult for consumers to visualize how juice fits into the plate models along with other fruits or vegetables.
- The current FDA definition of a serving of 100% fruit or vegetable juice for nutrition labeling is based on an 8 fl. oz. RACC (reference amount customarily consumed). However, single-serve packages that contains from 4 to 20 fl. oz. 100% juice may display the full amount in the container as 1 serving in the NFP, giving additional meaning to the term ‘serving.’

#### Other Fruits & Vegetables

Dried, canned and frozen fruits and vegetables face different issues. Most notably, to provide consumers with information about the amount of fruit/vegetable contributed in a food, cup *equivalency* is necessary. Cup *equivalency* could be confusing to a consumer if the Nutrition Facts Panel (NFP) has a labeled serving that is a different cup volume. For example:

- *Dried Fruit*: The FDA RACC for raisins/dried fruit is 40 grams, with ¼ cup as the serving listed on the NFP. This ¼ cup serving of raisins/dried fruit is the ‘equivalent of ½ cup of fruit’ in terms of dietary guidance.
- *Tomato Products*: These products have a variety of RACC’s ranging from 2 tbsp for tomato paste, to ¼ cup for tomato sauce, pizza sauce, and tomato purees, to ½ cup for spaghetti sauce. Some products are at least partially reconstituted during cooking. Other tomato products are primarily consumed ‘as is.’ Using USDA’s definitions, [MyPyramid Equivalents Database](#), a 1/4 cup of tomato puree or 1/4 cup of tomato paste is equivalent to 1/2 cup of vegetable. Spaghetti sauce’s labeled serving is consistent with dietary guidance, so ½ cup spaghetti sauce is ½ cup of vegetables.
- *Fruit Puree*: There currently isn’t a stated RACC for fruit puree, nor is it mentioned in USDA’s [MyPyramid Equivalents Database](#). These products resemble dried fruit and tomato purees, so presumably ¼ cup of fruit puree is the ‘equivalent of ½ cup of fruit’ in terms of dietary guidance. (This would assure that at least the ‘equivalent’ amount of fruit is in the quarter cup, although it could contain more.)
- *Dehydrated (and Freeze-dried) Vegetables*: Similar to the rationale for dried fruit and tomato purees/paste, USDA counts ½ cup of dehydrated vegetables as 1 cup equivalent. (This would apply to carrot chips, sun-dried tomatoes, dehydrated onion, and freeze-dried sweet green peppers.)
- *Frozen Dinners*: Still other products, like frozen meals containing veggies, may start with ½ cup raw vegetables but, once cooked, are less than that amount. A claim ‘provides ½ cup of vegetables’ should be true for the product *as consumed*.

#### Recommendations

Because it is expensive to change food labels and collateral marketing materials and because FDA has indicated intent to revise the NFP in the near future, recommendations are needed that allow companies flexibility in

timing of implementation to reduce cost burdens while providing consistency in consumer messaging over time. Specifically, PBH recommends that:

- Individual companies implement a transitional messaging strategy for cups vs. servings language for fruit and vegetable products as follows:
  - Try to incorporate messaging in communications like email, web sites, social media channels, etc., which explains the relationship between “labeled servings” and “cup equivalents.”
  - For 100% Fruit or Vegetable Juice (and juice blends): Where possible, define the number of cups of fruit or vegetable provided by a 100% juice product per labeled serving similar to the following:
    - *“xx cups of fruit/vegetables per (labeled) X fl. oz. serving”*
    - *“Each X fl. oz. serving provides XX of the XX cup(s) of fruit/veg recommended per day.\*”*  
\*for a 2000 calorie diet
  - For Canned/Frozen Fruits & Vegetables: Where possible, define the number of cups of fruit or vegetable provided per labeled serving similar to the following:
    - *“xx cups of fruit/vegetables per (labeled) serving”*
    - *“Each labeled serving provides XX cup(s) of fruit/veg.”*
    - *“Each labeled serving provides XX of the XX cup(s) of fruit/veg recommended per day.\*”*  
\*for a 2000 calorie diet
  - For Dried or Dehydrated Fruits & Vegetables, including tomato paste, tomato sauce, tomato puree, pizza sauce, and fruit puree: Where possible, define the number of cup *equivalents* of fruit or vegetable provided per labeled serving similar to the following:
    - *“Each labeled serving provides the equivalent of XX cup(s) of fruit/veg.”*
    - *“Each labeled serving provides the equivalent of XX of the XX cup(s) of fruit/veg recommended per day.\*”*  
\*for a 2000 calorie diet
  - For Frozen Dinners/Meals: Where possible, define the number of cups of fruit or vegetable provided per labeled serving *as consumed*, similar to the following:
    - *“xx cups of fruit/vegetables per (labeled) serving”*
    - *“Each labeled serving provides XX cup(s) of fruit/veg.”*
    - *“Each labeled serving provides XX of the XX cup(s) of fruit/veg recommended per day.\*”*  
\*for a 2000 calorie diet
- Robust consumer research needs to be conducted to inform messaging to help consumers understand cup equivalents language and how 100% fruit or vegetable juice fits into *MyPlate*.

## Examples

Food Product	FDA RACC (Reference Amount Customarily Consumed)	FDA NFP (Nutrition Facts Panel)	Food Labeling or Marketing Statement Examples (using USDA Cup or Ounce Equivalent; all references to 'serving' are the NFP labeled serving)
100% juices, nectars	240 mL	8 fl oz (240 mL)	Each 8 fl oz (labeled) serving provides 1 cup of the 2 cups of fruit recommended per day*; Each 8 fl oz (labeled) serving provides half of the fruit recommended daily*; 1 ½ cups of fruit in each 12 fl oz serving; Each 8 fl oz (labeled) serving provides 1 cup of the 2 ½ cups of vegetables recommended per day*; Each 12 fl oz (labeled) serving provides 1 ½ cups of the 2 1/2 cups of vegetables recommended per day*
100% Mixed Fruit/Veg Juice	240 mL	8 fl oz (240 mL)	Each 8 fl oz (labeled) serving provides 1 cup of the 4 ½ cups of fruits and vegetables recommended per day*; Each 8 fl oz (labeled) serving provides 1 cup of fruits and vegetables*; Each 8 fl oz (labeled) serving provides ½ cup of fruit and ½ cup of vegetables*; Each 12 fl oz (labeled) serving provides 1 ½ cups of the 4 ½ cups of fruits and vegetables recommended daily*; 1 ½ cups of fruit and vegetable in each 12 fl oz (labeled) serving; 1 cup of fruit and ½ cup of vegetables in each 12 fl oz (labeled) serving
Fruit (canned, frozen)	140 g	Xx piece(s) (xx g) for large pieces; xx cup(s) (xx g) for small pieces	Each serving provides ½ cup of the 2 cups of fruit recommended per day*; Each serving provides ½ cup fruit
Figs (large dried fruit)	40 grams	Xx piece(s) (xx g)	Each serving provides <i>the equivalent of</i> ½ cup of the 2 cups of fruit recommended per day*; Each serving provides <i>the equivalent of</i> ½ cup fruit
Raisins (small dried fruit)	40 grams	¼ cup (40 g)	Each serving provides <i>the equivalent of</i> ½ cup of the 2 cups of fruit recommended per day*
Vegetables without sauce: fresh, canned, or frozen	85 g frozen; 95 g vacuum packed; 130 g for canned in liquid, cream-style corn, canned or stewed tomatoes, pumpkin, or winter squash	Xx piece(s) (xx g) for large pieces (e.g. brussel sprouts); xx cup(s) (xx g) for small pieces (e.g., cut corn, green peas)	Each serving provides ½ cup of vegetables; Each serving provides ½ cup of the 2 ½ cups of vegetables recommended per day*; A labeled portion provides 1/5 the amount of vegetables recommended each day*
Vegetables with sauce	110 g	Xx piece(s) (xx g) for large pieces (e.g. brussel sprouts); xx cup(s) (xx g) for small pieces (e.g., cut corn, green peas)	Each serving provides ½ cup of vegetables; Each serving provides ½ cup of the 2 ½ cups of vegetables recommended per day*; A labeled portion provides 1/5 the amount of vegetables recommended each day*

Major entrée sauce (e.g. spaghetti sauce)	125 g	½ cup (xxg); xx cup (xx mL)	Each serving provides ½ cup of the 2 ½ cups of vegetables recommended per day*; Each serving provides ½ cup of vegetables
Minor entrée sauce (e.g. pizza sauce)	¼ cup	¼ cup (xx g)	Each serving provides <i>the equivalent of</i> ½ cup of the 2 ½ cups of vegetables recommended per day*; Each serving provides <i>the equivalent of</i> ½ cup of vegetables;
Vegetable pastes (e.g. tomato paste)	30 g	2 tbsp. (xx g)	Each serving provides the <i>equivalent of</i> ¼ cup of the 2 ½ cups of vegetables recommended per day*; Each serving provides the <i>equivalent of</i> ¼ cup of vegetables;
Vegetable sauces or purees (e.g. tomato sauce, tomato puree)	60 g	1/4 cup (xx g)	Each serving provides the <i>equivalent of</i> ½ cup of the 2 ½ cups of vegetables recommended per day*; Each serving provides the <i>equivalent of</i> ½ cup of vegetables;
Beans, plain or in sauce	130 g for beans in sauce or canned in liquid	Xx cup (xx g)	Each (½ cup) serving provides ½ cup of vegetables; Each serving provides ½ cup of the 2 ½ cups of vegetables recommended per day*;
Mixed dishes	Measurable with cup (e.g. casseroles, stews, canned soup)	1 cup (xx g)	Each serving provides ½ cup of vegetables; Each serving provides ½ cup of the 2 ½ cups of vegetables recommended per day*;
Mixed dishes	Not measurable with cup (e.g. egg rolls, pizza)	Xx piece(s) (xx g) for discrete pieces; xx fractional slice (xx g) for large discrete units	Each serving provides ½ cup of vegetable; ½ cup of vegetable per 1 egg roll

\*for a 2000 calorie diet

<http://www.gpo.gov/fdsys/pkg/CFR-2008-title21-vol2/pdf/CFR-2008-title21-vol2-part101.pdf>

[http://www.choosemyplate.gov/food-groups/vegetables\\_counts\\_table.html](http://www.choosemyplate.gov/food-groups/vegetables_counts_table.html)

[http://www.choosemyplate.gov/food-groups/fruits\\_counts\\_table.html](http://www.choosemyplate.gov/food-groups/fruits_counts_table.html)

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