



Figure 2. Possible New Front-of-Package Labeling.

with little more than fat, sugar, and salt.

That won't be easy. The food industry is expert at promoting its food in a captivating manner, so the FDA has very heavy competition for the consumer's eye. But we are riding a tide of change, with obesity experts increasingly recognizing the value of healthy eating and consumers eager to make smarter food choices. A revised Nutrition Facts label combined with a streamlined, comprehensible ingredient list and trustworthy front-of-package labeling can have a

powerful impact not only on consumer behavior, but perhaps more important, on the decisions manufacturers make about the foods they create for the marketplace.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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Nutrient-Content Claims — Guidance or Cause for Confusion?

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Nutrient-content claims, such as "sugar-free," "high in oat bran," or "contains 100 calories" — any "claims on a food product that directly or by implication characterize the level of a nutrient in the food" — are reg-

ulated in accordance with specific requirements of the Food and Drug Administration (FDA). According to the 2000–2001 Food Label and Package Survey (FLAPS), half of all packaged foods and beverages sold in the

United States presented such nutrient-content claims.¹ The prevalence of these claims has increased in recent years,² as the food and beverage industry has launched myriad new products to offer palatable, lower-calorie

Definitions of Sugar- and Calorie-Related Nutrient-Content Claims and Examples of Nonnutritive-Sweetener-Containing Foods and Beverages Bearing Each Claim.*		
Claim	Definition	Example
Sugar-free	<0.5 g of sugar per RACC and per labeled serving	Sugar-free strawberry preserves Sugar-free instant pudding
No sugar added	No sugar or sugar-containing ingredient added during processing; does not include sugar alcohol	No-sugar-added canned peaches No-sugar-added ice cream
Reduced or lower sugar	≥25% less sugar per RACC than an appropriate reference food (or for meals and main dishes, ≥25% less sugar per 100 g)	Reduced-sugar tomato ketchup Lower-sugar oatmeal
Low sugar	Not defined; may not be used	Not applicable
Light	If ≥50% of the calories in an appropriate reference food are from fat, fat must be reduced by ≥50% per serving; if <50% of calories in the reference food are from fat, fat must be reduced by ≥50% or calories reduced by at least one third per serving	Light lemonade Light yogurt Light English muffins
Low calorie	≤40 kcal per RACC (and per 50 g if RACC is small; for meals and main dishes, ≤120 kcal per 100 g)	Low-calorie syrup Low-calorie gelatin snacks

* Definitions are from the Food and Drug Administration (FDA; www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/labelingnutrition/ucm064911.htm). RACC denotes reference amount customarily consumed.

alternatives to full-calorie items. Many new products, regardless of their actual nutritional value, make sugar- and calorie-related claims that appeal to consumers (see table).

Concurrently, the FDA is considering changes to the Nutrition Facts label to help consumers make healthier choices. The proposed changes will update serving sizes, specify added sugar content, and prominently highlight the number of calories per serving and the number of servings in a container. However, they do not address nutrient-content claims or ingredient lists. We believe that if we are to improve consumers' — especially parents' — understanding of nutrient and calorie content, other labeling changes are necessary to support consumers in selecting wholesome and nutritious foods and beverages; one key concern is sugar- and calorie-related claims, especially with regard to non-nutritive sweeteners and product sweetness.

It's important to recognize that providing children with sugar- or calorie-modified foods and beverages will not necessarily reduce their caloric intake or risk of obesity or improve their long-term health. Research has shown that consumers perceive foods and beverages labeled with nutrient and health claims as “healthier” than foods without such claims,³ yet many of these products are heavily processed and may not produce health benefits. The presence of front-of-package nutrient and health claims reduces the likelihood that consumers will pay attention to the detailed Nutrition Facts label displayed on the back of the package.³

Sugar- or calorie-modified products usually contain fewer calories per serving than their counterparts. But factors other than calories influence the quantity consumed and ultimately the total calories ingested. For example, we have long known about the “low-fat phenomenon” whereby people overconsume snacks

labeled as low-fat, negating any difference in caloric intake per volume. Similarly, sugar- and calorie-related claims on foods and beverages may lead parents to underestimate the products' energy content and allow their children to consume more than they otherwise would. In effect, the calories assumed to be “saved” by providing a sugar- or calorie-modified alternative will be negated if children consume greater quantities of these highly processed yet seemingly healthier items.

Moreover, reducing sugar intake by selecting sugar- and calorie-modified alternatives will not necessarily promote a more nutritious or less sweet diet. Although sugar- and calorie-modified products contain less sugar than their counterparts, the use of nonnutritive sweeteners in these products may still foster the development of a “sweet tooth” because nonnutritive sweeteners are hundreds of times sweeter than table sugar by weight. Studies in ani-

mals and preliminary data from humans suggest that exposure to sweet taste early in life promotes long-term preferences for sweet foods and beverages. The contribution of sweet (and often high-calorie) foods and beverages to excess energy intake and obesity has been well described. Nutrient-content claims such as “sugar-free” and “no sugar added” offer a seemingly easy solution for parents who want to avoid sugar-laden snacks and soft drinks, yet surprisingly, such products are often sweeter than their sugar-sweetened counterparts.

Nonnutritive sweeteners and other food additives are documented on the ingredient lists of packaged foods, but their chemical names may not be recognized even by educated consumers. Furthermore, parents may choose “lower-sugar oatmeal” or “no-sugar-added canned fruit” for their children under the assumption that these products contain less sugar than the alternatives, but they often do not realize that such products frequently contain nonnutritive sweeteners — typically, sucralose and acesulfame potassium. Most consumers are also unaware that foods and beverages may contain ingredients that counterbalance sweetness (e.g., the sweet-taste-receptor antagonist lactisole). Thus, even the most health-conscious parent may not understand the information provided in ingredient lists and may rely instead on short and uncomplicated nutrient-content claims for guidance.

In fact, current FDA labeling regulations may promote rather than prevent parental confusion. In our own pilot study of parental selection of grocery items bearing sugar-related nutrient-

content claims,⁴ most parents reported strikingly negative attitudes toward giving their children foods containing nonnutritive sweeteners. Yet the same parents preferred sugar-modified products, which often contained nonnutritive sweeteners. Parents’ selection of foods and beverages containing the precise ingredients that they report avoiding was also seen in the Sweetener360 study (www.cornnaturally.com/Sweetener-360) and indicates that despite labeling efforts, parents often do not understand what they are selecting.

The FDA requires that the ingredient lists of all nonnutritive-sweetener-containing products include the specific sweetener name, but the amount that has been added to the product remains proprietary information. Thus, even if motivated parents have explored the acceptable daily intake (ADI) of a particular nonnutritive sweetener (the amount that can be ingested daily over a lifetime without appreciable risk), they cannot determine how much

into 100 mg of sucralose for an average-weight 6-year-old boy (weighing approximately 20 kg); this ADI would be met by the intake of 1.5 cans of an average sucralose-sweetened soda (60 to 70 mg per 12-oz [355-ml] can), a quantity of sweetened beverage that is frequently exceeded by children in this age group.

Whereas U.S. consumers cannot easily obtain detailed information about nonnutritive sweeteners, Canada, for example, has regulations requiring a statement on the front of a food or beverage package indicating that it contains one or more nonnutritive sweeteners (e.g., “contains aspartame”). In addition, Canadian regulations require that the amount of the sweetener or sweeteners expressed in milligrams per serving and a statement describing the sweetness per serving, expressed as the amount of sugar needed to produce an equivalent degree of sweetness, be present on the package and grouped with the ingredient list.⁵

In our pilot study of parental selection of grocery items bearing sugar-related nutrient-content claims, most parents reported strikingly negative attitudes toward giving their children foods containing nonnutritive sweeteners. Yet the same parents preferred sugar-modified products, which often contained nonnutritive sweeteners.

of a beverage containing that sweetener their children can safely consume. For example, the ADI for sucralose of 5 mg per kilogram of body weight translates

We believe that adopting a more straightforward and easily understandable ingredient-labeling system in the United States and educating parents in the inter-

pretation of sugar- and calorie-related nutrient-content claims through transparent food marketing are needed steps to empower parents to make informed choices. If the FDA revised the current labeling requirements for foods and beverages bearing sugar- and calorie-related nutrient-content claims in this way, the replacement of added sugars with other sweet ingredients would be clearly highlighted. And a statement about product sweetness and the quantity of nonnutritive sweeten-

ers that have been added would help parents understand what they are feeding their children.

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Culturally and Linguistically Appropriate Services — Advancing Health with CLAS

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The United States continues to grow more diverse. Currently, about 20% of the U.S. population speaks a language other than English at home, and 9% has limited English proficiency. By 2050, the United States will be a “majority minority” nation, with more than half the population coming from racial or ethnic minority backgrounds. Diversity is even greater when dimensions such as geography, socioeconomic status, disability status, sexual orientation, and gender identity are considered. Attention to these trends is critical for ensuring that health disparities narrow, rather than widen, in the future.

The U.S. Department of Health and Human Services (HHS) has long promoted cultural and linguistic competence as one way to address health disparities. Boosting such competence among health care providers and organizations could not only help them

improve health equity but also increase client satisfaction, improve quality and safety, gain a market advantage, and meet legislative and regulatory standards. Although many providers are personally committed to improving cultural and linguistic competence, their organizations may remain uncertain about how best to become welcoming to all.

To address this need, in 2013, the HHS Office of Minority Health (OMH) released the enhanced National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care (see box). These standards provide a framework for organizations seeking to offer services responsive to individual cultural health beliefs and practices, preferred languages, health-literacy levels, and communication needs.¹ Building on standards released in 2000, the enhanced standards employ broader definitions of culture

(beyond traditional considerations of race and ethnicity) and health (including mental health as well as physical health, for example). They apply to organizations focused on prevention and public health as well as health care organizations. To guide and encourage adoption, the OMH released a blueprint highlighting promising practices and exemplary programs.¹

Although adherence is voluntary, many organizations have committed to some or all of the 15 standards, which fall under three themes.¹ The first, “Governance, Leadership, and Workforce,” emphasizes that the responsibility for CLAS implementation rests at the highest levels of organizational leadership. Prominent groups have endorsed this concept. For example, the National Quality Forum identifies leadership as one of the seven primary domains for measuring and reporting cultural