Enhanced and Updated American Heart Association Heart-Check Front-of-Package Symbol: Efforts to Help Consumers Identify Healthier Food Choices

A VARIETY OF NUTRITION symbols and rating systems are on the front of food packages in the United States. Front-of-package (FOP) labeling systems are intended to help consumers make healthy food choices. However, many FOP systems have been criticized for causing confusion.[1] Consequently, in 2009 the US Congress directed the Centers for Disease Control and Prevention to address the issue. The Centers for Disease Control and Prevention contracted the Institute of Medicine (IOM) to examine and provide recommendations regarding FOP nutrition labeling.[2] The IOM panel concluded that a shift is needed away from multiple systems that provide subsets of nutrition information already mandated on the Nutrition Facts label to one that provides clear guidance about the healthfulness of foods. The IOM described a preferred FOP symbol as one that is simple and requires no sophisticated nutrition knowledge to guide food purchase decisions, is interpretive with nutrition information provided as guidance rather than specific facts, offers nutrition guidance using an ordinal scaled or ranking system, and is supported by readily remembered names or symbols.[2]

In 1995 the American Heart Association (AHA) developed the Heart-Check Food Certification Program (H-C FCP) and accompanying H-C FOP symbol (see Figure 1) to help shoppers quickly and reliably identify heart-healthy foods that at a minimum met Food and Drug Administration (FDA) requirements to make a coronary heart disease health claim. The program was developed to fill a void because at the time there was no independent program (not associated with the federal government or the food industry) that identified heart-healthy foods. In an effort to incorporate evolving science, AHA invited volunteers from the cardiovascular nutrition field to provide consultation and expertise that would inform AHA staff as they carried out the following objectives: update the AHA H-C FCP and bring it into alignment with the latest scientific research related to diet and cardiovascular disease risk, determine whether Americans' consumption of foods whose nutrient profiles meet AHA H-C FCP requirements was associated with better diet quality and reduced risk factors for cardiovascular disease, and gain consumer insights about the AHA H-C FCP to continually improve the program.

The definitive test of any FOP labeling system is whether it has an influence on better diet quality and improved public health. The AHA contracted with Nutrition Impact, LLC, to model several iterations of updated AHA H-C FCP criteria using the National Health and Nutrition Examination Survey 2007-2010 database. The consumption of AHA H-C FCP certifiable foods (ie, products whose nutrient profiles met AHA H-C FCP requirements) (see Figure 2) was positively associated with diet quality as measured by the 2005 Healthy Eating Index and fruit, vegetable, whole-grain, total sugar, fiber, potassium, calcium, and vitamin D intakes, and negatively associated with

Figure 1. American Heart Association Heart-Check Mark front-of-pack symbol.

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the percentage of energy intake from saturated fat, monounsaturated fat, added sugars, alcohol, cholesterol, and sodium.[3] The highest quartile of daily energy intake from AHA H-C FCP certifiable foods was associated with lower risk of obesity, elevated waist circumference, and metabolic syndrome compared with the lowest intakes.[3] Thus, the updated program criteria were validated and consumption of certifiable foods was found to positively influence food group and nutrient intakes and was associated with lower risk of cardiometabolic disease.[3] The criteria updates discussed in this article were effective as of January 2014.

Our objective is to describe how the AHA H-C FCP was redesigned as well as present research on consumers' perceptions of the program. This research was determined to be exempt from institutional review board requirements because the human subjects involved cannot be identified either directly or indirectly.

UPDATING THE AHA H-C FCP TO BE CONSISTENT WITH THE LATEST SCIENCE

The primary goal of the project was to update and align the AHA H-C with current AHA scientific statements on diet and cardiovascular health.[4-6] The focus was on the following key areas: ensuring that more food sources of monounsaturated (MUFA) and polyunsaturated (PUFA) fats were eligible for certification; setting food category-specific sodium limits; adding food category-specific requirements for dietary fiber, total sugars, and calories; and eliminating foods that list partially hydrogenated oils in the ingredient list.

To accomplish these goals, new certification categories were added, including products with higher levels of MUFA and PUFA (so-called healthy fats); most nuts (ie, almonds, hazelnuts, peanuts, pecans, pistachios, and walnuts) with sodium levels at 140 mg/serving or less; and fish containing ≥500 mg n-3 fatty acids per 3-oz serving (oily fish such as salmon).

To further improve the overall nutrition profile of certified products and to make it easier for consumers to follow a heart-healthy dietary pattern, category-based sodium limits and category-specific requirements for dietary fiber, total sugars, and calories were implemented. In establishing these criteria, nutrients of public health concern identified in the 2010 Dietary Guidelines for Americans (ie, potassium, dietary fiber, calcium, and vitamin D) were taken into account.[7] Care was taken not to be so stringent as to prevent important food sources of these key nutrients from being eligible for certification (eg, vegetables, fruits, whole grains, and milk and dairy products). The same rationale applied to fish and nuts. It was critical to ensure that the updated criteria promote consumption of foods that positively influence overall diet quality, promote nutrient adequacy, and achieve an eating pattern associated with beneficial health outcomes as validated through food modeling. Care was taken to strike a balance between products that are available in the marketplace and the food modeling research that demonstrated positive effects and diet quality and health.[3]

Sodium limits were established by food category and each category was evaluated independently. In addition to the nutrients of public health concern, the role of sodium in food processing and current sodium ranges for products in the marketplace were taken into account. Depending on these factors, one of four sodium limits was allowed for a particular food category: 140, 240, 360, or 480 mg sodium/serving (see Figure 2 for food categories). This approach enables the consumer to construct a healthier dietary pattern by making food selections that reduce sodium intake over time using a stair-step approach. With current average sodium intake in the United States of about 3,400 mg/day,[8] substantially higher than recommended,[7] a reduction in dietary sodium over time is needed for most consumers to succeed in lowering their intake.[9]

Because added sugars are not currently disclosed on the Nutrition Facts label, requirements were added for food categories such as cereal, flavored milk, and yogurt, which have a wide range of added sugars content but are also important sources of the nutrients of public health concern specified above. By establishing total sugars, dietary fiber, and calorie requirements for these food categories, the AHA H-C FCP promotes the consumption of important nutrients while at the same time limiting excess calories from added sugars. Examples of how these criteria are applied to various food groups are shown below:

Example 1: Cereals (Hot or Cold)*

The requirements for cereal include:

- ≤7 g Total sugars per serving if it is a good source of dietary fiber (ie, 10% to 19% Daily Value per Reference Amounts Customarily Consumed); or
- ≤9 g Total sugars per serving, if it is an excellent source of dietary fiber (≥20% Daily Value per Reference Amounts Customarily Consumed).

It should be noted that sugars from pieces of fruit do not count toward the total sugar allowance, but amounts and sources must be disclosed by the manufacturer.

Example 2: Milk and Yogurt

The requirements for milk and yogurt include:

- Milk and milk alternatives (nondairy beverages such as nut, rice, and soy "milks"): 130 kcal or less per 8 fl oz. This allows flavored milk with lower levels of added sugars and fat.
- Yogurt: 20 g or less total sugars per 6 oz serving. This allows yogurt with some added sugars.

Example 3: Canned Vegetables

The sodium criterion for most canned vegetables is 240 mg sodium per

**Daily Values and Reference Amounts Customarily Consumed are standard serving sizes established by the federal government for many different food categories based on the average amount of food usually eaten at one time, using national food consumption surveys. The intent of the Reference Amounts Customarily Consumed is to define uniform serving sizes to help consumers compare foods and the Reference Amounts Customarily Consumed is used as the basis for making nutrient content claims and health claims. Reference Amounts Customarily Consumed are not necessarily recommended serving sizes.*