

# What are the implications for nutrient intakes when animal sources of foods and beverages contributing to the Dairy and Fortified Soy Alternatives and Protein Foods groups and subgroups are removed or replaced with plant sources within the Healthy Vegetarian Dietary Pattern?: Food Pattern Modeling Protocol

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**Considering each life stage, should changes be made to the USDA Dietary Patterns (Healthy U.S.-Style, Healthy Mediterranean-Style, and/or Healthy Vegetarian); should additional Dietary Patterns be developed/proposed based on:**

- **Findings from systematic reviews, data analysis, and/or FPM analyses; and**
- **Population norms (e.g., starchy vegetables are often consumed interchangeably with grains), preferences (e.g., emphasis on one staple grain versus another), or needs (e.g., lactose intolerance) of the diverse communities and cultural foodways within the U.S. population?**

Changes to USDA Dietary Patterns may include modification to the amounts of food groups/subgroups and/or recategorization of food groups/subgroups, as well as subsequent changes to energy available for other uses, including for added sugars.

As part of that process and to address the overarching FPM question, the following questions for analysis have been identified:

**What are the implications for nutrient intakes when animal sources of foods and beverages contributing to the Dairy and Fortified Soy Alternatives and Protein Foods groups and subgroups are removed or replaced with plant sources within the Healthy Vegetarian Dietary Pattern?**

The Committee will use FPM analyses to address this question, with support from USDA's FPM methods team. This protocol will establish the methods to model hypothetical modifications of the nutrient profiles and the Dairy and Fortified Soy Alternatives and Protein Foods quantities within the 2020 H-VEG Dietary Pattern and implications on meeting nutritional goals among individuals ages 2 years and older.

## Historical perspectives

The 2020 USDA Dietary Patterns are designed to reflect health promoting dietary patterns and meet the known nutrient needs of the age-sex groups for which they are targeted, within calorie constraints. The Patterns include recommended amounts to eat from five major food groups, including the Dairy and Fortified Soy Alternatives and Protein Foods groups. The 2020 H-VEG Dietary Pattern is the only Dietary Pattern currently available for a lacto-ovo vegetarian diet, which includes some animal-source foods (i.e., dairy and eggs) but excludes meats, poultry, and seafood.<sup>2</sup> Within the H-VEG Dietary Patterns intended for ages 2 years and older, the Dairy and Fortified Soy Alternatives group does not have any subgroups, and the Protein Foods group has four subgroups: Eggs; Beans, Peas, and Lentils; Nuts and Seeds; and Soy Products. Compared to the Healthy U.S.-Style (HUSS) Dietary Pattern, the H-VEG Dietary Pattern is higher in Soy Products; Beans, Peas, and Lentils; Nuts and Seeds; and Whole Grains. The USDA Food Pattern Equivalents Database (FPED) can be used to estimate the contribution of various foods and beverages to 37 food pattern components, including within the Protein Foods and Dairy and Fortified Soy Alternatives groups.<sup>8</sup>

The H-VEG Dietary Pattern recommends 2 ½ to 6 oz eq of Protein Foods per day for individuals ages 9 years and older and 1 to 2 oz eq per day for children ages 2 to 8 years.<sup>2</sup> Weekly recommendations are provided for Protein Foods subgroups, with the majority of oz eq provided by the Soy Products; Nuts and Seeds; and Beans, Peas, and Lentils subgroups. For Dairy and Fortified Soy Alternatives, the Dietary Pattern recommends 3 cup eq per day for individuals ages 9 years and older and 2 cup eq per day for children ages 2 to 8 years.<sup>2</sup>

The FPM analyses in this protocol expand and complement the work of the 2010 Committee. In the 2010 Committee's *Vegetarian Food Patterns: Food Pattern Modeling Analysis (Appendix E-3.3)*, scenarios for three plant-source food patterns, including a vegan pattern, were modeled.<sup>9</sup> The vegan pattern analysis removed all meats, poultry, fish, eggs, milk, and milk products from the base USDA Food Pattern and increased amounts

































