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SuperTracker incorporates food composition data into innovative online consumer tool

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Abstract

The SuperTracker online dietary and physical activity assessment tool is a major outreach effort to encourage behavior change and help implement the 2010 Dietary Guidelines. It provides a user-friendly but powerful interface to help individuals enter food intake, compare it to nutrient goals and the USDA Food Patterns, and track intake over time. At its core, the SuperTracker relies on a food database adapted from ARS's Food and Nutrient Database for Dietary Studies (FNDDS) and MyPyramid Equivalents Database (MPED). Modifications and additions increase the database's convenience for users: Food names were simplified and, in some cases, additional names were assigned; portions and portion descriptions were modified; and MPED values were assigned for foods new to FNDDS 2007-08, to assure that these newer foods were included. SuperTracker is multifunctional, allowing for tiered levels of involvement by users, from looking up a single food to comprehensive dietary and physical activity assessment, goal setting, and planning over time. Features include creation of individualized "combos" and favorite foods, to simplify entry of items consumed often. It provides real-time interactive feedback to users, and offers multiple report options to meet varied user needs. The SuperTracker relies on data from FNDDS and MPED to provide accurate feedback, which enables users to take control of their dietary choices. Monitoring food intake can help individuals become more aware of and improve what they eat and drink. The SuperTracker can empower consumers to track their food intake and activity, in order to improve their health.

1. Introduction

The use of food composition databases in consumer materials is not new. These databases have often been part of the foundation for the content of print and online information directed at a specific or general consumer audiences. In addition, many dietary assessment tools rely on food composition data. Previous

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interactive tools developed by USDA's Center for Nutrition Policy and Promotion (CNPP) include the Interactive Healthy Eating Index, later called MyPyramid Tracker, which used the USDA Food and Nutrient Database for Dietary Studies for nutrient data and Pyramid Equivalents Database for food group data; and the MyPyramid Menu Planner, which used the MyPyramid Equivalents Database for food groups and National Nutrient Database for Standard Reference for calories and saturated fat information.

The SuperTracker, available at https://www.choosemyplate.gov/SuperTracker/default.aspx, is CNPP's new dietary and physical activity assessment and planning tool. It was released in December 2011, after almost 3 years of development, design, and testing. It is a key part of CNPP's communication and implementation plan for the *2010 Dietary Guidelines* [1]. It combines many features of previous tools with innovative new features. As of June 2012, about 6 months after its launch, the SuperTracker had over 800,000 registered users. The SuperTracker is a multi-functional program. Consumers can use it at many levels of involvement, from simply looking up the nutrients or food groups in a single food item, to comprehensive dietary, physical activity, and weight assessment and planning.

The following functions are currently available for users of the SuperTracker:

- Look up calories, food groups, and/or nutrients in a single food or compare any of these between two foods.
- Identify appropriate amounts to consume from all food groups, based on the USDA food patterns, for a person of a specific gender, age, height, weight, and level of physical activity.
- Enter foods and beverages consumed and compare these choices to food group and nutrient targets.
- Identify physical activity targets and compare personal physical activities to these targets.
- Set personal goals in one or more areas such as weight management, food group or nutrient intake, or physical activity, and analyze food intake and/or physical activity in comparison to these goals.

The SuperTracker provides real-time interactive feedback to users, which allows it to be used as a diet and physical activity planning device as well. It offers multiple report options to meet varied needs. Data entry can be simplified by selecting foods consumed often as "favorite foods," and by creating personal "combos" of foods often consumed together.

For this multi-functional program to be useful to many consumers, the food database needed to be current, complete, accurate, and easy-to-understand. This article describes how existing USDA databases were selected and modified to meet the needs of the SuperTracker and its users.

2. Data Sources

During early design and development of the SuperTracker, the development team identified a list of food components to be included in the database. These included:

- Calories
- 12 macronutrients (protein, carbohydrates, total fat, dietary fiber, saturated fat, monounsaturated fat, polyunsaturated fat, linoleic acid, alpha-linolenic acid, EPA, DHA, cholesterol)
- 9 minerals (calcium, potassium, sodium, copper, iron, magnesium, phosphorus, selenium, zinc)
- 12 vitamins (Vitamins A, B_6, B_{12}, C, D, E, K, folate, thiamin, riboflavin, niacin, coline)
- 5 USDA food groups (and subgroups): Grains (whole and refined); Vegetables (dark green; red and orange; beans and peas; starchy; and other); Fruits (whole fruit and juice); Dairy (milk and yogurt; and cheese); Protein Foods (meat, poultry and eggs; seafood; nuts, seeds, and soy)
- Oils
- Solid fats
- Added sugars
- Alcohol

In addition, for each food to be included in the SuperTracker, one or more portion descriptions and the gram weight of each portion were needed.