Front-Of-Package (FOP) Nutrition Labeling: Front & Center Food Information To Encourage Healthy Choices

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International Food Information Council

Building on its rich history of understanding consumer perceptions about food, the International Food Information Council (IFIC) recently completed a consumer study on Front-of-Package (FOP) Nutrition Labeling. This report highlights the key findings.

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EXECUTIVE SUMMARY

Introduction

The use of Front-Of-Package (FOP) nutrition labeling schemes has increased dramatically around the world since 2004 when the World Health Organization (WHO) first proposed a policy to implement FOP nutrition labeling.[1] In the United States (US), at the White House Conference on Hunger, Nutrition, and Health on September 28, 2022, the White House released a National Strategy that includes a directive to the US Food and Drug Administration (FDA) to conduct research and propose a standardized, science-based FOP nutrition labeling system for food packages to help consumers, particularly those with low nutrition literacy, quickly and easily identify foods that can help them build a healthy eating pattern.

The FDA has initiated qualitative and quantitative consumer research to explore the development of a FOP nutrition labeling scheme. In May 2022, the agency announced its intentions to conduct online focus groups, which were completed in August 2022. In January and June 2023, the agency issued procedural notices on its quantitative research plans. In August 2023, the agency announced its intention to conduct a second round of FOP focus groups. A Fall 2023 entry from the FDA to the Unified Agenda cites June 2024 as a timetable for FOP proposed rulemaking.

Given the multiple FOP initiatives underway at the FDA and health agencies throughout the world, this consumer study adds to the International Food Information Council's (IFIC) rich history of understanding consumer perceptions about food. By commissioning quantitative FOP consumer research in partnership with Greenwald Research, a leading independent custom research firm, this current study builds on IFIC's 2021 FOP nutrition labeling consumer research, *Knowledge, Understanding and Use of Front-of-Pack Labeling in Food and Beverage Decisions: Insights from U.S. Shoppers*.

Overall Methodology

The purpose of this IFIC FOP nutrition labeling consumer study, *Front-of-Package Nutrition Labeling: Front & Center Food Information To Encourage Healthy Choices*, was to better understand how consumers perceive, prioritize, use, and interpret nutritional labels and information on food packaging. Some of the research methods and questions included in this IFIC consumer study were taken directly from FDA's publicly available documents for their consumer study on FOP nutrition labeling.[2,3] This IFIC consumer study used variations of five of the FDA's six prototype FOP schemes. The only prototype FDA FOP scheme not included in this IFIC consumer study is the Nutrition Info w/Magnifying Glass. The exclusion of this prototype FDA FOP scheme is due to its similarity to the prototype FDA Nutrition Info schemes that were included in this IFIC study.

This IFIC FOP nutrition labeling consumer study was conducted online from October 4-27, 2023, among 3,000 Americans between the ages of 18 and 80 years. Survey participants were segmented

into “high” (n=1500) and “low” (n=1500) nutrition literacy groups, which was determined using the FDA’s 3-question nutrition literacy quiz.[3]

Sourcing for the study sample was through Dynata consumer panels. Dynata maintains one of the most comprehensive and deeply profiled online consumer survey panels. Consumers opt-in and are vetted and verified using Dynata’s internal data quality solution. Greenwald Research reviewed the data during fielding for quality. The toss rate for bad quality respondents was 9.3%. Respondents were only terminated if they were under 18 years old or over 80 years old (only 20 cases screened out). On average, the questionnaire took respondents approximately 19 minutes to complete.

Within this consumer study, five experimental tests were conducted. Because of the nature of the experimental tests, respondents could only complete the questionnaire if they were on a desktop computer or tablet device. For each experimental condition, respondents were assigned to different split sample groups (aka “cells”). Cell assignment was automated to ensure:

- An even distribution of respondents in each group
- A 50/50 split of nutrition literacy in each group
- A balanced demographic distribution across groups (by age, gender, education, and race)

Statistical Analyses

The results of the experimental tests were analyzed for significant differences across split samples using Independent T-Test for Means (based on test for equal variances) and Independent Z-Test for Percentages (unpooled proportions). Differences between comparison groups were considered significant at the 95% confidence level.

About IFIC & Study Funding

The International Food Information Council (IFIC) is a 501(c)(3) nonprofit educational organization with a mission to effectively communicate science-based information about food safety, nutrition, and sustainable food systems, serving the public good. To fulfill this mission and demonstrate its thought leadership in action, IFIC: 1) delivers best-in-class research and consumer insights to inform food, nutrition, and health stakeholders; 2) promotes science communications to positively impact consumer behavior and public health; and 3) convenes critical thought leaders to advance the food systems dialogue and science-based decision-making. Funding for this study was provided via unrestricted grants from the broad-based food and beverage industry.

Suggested Citation

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Key Findings

OVERALL, FINDINGS FROM THIS IFIC FOP CONSUMER STUDY SUGGEST THAT NO SINGLE FOP SCHEME IS SUPERIOR TO ANY OTHER FOP SCHEME IN HELPING CONSUMERS IDENTIFY THE HEALTHIEST AND LEAST HEALTHY CHOICES

While some statistical significance was observed between and among the FOP label schemes tested, the collective results from this IFIC FOP consumer study indicate that the impact of FOP labeling schemes may vary depending on the type and amount of information provided as well as the product on which the label appears.

WHEN FOP SCHEMES INCLUDE CALORIES AND DIETARY FIBER, THE FACTS UP FRONT FOP SCHEME MAY IMPROVE CORRECT SELECTION OF THE "HEALTHIEST" FOP LABEL

Results from this IFIC FOP consumer research study show that, among study participants exposed to FOP scheme variations that included calories and dietary fiber along with added sugars, saturated fat, and sodium, significantly more study participants exposed to Facts Up Front FOP labels correctly selected the "healthiest" FOP label compared with study participants exposed to FOP label variations of the FDA Nutrition Info and FDA Nutrition Info w/DV FOP scheme prototypes.

INCLUDING CALORIES AND/OR DIETARY FIBER INFORMATION ON FOP SCHEMES MAY IMPROVE CORRECT SELECTION OF THE "HEALTHIEST" FOP LABEL

Results from this study show that variations of FOP schemes that include information beyond added sugars, saturated fat, and sodium (such as calories and/or dietary fiber) may facilitate more correct selection of the "healthiest" FOP label.

USE OF INTERPRETIVE LANGUAGE ON FOP LABELS MAY IMPROVE CORRECT SELECTION OF THE "LEAST HEALTHY" FOP LABEL WHEN LESS INFORMATION IS PROVIDED ON FOP LABELS

Results from this study show that the use of interpretive language (i.e., "Low", "Med", and "High") may facilitate more correct selection of the "least healthy" FOP label when less nutrition information is provided, as this effect of interpretive language was not found when FOP labels provide the most information (added sugars, saturated fat, and sodium along with calories and dietary fiber).

IT MAY BE EASIER FOR CONSUMERS TO CORRECTLY SELECT THE "HEALTHIEST" FOP LABEL THAN THE "LEAST HEALTHY" FOP LABEL

Results from this study show that 89% of study participants correctly selected the "healthiest" FOP label and 81% correctly selected the "least healthy" FOP label.

Significantly more high nutrition literate study participants correctly selected the "healthiest" and "least healthy" FOP labels compared with low nutrition literate study participants.

FOP LABELS WITH COLOR MAY LOWER PERCEPTIONS OF A FOOD'S HEALTHFULNESS

Results from this study show that FOP labels with color may lead people to assume that products containing such labels may be less healthy than nutritionally identical products with black and white FOP labels.

It should be noted that this experiment was conducted using the prototype FDA Nutrition Info w/DV FOP scheme in which each of three nutrients (added sugars, saturated fat, and sodium) were placed at different levels (low, medium, and high). As such, it is unclear how consumers would respond to the use of color on FOP schemes that include a mix of nutrients to limit and nutrients to encourage (e.g., calcium, dietary fiber, iron, potassium, and vitamin D) at various levels and corresponding colors.

INCLUDING PERCENT DAILY VALUE IN FOP SCHEMES MAY PUT CONCERN INTO CONTEXT

The presence of percent Daily Value (%DV) in a variation of the prototype FDA Nutrition Info w/DV FOP scheme lowered concern about consuming a food or beverage with a medium level of added sugars, saturated fat, or sodium compared with variations of the prototype FDA Nutrition Info FOP scheme.

FOP SCHEMES MAY INFLUENCE PERCEPTIONS OF A FOOD'S HEALTHFULNESS MORE THAN A "HEALTHY" SYMBOL

The presence of a prototype FDA GDA FOP scheme on a 100% orange juice product image positively impacted perceptions of healthfulness more than a FDA "Healthy" symbol prototype, even among people that say they are more likely to purchase a food that has a symbol or image on the package indicating that it is healthy.

FOP LABEL INFORMATION MAY BE MORE USEFUL IF IT INCLUDES THE INFORMATION SUCH AS CALORIES THAT CONSUMERS LOOK FOR ON THE NUTRITION FACTS LABEL

Results from this study show that study participants report calories are the most important piece of nutrition information on the Nutrition Facts label. Calories are also the second most sought out piece of nutrition information on Nutrition Facts labels when purchasing food (the first is sodium). Study participants also placed more importance on calories than added sugar or saturated fat when considering what makes a food healthy. Additionally, calories are also the most desired piece of nutrition information that study participants reported wanting to see displayed on the front of small, individually wrapped snack-size packages.

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TEST 1: IMPACT OF FOP SCHEMES ON CHOOSING HEALTHIEST & LEAST HEALTHY FOP LABELS

TEST 1 METHODOLOGY

For Test 1, study participants were randomized across four variations of four FOP schemes. The resulting design yielded 16 cells (n≈188 each). As described in the overall methodology above, each cell was balanced by demographics, including a roughly 50/50 split of high and low nutrition literacy. Cell exposure details are outlined in FIGURE 1 below.

Study participants in each cell were simultaneously exposed to three FOP labels of the same FOP scheme (i.e. FOP format) and variation (i.e. the information included in the FOP scheme). For example, study participants randomly assigned to cell A were simultaneously exposed to three of FDA's prototype GDA FOP schemes that displayed only added sugars, saturated fat, and sodium information in grams and percent Daily Value (%DV). However, the information on FOP schemes varied by cell. While cell A was exposed to only added sugars, saturated fat, and sodium information in grams and %DV on the prototype FDA GDA FOP scheme, cell M was exposed to the same prototype FDA GDA FOP scheme, except cell M FOP label variations included calories and dietary fiber along with the three aforementioned nutrients. See FIGURE 2 below for cell A and cell M exposure.

The three FOP labels simultaneously viewed by each cell displayed nutritional information created by and used by the FDA for their FOP consumer study. Designation of the "healthiest," "middle," and "least healthy" FOP labels were developed and made publicly available by the FDA via their FOP study materials, which also included corresponding Nutrition Facts labels for each FOP label.[2] In Test 1, IFIC study participants in cells A-C were exposed to the FDA GDA, Nutrition Info, and Nutrition Info w/DV FOP scheme prototypes as provided in the FDA's publicly available FOP study materials.[4] To standardize FOP labels across all cells in Test 1, FOP labels simultaneously shown to cells B-P were developed by IFIC using the information FDA's publicly available FOP study materials[4] and corresponding FDA Nutrition Facts labels.[2] See FIGURE 2 for "Middle Versions" of FOP schemes shown to each cell.

The relative on-screen position (i.e. left, center, right) of the three FOP labels was randomized for each study participant. During this simultaneous exposure, study participants were first asked to select the FOP label that they thought had the healthiest overall nutrient profile. If the study participant wanted to see more nutritional detail than was provided on the three FOP labels, a clickable link was available on the screen that, when clicked, refreshed the screen to show the same three FOP labels (in the same order) with corresponding Nutrition Facts labels[2] shown below each FOP label. FIGURE 2 includes the corresponding Nutrition Facts labels.

In addition to the study participant's selection of the FOP label that they believed was the "healthiest" and "least healthy," other collected measurements in Test 1 included whether the Nutrition Facts labels were accessed, and the seconds taken to make an FOP label selection. Time

viewing the screens that showed only FOP labels and FOP labels along with corresponding Nutrition Facts labels were measured. Only the total time it took to select the "healthiest" FOP label is presented in this analysis.

Study participants who took more than 120 seconds to select the "healthiest" label were removed from this analysis (n=69). This was completed for two reasons: 1) because 120 seconds is more than four times what the average study participant took to make this label selection; and 2) because 120 seconds taken on this single question represents more than 10% of the time it took the average study participant to complete all 62 questions in the study. In online settings such as the one used to conduct this study, outliers such as these may indicate distraction from the task at hand.

After selecting the FOP label that they thought was "healthiest," study participants were then asked to select the FOP label that they thought was "least healthy." For this subsequent question in Test 1, each cell was simultaneously exposed to the exact same three FOP labels as the previous question, with their relative on-screen position unchanged. All other methods described above, when study participants were asked to select the "healthiest" FOP label, were applied to the subsequent question which asked study participants to select the "least healthy" FOP label.

It should be noted that when responding to the two questions in Test 1, approximately 21% of study participants (n=628) selected the same FOP label as their answer to the first question which asked them to select the "healthiest" FOP label as they did for the subsequent question which asked them to select the "least healthy" FOP label. Study participants who selected the same FOP label for both questions were removed from this analysis of Test 1 results.

FIGURE 1

Test 1 Cell Exposures

FOP labels displayed Added Sugars, Saturated Fat, Sodium

[Each cell (n≈188) given single, randomized, simultaneous exposure to three FOP labels in one of the following conditions]

A. **Prototype FDA GDA** (displayed absolute amounts and %DV)
B. **Prototype Nutrition Info** (displayed absolute amounts, interpretive language Low/Med/High, and no %DV)
C. **Prototype Nutrition Info w/DV** (displayed absolute amounts, interpretive language Low/Med/High, and %DV)
D. **Facts Up Front** (displayed absolute amounts and %DV)

FOP labels displayed Calories, Added Sugars, Saturated Fat, Sodium

[Each cell (n≈188) given single, randomized, simultaneous exposure to three FOP labels in one of the following conditions]

- **E. IFIC Variation of Prototype GDA** (displayed absolute amounts and %DV)
- **F. IFIC Variation of Prototype Nutrition Info** (displayed absolute amounts, interpretive language Low/Med/High, and no %DV)
- **G. IFIC Variation of Prototype Nutrition Info w/DV** (displayed absolute amounts, interpretive language Low/Med/High, and %DV)
- **H. Facts Up Front** (displayed absolute amounts and %DV)

FOP labels displayed Dietary Fiber, Added Sugars, Saturated Fat, Sodium

[Each cell (n≈188) given single, randomized, simultaneous exposure to three FOP labels in one of the following conditions]

- **I. IFIC Variation of Prototype GDA** (displayed absolute amounts and %DV)
- **J. IFIC Variation of Prototype Nutrition Info w/o DV** (displayed absolute amounts, interpretive language Low/Med/High, and no %DV)
- **K. IFIC Variation of Prototype Nutrition Info w/DV** (displayed absolute amounts, interpretive language Low/Med/High, and %DV)
- **L. Facts Up Front** (displayed absolute amounts and %DV)

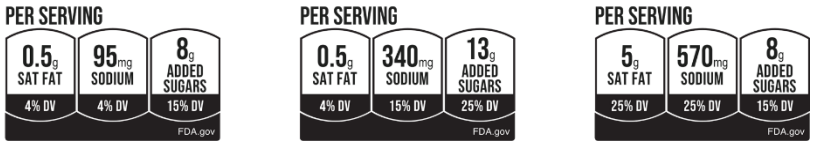
FOP labels displayed Calories, Dietary Fiber, Added Sugars, Saturated Fat, Sodium

[Each cell (n≈188) given single, randomized, simultaneous exposure to three FOP labels in one of the following conditions]

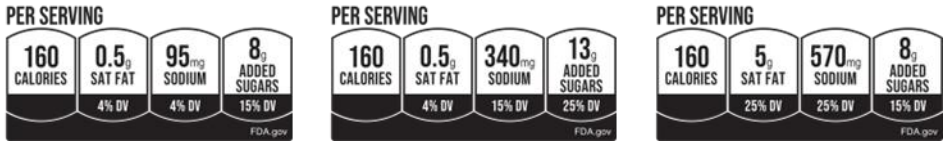
- **M. IFIC Variation of Prototype GDA** (displayed absolute amounts and %DV)
- **N. IFIC Variation of Prototype Nutrition Info w/o DV** (displayed absolute amounts, interpretive language Low/Med/High, and no %DV)
- **O. IFIC Variation of Prototype Nutrition Info w/DV** (displayed absolute amounts, interpretive language Low/Med/High, and %DV)
- **P. Facts Up Front** (displayed absolute amounts and %DV)

FIGURE 2

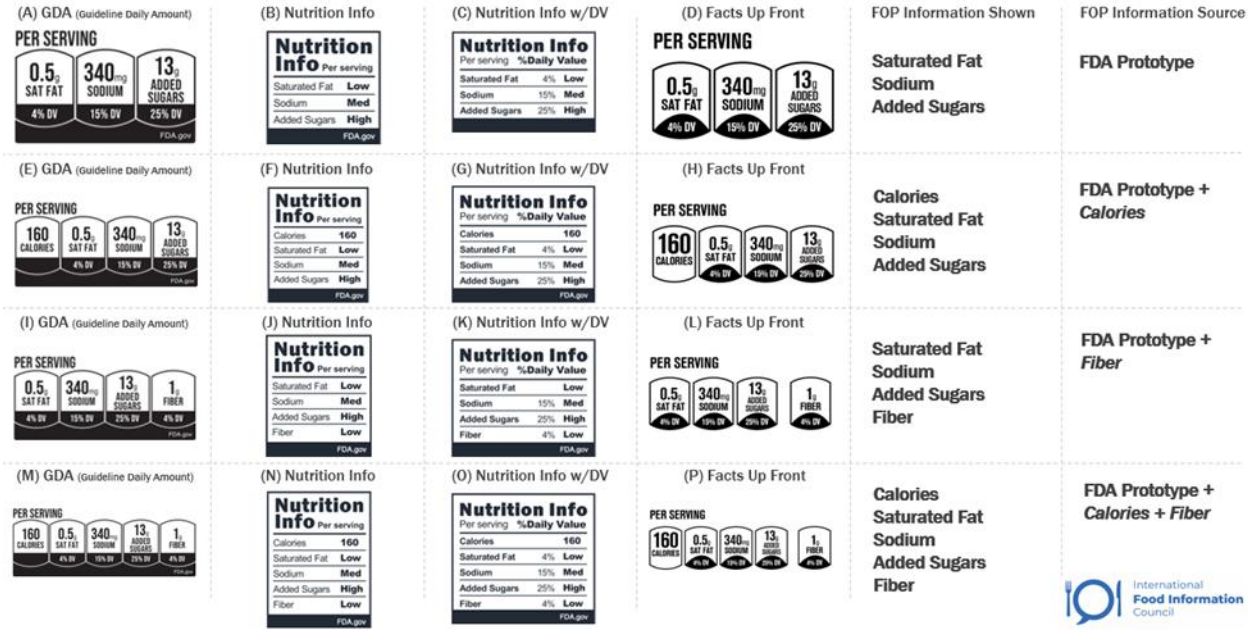
Example of Cell A FOP Scheme Exposure *(According to FDA: Left = "Healthiest", Right = "Least Healthy")*



Example of Cell M FOP Scheme Exposure *(According to FDA: Left = "Healthiest", Right = "Least Healthy")*



"Middle Versions" of FOP Schemes by Cell Exposure



Corresponding FDA Nutrition Facts Labels Available to Study Participants via Clickable Link*

(According to FDA: Left = "Healthiest", Right = "Least Healthy")

Nutrition Facts

8 servings per container
Serving size 1 1/2 cup (42g)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 2g	3%
Saturated Fat 0.5g	4%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 95mg	4%
Total Carbohydrate 33g	12%
Dietary Fiber 1g	4%
Total Sugars 12g	
Includes 8g Added Sugars	15%
Protein 3g	

Vit. D 2mcg 10% • Calcium 130mg 10%
Iron 8mg 45% • Potas. 280mg 6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Nutrition Facts

9 servings per container
Serving size 1 cup (40g)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 2g	3%
Saturated Fat 0.5g	4%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 340mg	15%
Total Carbohydrate 32g	12%
Dietary Fiber 1g	4%
Total Sugars 15g	
Includes 13g Added Sugars	25%
Protein 3g	

Vit. D 2mcg 10% • Calcium 130mg 10%
Iron 8mg 45% • Potas. 280mg 6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Nutrition Facts

12 servings per container
Serving size 1 cup (42g)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 5g	6%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 570mg	25%
Total Carbohydrate 26g	9%
Dietary Fiber 1g	4%
Total Sugars 12g	
Includes 8g Added Sugars	15%
Protein 3g	

Vit. D 2mcg 10% • Calcium 130mg 10%
Iron 8mg 45% • Potas. 280mg 6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

***Only 2% (n=36) of study participants (n=2,372) clicked to view corresponding Nutrition Facts labels before selecting the FOP label they thought was "healthiest." Similarly, only 1% (n=18) of study participants (n=2,372) clicked to view corresponding Nutrition Facts labels before selecting the FOP label they thought was "least healthy."*

TEST 1 KEY FINDINGS

WHEN FOP SCHEMES INCLUDE CALORIES AND DIETARY FIBER, THE FACTS UP FRONT FOP SCHEME MAY IMPROVE CORRECT SELECTION OF THE "HEALTHIEST" FOP LABEL

Results from this IFIC FOP consumer study show that among study participants exposed to FOP scheme variations that included calories and dietary fiber along with added sugars, saturated fat, and sodium (cells M-P), significantly more study participants exposed to Facts Up Front FOP labels (cell P) correctly selected the "healthiest" FOP label compared with study participants exposed to FOP Label variations of the FDA Nutrition Info (cell N) and FDA Nutrition Info w/DV (cell O) FOP scheme prototypes (95% vs. 88% and 86%, respectively). See cell P vs. N and O in TABLE 1.

When study participants were exposed to FOP scheme variations that included less nutrition information, no FOP scheme significantly impacted study participants' ability to correctly select the "healthiest" FOP label. See cells A-D, E-H, and I-L in TABLE 1.

INCLUDING CALORIES AND/OR DIETARY FIBER ON FOP SCHEMES MAY IMPROVE CORRECT SELECTION OF THE "HEALTHIEST" FOP LABEL

Results from this IFIC FOP consumer study show that among study participants who were exposed to prototype FDA GDA FOP scheme variations (cells A, E, I, M), significantly more study participants exposed to FOP Label variations of the prototype FDA GDA FOP scheme that included dietary fiber along with added sugars, saturated fat, and sodium (cell I) correctly selected the "healthiest" FOP label compared with study participants exposed to prototype FDA GDA FOP labels (cell A) that included only added sugars, saturated fat, and sodium (92% vs. 84%). See cell I vs. A in TABLE 1.

When comparing results among study participants who were exposed to Facts Up Front FOP scheme variations (cells D, H, L, P), significantly more study participants exposed to Facts Up Front FOP labels that included calories and dietary fiber along with added sugars, saturated fat, and sodium (cell P) correctly selected the "healthiest" FOP label compared with study participants exposed to Facts Up Front FOP labels that included calories (cell H) or dietary fiber (cell L) along with added sugars, saturated fat, and sodium (95% vs. 86% and 86%, respectively). See cell P vs. H and L in TABLE 1.

TABLE 1

Across label variations of four FOP schemes tested by IFIC, more study participants correctly selected the "healthiest" FOP label than the "least healthy" FOP label.

89% correctly selected the "healthiest" FOP label and 81% correctly selected the "least healthy" FOP label.

Percent Correctly Selecting the Healthiest and Least Healthy FOP Label by Randomized FOP Scheme Groups

FDA Prototype	% Correctly Selected Healthiest (n=2372)	% Correctly Selected Least Healthy (n=2372)	FDA Prototype + FIBER	% Correctly Selected Healthiest (n=2372)	% Correctly Selected Least Healthy (n=2372)
(A) GDA	84%	77%	(I) GDA	**92%^{A}**	81%
(B) Nutrition Info	87%	**84%^{D}**	(J) Nutrition Info	93%	**90%^{IKL}**
(C) Nutrition Info w/DV	89%	83%	(K) Nutrition Info w/DV	89%	80%
(D) Facts Up Front	89%	75%	(L) Facts Up Front	86%	81%
FDA Prototype + KCAL	**% Correctly Selected Healthiest (n=2372)**	**% Correctly Selected Least Healthy (n=2372)**	**FDA Prototype + KCAL + FIBER**	**% Correctly Selected Healthiest (n=2372)**	**% Correctly Selected Least Healthy (n=2372)**
(E) GDA	90%	77%	(M) GDA	91%	78%
(F) Nutrition Info	90%	85%	(N) Nutrition Info	88%	82%
(G) Nutrition Info w/DV	90%	**86%^{E}**	(O) Nutrition Info w/DV	86%	80%
(H) Facts Up Front	86%	79%	(P) Facts Up Front	**95%^{HLNO}**	**85%^{D}**

Superscript letters indicate a statistically significant difference between groups
Groups exposed to different FOP schemes containing identical nutrition information: [A/B/C/D] – [E/F/G/H] – [I/J/K/L] – [M/N/O/P]
Groups exposed to identical FOP schemes containing different nutrition information: [A/E/I/M], – [B/F/J/N] – [C/G/K/O] – [D/H/L/P]
Base excludes those who selected the same FOP label as the Healthiest and Least Healthy (n=628)
FDA Prototype FOP schemes included three nutrients: added sugars, saturated fat, and sodium

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USE OF INTERPRETIVE LANGUAGE ON FOP LABELS MAY IMPROVE CORRECT SELECTION OF THE "LEAST HEALTHY" FOP LABEL WHEN LESS INFORMATION IS PROVIDED

Two of the four FOP schemes used in Test 1 included interpretive language (i.e., "Low", "Med", and "High") to describe nutrient levels. These two FOP schemes were the FDA Nutrition Info and FDA Nutrition Info w/DV prototypes. The other two FOP schemes used in Test 1 (prototype FDA GDA and Facts Up Front) included percent Daily Value (%DV) instead of interpretive language to describe nutrient levels.

Results from this IFIC FOP consumer study show that among study participants who were exposed to FOP scheme variations that included only added sugars, saturated fat, and sodium (cells A-D), significantly more study participants exposed to the prototype FDA Nutrition Info FOP scheme (cell B) that included interpretive language describing levels of added sugars, saturated fat, and sodium, correctly selected the "least healthy" FOP label compared with those exposed to the Facts Up Front FOP scheme (cell D) that included %DV to describe levels of the same three nutrients (84% vs. 75%). See cell B vs. D in TABLE 1.

When comparing results among study participants who were exposed to FOP scheme variations that included calories along with added sugars, saturated fat, and sodium (cells E-H), significantly more study participants exposed to the FOP label variations of the prototype FDA Nutrition Info w/DV FOP scheme (cell G) that included interpretive language to describe levels of added sugar, saturated fat, and sodium, correctly selected the "least healthy" FOP label compared with study

participants exposed to the FOP label variation of the prototype FDA GDA FOP scheme (cell E) that included %DV to describe levels of added sugars, saturated fat, and sodium (86% vs. 77%). See cell G vs. E in TABLE 1.

When comparing results among study participants who were exposed to FOP scheme variations that included dietary fiber along with added sugars, saturated fat, and sodium (cells I-L), significantly more study participants exposed to the FOP label variations of the prototype FDA Nutrition Info FOP scheme (cell J) that included interpretive language to describe levels of dietary fiber, added sugars, saturated fat, and sodium, correctly selected the "least healthy" FOP label compared with study participants exposed to FOP label variations of the prototype FDA GDA (cell I), prototype FDA Nutrition Info w/DV (cell K), and Facts Up Front (cell L) FOP schemes (90% vs. 81%, 80%, 81%, respectively). See cell J vs. I, K, and L in TABLE 1.

However, when comparing results among study participants who were exposed to FOP scheme variations that included calories and dietary fiber along with added sugars, saturated fat, and sodium (cells M-P), FOP schemes that included interpretive language to describe levels of dietary fiber, added sugars, saturated fat, and sodium did not improve correct selection of the "least healthy" FOP label. In fact, when looking across the four cells (M-P) exposed to these FOP scheme variations, study participants exposed to Facts Up Front FOP schemes (cell P), which uses %DV to describe levels of nutrients instead of interpretive language, had the highest percentage (85%) correctly select the "least healthy" FOP label. See cell P in TABLE 1.

IT MAY BE EASIER FOR CONSUMERS TO CORRECTLY SELECT THE "HEALTHIEST" FOP LABEL THAN THE "LEAST HEALTHY" FOP LABEL

Results from this IFIC FOP consumer study show that 89% of all study participants correctly selected the "healthiest" FOP label and 81% correctly selected the "least healthy" FOP label.

When comparing correct selection of the "healthiest" and "least healthy" FOP label within each cell of study participants, a higher percentage in each cell correctly selected the "healthiest" FOP label than correctly selected the "least healthy" FOP label. This consistent result across all cells, along with the overall 8-point gap (89% vs. 81%) between correct selections suggests that consumers may find it easier to identify the "healthiest" FOP label than the "least healthy" FOP label when choosing between or among three options.

When comparing correct selection of the "healthiest" FOP label by nutrition literacy, significantly more high nutrition literate study participants (93%) correctly selected the "healthiest" FOP label than low nutrition literate study participants (85%). Similarly, we found that significantly more high nutrition literate study participants (85%) correctly selected the "least healthy" FOP label than low nutrition literate study participants (78%).

When comparing correct selection of the "healthiest" FOP label by age, significantly more 65–80 (93%) and 50-64 (93%) year-old study participants correctly selected the "healthiest" FOP label compared with 35-49 (84%) and 18-34 (85%) year-old study participants. Similarly, significantly more and 65–80 (85%) and 50-64 (86%) year-old study participants correctly selected the "least healthy" FOP label compared with 35-49 (78%) and 18-34 (75%) year-old study participants.

It should be noted that approximately 21% of all study participants selected the same FOP label as their answer to the first question which asked them to select the "healthiest" FOP label as they did for the subsequent question which asked them to select the "least healthy" FOP label. For the analysis of Test 1 presented above, study participants who selected the same FOP label for both questions were removed (n=628). When including all study participants (n=3,000), including those who selected the same FOP label as both the "healthiest" and "least healthy" in Test 1, 88% of study participants correctly selected the "healthiest" FOP label and 66% correctly selected the "least healthy" FOP label compared with 89% who correctly selected the "healthiest" FOP label and 81% who correctly selected the "least healthy" FOP label when those selecting the same FOP label were removed (n=2,372).

NO DIFFERENCES IN TIME TAKEN TO SELECT THE "HEALTHIEST" FOP LABEL

Results from this study show that survey respondents took an average of 27.9 seconds to select the FOP label that they thought was "healthiest" (n=2,931). There was no significant difference in time taken between those who correctly (27.8 seconds) and incorrectly (28.1 seconds) selected the "healthiest" FOP label. Regardless of correct or incorrect selection of the "healthiest" FOP label, there was no significant difference in time taken to make a label selection between high nutrition literate study participants (27.3 seconds) and low nutrition literate study participants (28.6 seconds) (n=2,331).

TEST 1 IMPLICATIONS

THE IMPACT OF FOP LABELING SCHEMES MAY VARY DEPENDING ON THE AMOUNT AND TYPE OF INFORMATION INCLUDED

There are various voluntary FOP labeling schemes currently in use in the US market, with the most prevalent among them being Facts Up Front. Facts Up Front parameters require four pieces of nutrition information (calories, saturated fat, sodium, and added sugars) while also allowing flexibility in presenting up to two additional "nutrients to encourage," each of which must meet the FDA requirements for a "good source" and be at least 10% of the Daily Value per serving for that nutrient.

The FDA has put forward six FOP scheme prototypes, with each including only three nutrients that Americans typically over consume—added sugars, saturated fat, and sodium. Two of the six prototype FDA FOP schemes (Nutrition Info and Nutrition Info w/DV) have variations that include

color over interpretive language used to describe levels of added sugars, saturated fat, and sodium. The FDA's stated goal is to create a standardized, science-based FOP scheme for use on the front of food packaging to help consumers, particularly those with low nutrition literacy, more quickly and easily identify foods that contribute to a healthy eating pattern.

While some statistical significance was observed between and among label variations of the four FOP schemes tested, the collective results from this IFIC FOP consumer study indicate that the impact of FOP labeling schemes may vary depending on the type and amount of information provided.

AMOUNT OF FOP INFORMATION: INCLUDING CALORIES AND/OR UNDER CONSUMED NUTRIENTS MAY HELP WITH SELECTION OF "HEALTHIEST" FOP LABELS

The nutrient density of a food can be higher when under consumed nutrients like calcium, dietary fiber, iron, potassium, and vitamin D are more present. Conversely, nutrient density can also be higher when over consumed nutrients like added sugars, saturated fat, and sodium are less present. In addition to providing information on over consumed nutrients, by including information on calories and under consumed yet scientifically established health-promoting nutrients—that are required on the Nutrition Facts label (e.g., calcium, dietary fiber, iron, potassium, vitamin D) for this very reason—on the front of food packaging, consumers would have quicker and easier access to information that helps them select more nutrient dense foods.

Results from this IFIC FOP consumer study suggest that providing information such as calories and under consumed, health-promoting nutrients such as dietary fiber on FOP labels may assist consumers in selecting the "healthiest" FOP label more often. A standardized, science-based FOP scheme void of such information may not provide the critical context to determine a food's nutrient density, an important concept that consumers already struggle to understand.

TYPE OF FOP INFORMATION: INCLUDING INTERPRETIVE LANGUAGE MAY HELP WITH SELECTION OF "LEAST HEALTHY" FOP LABELS

Results from this study suggest that FDA Nutrition Info and FDA Nutrition Info w/DV FOP scheme prototypes that use interpretive language (i.e., "Low", "Med", and "High") to describe nutrient levels of only added sugars, saturated fat, and sodium, as well as FOP label variations of these FDA FOP schemes that also include calories or dietary fiber, improves selection of the "least healthy" FOP label. However, FOP schemes that included calories and interpretive language to describe levels of dietary fiber, added sugars, saturated fat, and sodium did not improve correct selection of the "least healthy" FOP label.

According to the FDA, 20% DV or more of a nutrient per serving is considered "High" and 5% DV or less of a nutrient per serving is considered "Low."[5] "Medium" would therefore be considered between 6% and 19% DV of a nutrient per serving. In other words, "Low" and "Medium" have upper

and lower limits, whereas “High” only has a lower threshold. A product with a 20% DV for added sugars (i.e., 10 grams), saturated fat (i.e., 4 grams), or sodium (i.e., 460 milligrams) may be more likely to be more nutrient dense than a similar product with a 30% DV or higher of one or more of these nutrients, yet both products would be described with identical interpretive language and thus potentially be interpreted via FOP labels as equally “unhealthy” or “healthy.” Therefore, the connotation and interpretation of “High” on FOP schemes is something to carefully consider, especially if companion information such as %DV is not included in FOP nutrition labeling proposals.

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TEST 2: PERCEPTIONS OF FACTS UP FRONT & PROTOTYPE FDA HIGH IN FOP SCHEMES

TEST 2 METHODOLOGY

For Test 2, IFIC study participants were randomized across two variations of three FOP schemes that were placed in the upper right corner of mock images of two food products (cereal and soup). The mock product images were taken from FDA's publicly available documents for their consumer study on FOP nutrition labeling.[4] This design yielded 12 cells (n≈250 each), with six cells viewing FOP labels on a mock cereal product image and six cells viewing FOP labels on a mock soup product image. Study participants were exposed to Facts Up Front FOP schemes and prototype FDA High In and High In w/DV FOP schemes. In total, twelve different FOP labels were used in Test 2. See FIGURE 3 below for the mock product images and FOP labels used in Test 2.

As in Test 1, each cell in Test 2 was balanced by demographics, including a roughly 50/50 split of high and low nutrition literacy. Cell exposure details are outlined in FIGURE 4 below.

Study participants in each cell were given a randomized, single exposure to one of six FOP labels on a cereal or a soup product image. FOP labels shown to study participants were "High" in two or three of the following nutrients: added sugars, dietary fiber, saturated fat, sodium. FOP labels for the six cells exposed to the cereal product were "High" in added sugars and saturated fat, with three of those six cells also displaying dietary fiber as "High." FOP labels for the six cells exposed to the soup product were "High" in saturated fat and sodium, with three of those six cells also displaying dietary fiber as "High."

Nutrient levels for the cereal and soup products were adjusted to align the study's hypothetical FOP labels with assumed consumer expectations for those products as found in the marketplace. In other words, consumers are more likely to encounter a cereal that is high in added sugar and/or saturated fat than cereal that is high in sodium. Conversely, consumers are more likely to encounter a soup that is high in saturated fat and/or sodium than soup that is high in added sugars. To standardize the exposure across FOP labels in Test 2, percent Daily Values (%DV), and corresponding gram amounts for "High" nutrients were set to 25% DV. Sodium values displayed on FOP labels in Test 2 that were not "High" were taken directly from the FDA's Nutrition Facts labels for its High In FOP schemes (i.e. 95 mg and 4% DV for sodium) as used in their FOP consumer research. Added sugar values displayed on FOP labels in Test 2 that were not "High" were matched to sodium's %DV (i.e. 4% DV) and the grams of added sugars calculated and displayed accordingly (i.e. 2 g). Added sugar values were modified because the FDA's Nutrition Facts panel labels for its prototype High In FOP schemes used in their FOP consumer research hold added sugar constant at 11 grams and 22% DV.

FIGURE 3

FIGURE 4

Test Two Cell Exposures

FOP labels displayed only Added Sugars, Saturated Fat, Sodium

[Each cell (n≈250) given single, randomized exposure to one FOP label in one of the following conditions]

- **A. Facts Up Front** (on FDA cereal product image)
- **B. Facts Up Front** (on FDA soup product image)
- **C. High In** (on FDA cereal product image)
- **D. High In** (on FDA soup product image)
- **E. High In w/DV** (on FDA cereal product image)
- **F. High In w/DV** (on FDA soup product image)

FOP labels displayed Calories*, Dietary Fiber, Added Sugars, Saturated Fat, Sodium

[Each cell (n≈250) given single, randomized exposure to one FOP label in one of the following conditions]

G. **Facts Up Front*** (on FDA cereal product image, calories displayed)
H. **Facts Up Front*** (on FDA soup product image, calories displayed)
I. **High In** (on FDA cereal product image, no calories displayed)
J. **High In** (on FDA soup product image, no calories displayed)
K. **High In w/DV** (on FDA cereal product image, no calories displayed)
L. **High In w/DV** (on FDA soup product image, no calories displayed)

TEST 2 KEY FINDINGS

PRODUCT IMAGES THAT INCLUDED HIGH IN FOP SCHEMES WERE RATED LOW

Locating and Using FOP Information: Compared with study participants exposed to product images with Facts Up Front FOP schemes that included added sugars, saturated fat, and sodium information, significantly fewer study participants exposed to the prototype FDA High In FOP schemes that included only saturated fat and added sugars (for cereal) and saturated fat and sodium (for soup) agreed that they could easily find nutrition information on the label (59% exposed to the prototype FDA High In FOP scheme (cell B) vs. 79% exposed to Facts Up Front on Cereal (cell A); 59% exposed to the prototype FDA High In FOP scheme (cell H) vs. 78% exposed to Facts Up Front on Soup (cell G)). Similarly, compared with study participants exposed to product images with Facts Up Front FOP schemes that included added sugars, saturated fat, and sodium information, significantly fewer also reported they could easily use the label information to determine if the food can be part of a healthful dietary pattern (68% exposed to the prototype FDA High In FOP scheme (cell B) vs. 78% exposed to Facts Up Front on Cereal (cell A); 64% exposed to the prototype FDA High In FOP scheme (cell H) vs. 76% exposed to Facts Up Front on Soup (cell G). See TABLE 2 below.

Significant differences on the same two variables (ease of finding and using information on the label) were also observed when comparing responses between study participants exposed to Facts Up Front FOP schemes that included calories and dietary fiber along with added sugars, saturated fat, and sodium information and groups exposed to FOP label variations of prototype FDA High In FOP schemes that included dietary fiber along with added sugars and saturated fat on cereal product images, and dietary fiber along with saturated fat and sodium on soup product images (66% exposed to the prototype FDA High In FOP scheme (cell E) vs. 85% exposed to Facts Up Front on Cereal (cell D); 60% exposed to the prototype FDA High In FOP scheme (cell K) vs. 73% exposed to Facts Up Front on Soup (cell J). See TABLE 2 below.

Perceptions of Healthfulness and Trustworthiness: Study participants in three of the four cells exposed to mock product images with prototype FDA High In FOP schemes (cells B, H) and FOP label variations of prototype FDA High In FOP schemes that included dietary fiber (cell K) rated the healthfulness and trustworthiness of information significantly lower than other study participants exposed to Facts Up Front FOP schemes (cells A, G ,D, J) and other FOP label variations of prototype FDA High In FOP schemes (cells C, I, F, L). See TABLE 3 below.

Satisfaction with Information on the Front of Packages: Study participants exposed to product images with Facts Up Front FOP scheme variations (cells A, D, G, J) reported significantly higher levels of satisfaction with the information provided on the front of that package. NOTE: All Facts Up Front FOP schemes include percent Daily Value information. See TABLE 4 below.

When comparing results among study participants exposed to prototype FDA High In FOP schemes, satisfaction was significantly higher among study participants in three of the four groups exposed to product images with prototype FDA High In w/DV FOP schemes and FOP label variations of prototype FDA High In w/DV FOP schemes compared with prototype FDA High In FOP schemes (42% in cell C and 46% in cell F vs. 31% in cell B; 31% in cell L vs. 23% in cell K), suggesting that consumers may value additional context provided by the percent Daily Value. See TABLE 4 below.

TABLE 2

Nutrition information was less easy to find for study participants exposed to product images with prototype FDA High In FOP schemes.

Fewer study participants exposed to product images with prototype FDA High In FOP schemes agreed they can easily use the product's label information to determine if it can be part of a healthy eating pattern.

Percent agree with each statement by Randomized FOP Scheme Groups (6-point scale)

Cereal Product	"I can easily find nutrition information on this label"	"I can easily use information on this label to determine if this food can be part of a healthful dietary pattern"	Soup Product	"I can easily find nutrition information on this label"	"I can easily use information on this label to determine if this food can be part of a healthful dietary pattern"
(A) Facts Up Front: FDA Prototype	79%^{BE}	78%^{BE}	(G) Facts Up Front: FDA Prototype	78%^{HK}	76%^{HIKL}
(B) High In: FDA Prototype	59%	68%	(H) High In: FDA Prototype	59%	64%
(C) High In w/DV: FDA Prototype	76%^{BE}	79%^{BEI}	(I) High In w/DV: FDA Prototype	72%^{HK}	65%
(D) Facts Up Front: FDA Prototype + KCAL + Fiber	85%^{BCEJ}	85%^{ABEFJ}	(J) Facts Up Front: FDA Prototype + KCAL + Fiber	73%^{HK}	72%^{H}
(E) High In: FDA Prototype + Fiber	66%	70%	(K) High In: FDA Prototype + Fiber	60%	65%
(F) High In w/DV: FDA Prototype + Fiber	79%^{BEL}	77%^{BL}	(L) High In w/DV: FDA Prototype + Fiber	71%^{HK}	65%

Superscript letters indicate a statistically significant difference between groups
Groups exposed to different FOP schemes on the same mock product image: [A/B/C/D/E/F] – [G/H/I/J/K/L]
Groups exposed to different mock product images with same FOP schemes: [A/G] – [B/H] – [C/I] – [D/J] – [E/K] – [F/L]
"FDA Prototype" means that a given FOP scheme included at least two of the following three nutrients: added sugars, saturated fat, and sodium
6-point scale used: 1=Strongly disagree, 2=Somewhat disagree, 3=Slightly disagree, 4=Slightly agree, 5=Somewhat agree, 6=Strongly agree

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TABLE 3

Product images with prototype FDA High In FOP schemes were generally perceived as less healthy and the packaging communication less trustworthy.

Regardless of FOP label exposure, reactions were more positive to cereal product images than to soup product images.

Percent Top 3 by Randomized FOP Scheme Groups (4, 5 or 6 out of a 6-point scale)

Cereal Product	% Healthy	% Trustworthy	Soup Product	% Healthy	% Trustworthy
(A) Facts Up Front: FDA Prototype	80%^{BCEFG}	76%^{BE}	(G) Facts Up Front: FDA Prototype	48%^{HK}	70%^{HKL}
(B) High In: FDA Prototype	54%^{H}	63%	(H) High In: FDA Prototype	33%	61%
(C) High In w/DV: FDA Prototype	64%^{BI}	75%^{BEI}	(I) High In w/DV: FDA Prototype	46%^{HK}	63%
(D) Facts Up Front: FDA Prototype + KCAL + Fiber	81%^{BCEFJ}	82%^{BEFJ}	(J) Facts Up Front: FDA Prototype + KCAL + Fiber	58%^{GHIK}	69%^{HK}
(E) High In: FDA Prototype + Fiber	71%^{BK}	66%	(K) High In: FDA Prototype + Fiber	36%	59%
(F) High In w/DV: FDA Prototype + Fiber	68%^{BL}	70%	(L) High In w/DV: FDA Prototype + Fiber	53%^{HK}	62%

Superscript letters indicate a statistically significant difference between groups
Groups exposed to different FOP schemes on the same mock product image: [A/B/C/D/E/F] – [G/H/I/J/K/L]
Groups exposed to different mock product images with same FOP schemes: [A/G] – [B/H] – [C/I] – [D/J] – [E/K] – [F/L]
"FDA Prototype" means that a given FOP scheme included at least two of the following three nutrients: added sugars, saturated fat, and sodium
6-point scale used for Healthy: 1=Very unhealthy, 2=Moderately unhealthy, 3=Slightly unhealthy, 4=Slightly healthy, 5=Moderately healthy, 6=Very healthy
6-point scale used for Trustworthy: 1=Not trustworthy, 6=Trustworthy

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TABLE 4

Study participants exposed to product images with Facts Up Front FOP schemes reported significantly higher levels of satisfaction with the information provided on the front of the package, especially FOP schemes that included Calories and Fiber.

Providing Percent Daily Value in FOP schemes also increases satisfaction with information on the front of packages.

Satisfaction with Amount of Information Provided by FOP Schemes by Randomized FOP Scheme Groups

Cereal Product	% Satisfied with amount	% Want more info	Soup Product	% Satisfied with amount	% Want more info
(A) Facts Up Front: FDA Prototype	49%^{BEG}	49%^{D}	(G) Facts Up Front: FDA Prototype	39%^{HIK}	57%^{J}
(B) High In: FDA Prototype	31%	67%^{ACDF}	(H) High In: FDA Prototype	26%	72%^{GJ}
(C) High In w/DV: FDA Prototype	42%^{BI}	55%^{D}	(I) High In w/DV: FDA Prototype	28%	70%^{CGJ}
(D) Facts Up Front: FDA Prototype + KCAL + Fiber	73%^{ABCEFJ}	25%	(J) Facts Up Front: FDA Prototype + KCAL + Fiber	50%^{GHIKL}	47%^{D}
(E) High In: FDA Prototype + Fiber	35%^{K}	64%^{ACDF}	(K) High In: FDA Prototype + Fiber	23%	75%^{EGJL}
(F) High In w/DV: FDA Prototype + Fiber	46%^{BEL}	53%^{D}	(L) High In w/DV: FDA Prototype + Fiber	31%^{K}	67%^{FGJ}

Superscript letters indicate a statistically significant difference between groups
Groups exposed to different FOP schemes on the same mock product image: [A/B/C/D/E/F] – [G/H/I/J/K/L]
Groups exposed to different mock product images with same FOP schemes: [A/G] – [B/H] – [C/I] – [D/J] – [E/K] – [F/L]
"FDA Prototype" means that a given FOP scheme displayed at least two of the following three nutrients: added sugars, saturated fat, and sodium
Note: "Want less information" not shown

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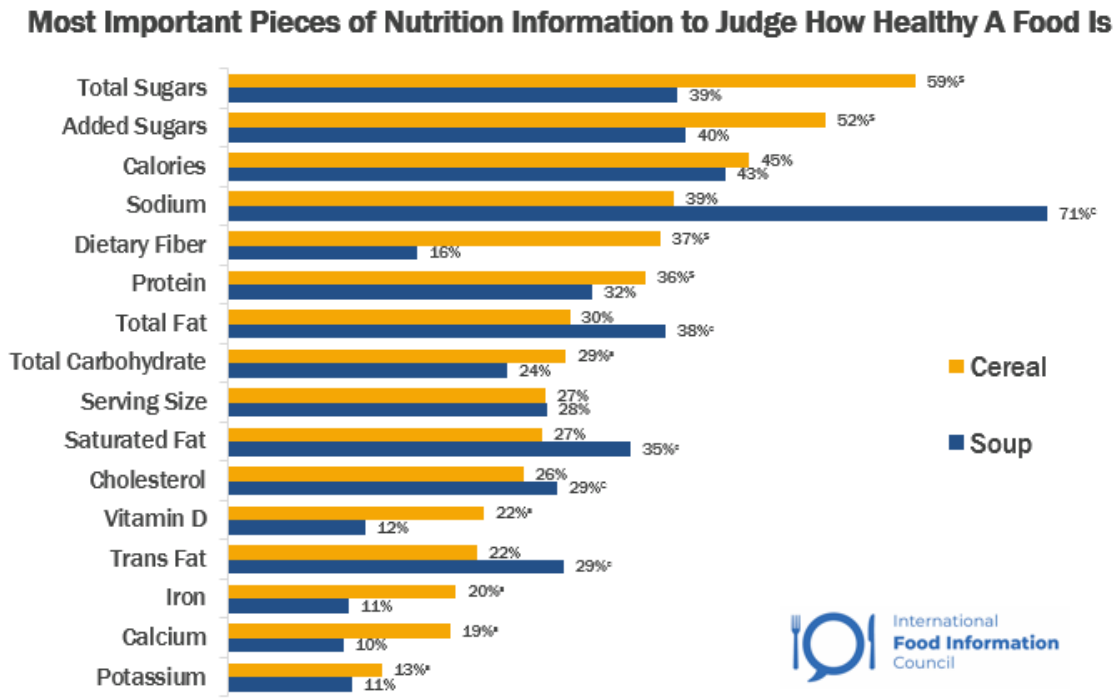
THE NUTRIENTS CONSUMERS USE TO JUDGE HEALTHFULNESS DEPENDS ON THE PRODUCT

Results from this study point to differences in the nutrition information that people value for judging the healthfulness of different products. When given a list of 16 items that are required on the Nutrition Facts label and asked what they thought the most important piece of information for them to know about breakfast cereal, 52% of study participants reported added sugars and 37% reported dietary fiber. These percentages are significantly higher than study participants who reported added sugars (40%) and dietary fiber (16%) were the most important piece of information for them to know about canned soup.

Conversely, 71% of study participants reported sodium as the most important piece of information for them to know about canned soup and 35% reported saturated fat. These percentages are significantly higher than study participants who reported sodium (39%) and saturated fat (27%) as the most important piece of information for them to know about breakfast cereal.

Importantly, calorie information was valued equally among study participants for breakfast cereal and canned soup (45% and 43%, respectively). See FIGURE 5 below for more details on the importance consumers place on certain nutrients for judging the healthfulness of breakfast cereal and canned soup.

FIGURE 5



TEST 2 IMPLICATIONS

INFORMATION INCLUDED IN HIGH IN FOP SCHEMES IS RATED LOW

Results from this consumer study suggest that the nutrition information on mock product images that included FDA High In FOP scheme prototypes (both with %DV and without %DV) and FOP label variations of prototype FDA High In FOP schemes is less trustworthy, and the amount of information is less satisfying in comparison with nutrition information on mock products images with Facts Up Front FOP schemes, a voluntary FOP labeling scheme that is already in use in the marketplace. Consumers may be more motivated to consume healthier packaged foods if nutrition information is presented consistently in more satisfying and trusted formats.

THE NUTRIENTS CONSUMERS USE TO JUDGE HEALTHFULNESS DEPENDS ON THE PRODUCT

The differing criteria that consumers use to judge the healthfulness of products must be considered when developing a standardized, science-based FOP labeling scheme to be used across diverse food and beverage products and categories. FOP schemes such as FDA's High In scheme prototypes that are limited in scope to three nutrients (added sugar, saturated fat, and sodium) may give consumers speedy access to information, but the curtailed information may not always provide the desired information on which to inform a healthier choice, as seen results from Test 1. This fact is also brought to light here in results from Test 2 where increased satisfaction was expressed by study participants when exposed to Facts Up Front FOP labels that included information on calories and dietary fiber, in addition to added sugars, saturated fat, and sodium, regardless of whether a nutrient is described as "High" using interpretive language.

FOP labeling schemes that provide a more limited set of information, such as that found in the FDA High In FOP scheme prototypes, may increase the likelihood of consumers making quicker decisions, but it is unclear if such FOP schemes would lead consumers to consult the Nutrition Facts label more or less often.

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TEST 3: IMPACT OF COLOR ON PROTOTYPE FDA NUTRITION INFO w/DV FOP SCHEME

TEST 3 METHODOLOGY

For Test 3, study participants were randomized across two variations of the same FOP scheme (FDA's Nutrition Info w/DV prototype) with nutrient information arranged in six unique configurations. This design yielded 12 cells (n≈236 each), with six cells exposed to prototype FDA Nutrition Info w/DV FOP schemes with color (Group A-F) and the other six cells exposed to prototype FDA Nutrition Info w/DV FOP schemes without color or in black and white (Group G-L). In total, Test 3 included exposure to 12 different FOP label variations. See FIGURE 6 below for FOP labels used in Test 3.

As with other Tests in this consumer study, each cell in Test 3 was balanced by demographics, including a roughly 50/50 split of high and low nutrition literacy. Cell exposure details are outlined in FIGURE 7 below.

Study participants in each cell were exposed to a prototype FDA Nutrition Info w/DV FOP label that contained information about the same three nutrients (added sugars, saturated fat, sodium). The difference between each cell's exposure was the unique configuration of each nutrient's level and whether the FOP label had color.

All FOP labels in Test 3 included interpretive language conveying the level of each nutrient ("Low," "Med," and "High"), and also included corresponding percent Daily Values (%DV) (4%, 15%, 25%, respectively). For the six cells exposed to FOP labels with color, Green, Yellow, and Red corresponded to their respective nutrient levels ("Low," "Medium," and "High," respectively). The other six cells were exposed to the same six FOP label configurations without color or in black and white.

Each cell was given a single, randomized exposure to one FOP label and asked to rate the healthfulness of a product (on a 6-point scale) with that FOP label on the front of its package. The 6-point scale used ranged from 1=very unhealthy to 6=very healthy.

In the beginning of the questionnaire, all study participants were asked if they were colorblind. All study participants were included in Test 3, yet those who reported being colorblind were not included in this analysis.

FIGURE 6

FIGURE 7

Test Three Cell Exposures

FOP labels displayed only Added Sugars, Saturated Fat, Sodium w/Color

[Each cell (n≈236) given single, randomized exposure to one FOP label in one of the following conditions]

- **A. Nutrition Info w/DV** (Low Saturated Fat, Med Sodium, High Added Sugars)
- **B. Nutrition Info w/DV** (Low Saturated Fat, High Sodium, Med Added Sugars)
- **C. Nutrition Info w/DV** (Med Saturated Fat, Low Sodium, High Added Sugars)
- **D. Nutrition Info w/DV** (Med Saturated Fat, High Sodium, Low Added Sugars)
- **E. Nutrition Info w/DV** (High Saturated Fat, Low Sodium, Med Added Sugars)
- **F. Nutrition Info w/DV** (High Saturated Fat, Med Sodium, Low Added Sugars)

FOP labels displayed only Added Sugars, Saturated Fat, Sodium w/o Color

[Each cell (n≈236) given single, randomized exposure to one FOP label in one of the following conditions]

- **G. Nutrition Info w/DV** (Low Saturated Fat, Med Sodium, High Added Sugars)
- **H. Nutrition Info w/DV** (Low Saturated Fat, High Sodium, Med Added Sugars)
- **I. Nutrition Info w/DV** (Med Saturated Fat, Low Sodium, High Added Sugars)
- **J. Nutrition Info w/DV** (Med Saturated Fat, High Sodium, Low Added Sugars)
- **K. Nutrition Info w/DV** (High Saturated Fat, Low Sodium, Med Added Sugars)
- **L. Nutrition Info w/DV** (High Saturated Fat, Med Sodium, Low Added Sugars)

TEST 3 KEY FINDINGS

ADDING COLOR TO FOP LABELS MAY REDUCE HEALTHFULNESS RATINGS WHEN COMPARING BETWEEN NUTRITIONALLY IDENTICAL FOP LABELS

When healthfulness ratings were compared between twelve groups of study participants, each exposed to one of six nutritionally identical pairs of prototype FDA Nutrition Info w/DV FOP labels (pairs had one label in color and one label in black and white), notable trends were observed, some of which are statistically significant.

Notable Overall Trends: The two cells (A, B) that reported the lowest healthy ratings (21% and 24%, respectively) were exposed to color FOP labels with a nutrient configuration that had saturated fat in the "Low" position. Conversely, the two cells (J, L) that reported the highest healthy ratings (33% and 37%, respectively) were exposed to the two black and white FOP labels with nutrient configurations that had added sugars in the "Low" position. See cells A, B, J, L in TABLE 6.

When looking overall at the six matched pairs of cells exposed to corresponding FOP labels and with and without color, in each case, fewer study participants exposed to the color FOP label version rated it as "healthy." See cells A/G, B/H, C/I, D/J, E/K, and F/L in TABLE 6.

Statistically Significant Results Among Black and White FOP Label Exposure: Significantly more study participants exposed to the nutrient configuration with "Low" added sugars, "Med" sodium, and "High" saturated fat rated it as healthy (37% in cell L) compared with healthy ratings by study participants exposed to the nutrient configuration "Med" added sugars, "High sodium, and "Low" saturated fat (29% in cell H). See cell L vs. cell H in TABLE 6.

Statistically Significant Results Among Color FOP Label Exposure: Significantly more study participants in the two cells exposed to the two nutrient configurations with added sugars in the "Low" position (cells D, F) reported the highest healthy ratings (30% and 29%, respectively). Each of these healthy ratings were significantly higher than study participants exposed to the nutrient configuration with the nutrient configuration with "High" added sugars, "Med" sodium and "Low" saturated fat (cell A). See cells D and F vs. cell A in TABLE 6.

Statistically Significant Results Between Color and Black and White FOP Label Exposure: Significantly more study participants in cell exposed to the black and white FOP label with the nutrient configuration "Low" saturated fat, "Med" sodium, and "High" added sugars rated it as healthy (29% in cell G) compared with study participants exposed to same nutrient configuration on a color FOP label (21% in cell A). See cell G vs. cell A in TABLE 6.

TABLE 6

Use of color in prototype FDA Nutrition Info w/DV FOP schemes may reduce perceptions of healthfulness compared with nutritionally identical black and white FOP schemes.

Reactions to levels of each nutrient may also play a role, especially added sugars.

Percent Top 3 Healthfulness Rating of Prototype Nutrition Info w/DV FOP Schemes by Randomized FOP Scheme Groups (4,5,6 out of a 6-point scale)

In Color	% Healthy	In Black & White	% Healthy
(A) Saturated Fat (Low) – Sodium (Med) – Added Sugars (High)	21%	(G) Saturated Fat (Low) – Sodium (Med) – Added Sugars (High)	29%[A]
(B) Saturated Fat (Low) – Sodium (High) – Added Sugars (Med)	24%	(H) Saturated Fat (Low) – Sodium (High) – Added Sugars (Med)	29%
(C) Saturated Fat (Med) – Sodium (Low) – Added Sugars (High)	28%	(I) Saturated Fat (Med) – Sodium (Low) – Added Sugars (High)	30%
(D) Saturated Fat (Med) – Sodium (High) – Added Sugars (Low)	30%[A]	(J) Saturated Fat (Med) – Sodium (High) – Added Sugars (Low)	33%
(E) Saturated Fat (High) – Sodium (Low) – Added Sugars (Med)	28%	(K) Saturated Fat (High) – Sodium (Low) – Added Sugars (Med)	30%
(F) Saturated Fat (High) – Sodium (Med) – Added Sugars (Low)	29%[A]	(L) Saturated Fat (High) – Sodium (Med) – Added Sugars (Low)	37%[H]

Each group received a single exposure to a unique configuration of FDA's Nutrition Info w/ DV FOP scheme prototype
Groups A-F (left table above) were exposed to color over corresponding interpretive language (Low = Green, Medium = Yellow, High = Red)
Groups G-L (right table above) were not exposed to color over interpretive language (Low = Black, Medium = Black, High = Black)
Superscript letters indicate a statistically significant difference between groups
Statistical comparisons between groups exposed to color FOP labels [A/B/C/D/E/F]
Statistical comparisons between groups exposed to corresponding color and black/white FOP labels [A/G, B/H, C/I, D/J, E/K, F/L]
6-point scale used for Healthy: 1=Very unhealthy, 2=Moderately unhealthy, 3=Slightly unhealthy, 4=Slightly healthy, 5=Moderately healthy, 6=Very healthy

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TEST 3 IMPLICATIONS

Two of FDA's FOP scheme prototypes incorporate green, yellow, and red color blocks over interpretative language used to describe low, medium, and high levels of added sugars, saturated fat, and sodium. While this may not seem like a critical design element, the influence of color should not be overlooked. IFIC consumer data shows that color may lead people to assume a product using color on its FOP label is less healthy than a nutritionally identical product with a black and white FOP label.

It should be noted that this experiment was only conducted using the prototype FDA Nutrition Info w/DV FOP scheme in which all three nutrients are encouraged to limit (i.e. added sugars, saturated fat, and sodium). Healthy eating patterns can also be supported by encouraging more consumption of under consumed, health-promoting nutrients such as calcium, dietary fiber, iron, and potassium. As such, it is unclear how consumers would respond to the use of color on FOP schemes that include a mix of nutrients to limit and nutrients to consume more of or encourage.

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TEST 4: IMPACT OF COLOR & PERCENT DAILY VALUE ON PROTOTYPE FDA NUTRITION INFO FOP SCHEMES

TEST 4 METHODOLOGY

For Test 4, study participants were randomized across two variations of two FOP schemes (FDA Nutrition Info and Nutrition Info w/DV prototypes). This design yielded 4 cells (n≈712 each), with two cells exposed to FOP labels with color (A, C) and the other two cells exposed to FOP labels without color (B, D). In total, Test 4 included four different FOP label variations. See FIGURE 8 below for FOP labels used in Test 4.

As in other Tests, each cell in Test 4 was balanced by demographics, including a roughly 50/50 split of high and low nutrition literacy. Cell exposure details are outlined in FIGURE 9 below.

Study participants in each cell were given three repeated exposures to the same FOP scheme, with each exposure displaying a medium level of one single nutrient (added sugars, saturated fat, or sodium). The order of the single nutrient exposure (sodium, then saturated fat, then added sugars) was held constant for every study participant.

All FOP labels in Test 4 included interpretive language conveying a medium level of the nutrient. Medium was displayed on FOP labels as "Med," just as the FDA's FOP scheme prototypes that include interpretive language do. For the FOP labels that included color, yellow was overlayed on the interpretive language "Med."

For each of three repeated FOP label exposures, study participants were asked to rate (on a 5-point scale) how concerned they would be about consuming a food or beverage with that specific label on the front of its package. The 5-point scale used was as follows: 1=Not all concerned, 2=Not too concerned, 3=Somewhat concerned, 4=Very concerned, 5=Extremely concerned.

In the beginning of the questionnaire, all study participants were asked if they were colorblind. All study participants were included in Test 4, yet those who reported being colorblind were not included in the Test 4 analysis.

It should be noted that the labels used in Test 4 are variations of FDA Nutrition Info and FDA Nutrition Info w/DV prototypes as only a single nutrient was displayed on each FOP label, whereas prototype FDA FOP schemes included three nutrients: added sugars, saturated fat, and sodium.

While each vehicle driver may not react the same way when approaching a yellow light, consumer response to "Low" and "High" interpretive language and their associated green and red colors was assumed to be more straightforward. Therefore, IFIC created hypothetical prototype FDA Nutrition Info FOP label for this study which isolated a single nutrient with a "medium" percent Daily Value

with and without yellow color over interpretive language in the attempt to better understand how consumers would respond to such scenarios.

FIGURE 8

Example of Cell A FOP Scheme Exposure

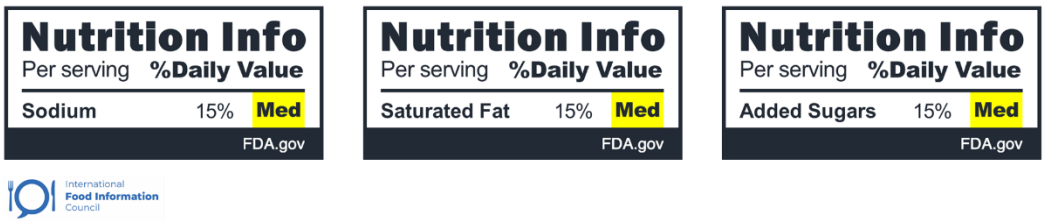


FIGURE 9

Test Four Cell Exposures

[Each cell (n≈712) given three repeated exposures to sodium, then saturated fat, then added sugars on one of the following FOP schemes]

- **A. Nutrition Info w/DV** (interpretive language displayed as "Med")
- **B. Nutrition Info w/DV** (interpretive language displayed as "Med")
- **C. Nutrition Info** (interpretive language displayed as "Med")
- **D. Nutrition Info** (interpretive language displayed as "Med")

TEST 4 KEY FINDINGS

INCLUDING PERCENT DAILY VALUE IN FOP SCHEMES MAY PUT CONCERN INTO CONTEXT

Results from this IFIC FOP labeling consumer study show that concern about consuming a product with a medium amount of sodium, saturated fat, or added sugars was significantly higher for each nutrient among cells exposed to the Nutrition Info FOP schemes [sodium: 21% (color), 25% (black and white); saturated fat: 21% (color), 27% (black and white); added sugars: 26% (color), 33% (black and white)] compared with cells exposed to the Nutrition Info w/DV FOP schemes [sodium: 13% (color), 16% (black and white); saturated fat: 15% (color), 19% (black and white); added sugars: 21% (color), 24% (black and white)].

The difference in level of concern expressed for consuming a food or beverage with each label on the front of its package was significant regardless of exposure to color in FOP schemes. The presence of percent Daily Value (%DV) in a variation of the prototype FDA Nutrition Info w/DV FOP scheme lowered concern about consuming a food or beverage with a medium level of added sugars, saturated fat, and sodium compared with variations of the prototype FDA Nutrition Info FOP scheme. See FIGURES 10-12 below for details.

YELLOW COLOR DECREASED CONCERN FOR ADDED SUGARS AND SATURATED FAT WHEN PERCENT DAILY VALUE WAS NOT PRESENT

The addition of a yellow highlight over interpretive language for a medium amount of either sodium, saturated fat, or added sugars on the variations of FDA Nutrition Info and FDA Nutrition Info w/DV FOP scheme prototypes used in Test 4 had differing effects on reported concern about consuming a food or beverage carrying that FOP label.

Study participants exposed to variations of prototype FDA Nutrition Info FOP schemes with color reported lower levels of concern for consuming a food or beverage with a medium amount of added sugars and saturated fat compared with study participants exposed to black and white variations of prototype FDA Nutrition Info FOP schemes (added sugars: 26% vs. 33%; saturated fat: 21% vs. 27%). See FIGURES 10-12 below for details. This finding was not observed for sodium.

There were no significant differences observed between study participants exposed to variations of prototype FDA Nutrition Info w/DV FOP schemes with and without color. This finding was observed for each nutrient: sodium, saturated fat, added sugars. See FIGURES 10-12 below for details.

CONSUMERS EXPRESSED MORE CONCERN FOR CONSUMING ADDED SUGARS THAN SATURATED FAT OR SODIUM

When comparing the three repeated measures of concern expressed for consuming a food or beverage highlighting a medium level of added sugars, saturated fat, and sodium, study participants expressed more concern during exposure to FOP labels showing medium amounts of added sugars (21%, 24%, 26%, 33% concern by FOP label scheme) than they did for saturated fat (15%, 19%, 21%, 27%), or sodium (13%, 16%, 21%, 25%). See FIGURES 10-12 below for details.

FIGURE 10

FOP Schemes without a %DV elicit more concern about Added Sugars consumption.

Between the two groups shown FOP Schemes without a %DV (C,D), those exposed to the FOP Scheme with color (C) were less concerned than those exposed to it in black and white (D).

Concern for Consuming a Food/Beverage with a Medium Amount of Added Sugars By Randomized FOP Scheme Groups

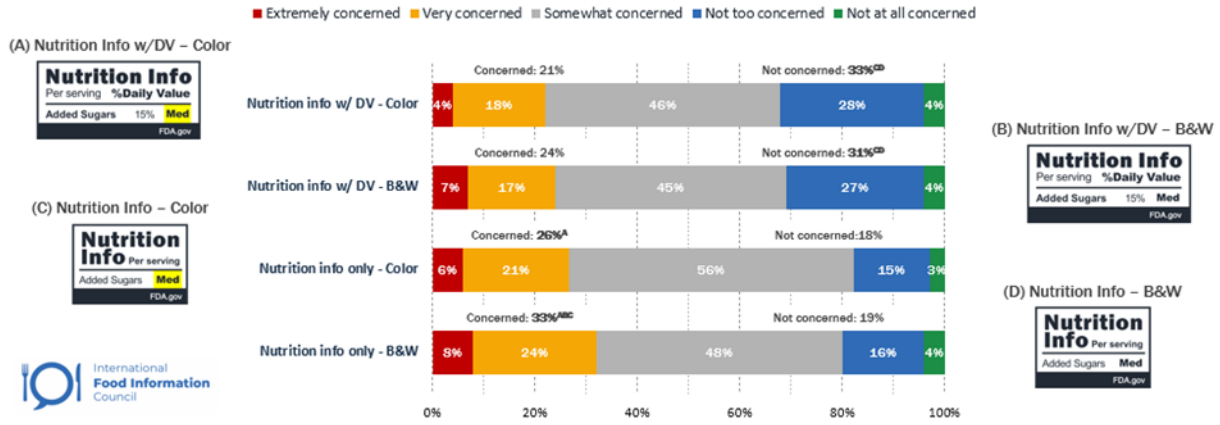


FIGURE 11

FOP Schemes without a %DV elicit more concern about Saturated Fat consumption.

Between the two groups shown FOP Schemes without a %DV (C,D), those exposed to the FOP Scheme with color (C) were less concerned than those exposed to it in black and white (D).

Concern for Consuming a Food/Beverage with a Medium Amount of Saturated Fat By Randomized FOP Scheme Groups

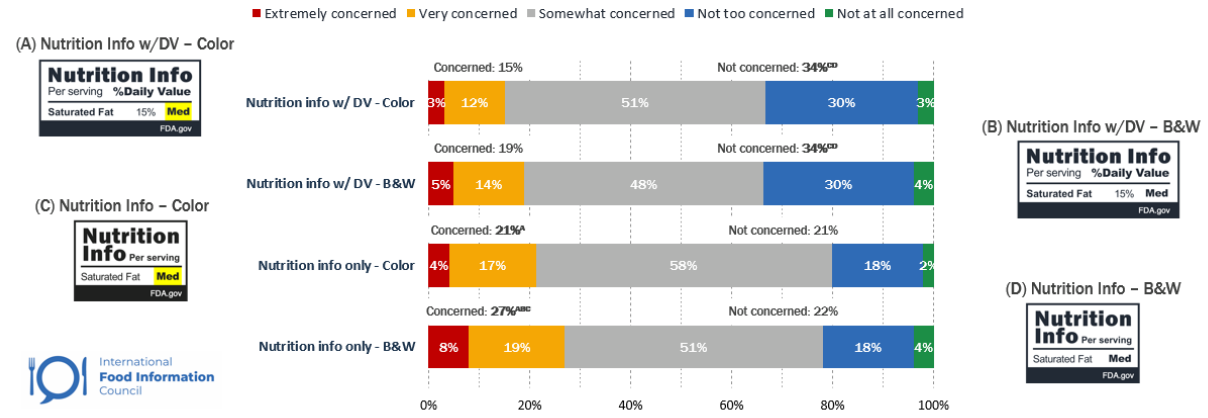
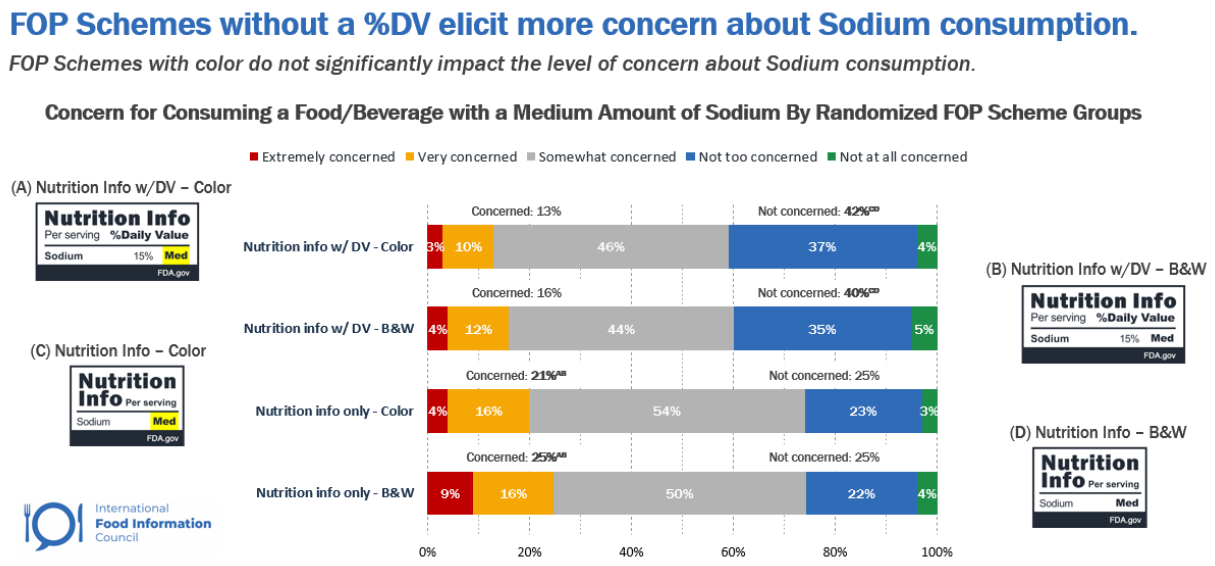


FIGURE 12



TEST 4 IMPLICATIONS

The %DV is required information on Nutrition Facts labels. Facts Up Front and three of the six prototype FDA FOP schemes include %DV (GDA, Nutrition Info w/DV, and High In w/DV). As such, the other three FDA FOP scheme prototypes do not include %DV. The possibility of two mandatory pieces of nutrition labeling (a potential standardized FOP scheme and the current Nutrition Facts label) requiring separate information makes it critical to understand the impact of the presence or absence of %DV information on potential FOP labels.

As demonstrated in this IFIC FOP consumer study, including the presence of a 15% DV on FOP labels led to less concern about consuming a food or beverage with a “Medium” level of added sugars, saturated fat, and sodium. By including %DV in FOP schemes, consumers are provided with further context, which may help them interpret additional information appearing on FOP labels such as interpretive language like “Low,” “Med”, and “High.”

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TEST 5: INTERSECTION OF PROTOTYPE FDA GDA FOP SCHEME & PROTOTYPE FDA "HEALTHY" SYMBOL

TEST 5 METHODOLOGY

For Test 5, study participants were randomized across four groups (A, B, C, D). This design yielded four cells (n≈750 each). As in other Tests, each cell in Test 5 was balanced by demographics, including a roughly 50/50 split of high and low nutrition literacy. Cell exposure details are outlined in FIGURE 13 below.

In Test 5, each of the four cells was exposed to a different label condition on the same image of an unbranded 8-ounce container of 100% orange juice. Study participants in each cell were asked to rate the healthfulness of the orange juice product on a 1-6 scale. The 6-point scale was as follows: 1=Very unhealthy, 2=Moderately unhealthy, 3=Slightly unhealthy, 4=Slightly healthy, 5=Moderately healthy, 6=Very healthy.

The 100% orange juice image was taken from FDA's FOP Focus Group 2 Schemes and Product Mock-Ups that were publicly announced via email on September 19, 2023.[6] The four label conditions used in Test 5 included the prototype FDA GDA FOP scheme (displaying only added sugars, saturated fat, sodium), one of the FDA's 30 prototype "Healthy" symbols (FDA 14b),[7] the same prototype FDA GDA FOP scheme and the same prototype FDA "Healthy" symbol, or neither of the aforementioned FDA prototypes. See FIGURE 14 below for product image exposures used in Test 5.

The decision to use the FDA "Healthy" symbol prototype 14b in Test 5 was made because of its lack of color and design similarities to the current USDA organic seal.[8]

FIGURE 13

Test 5 Cell Exposures

[Each cell (n≈750) given a single exposure to a product image of 100% orange juice with one of the following label conditions]

A. No Prototype FDA GDA FOP Scheme / No Prototype FDA "Healthy" Symbol
B. No Prototype FDA GDA FOP Scheme / Prototype FDA "Healthy" Symbol
C. Prototype FDA GDA FOP Scheme / Prototype FDA "Healthy" Symbol
D. Prototype FDA GDA FOP Scheme / No Prototype FDA "Healthy" Symbol

FIGURE 14

TEST 5 KEY FINDINGS

A PROTOTYPE FDA GDA FOP SCHEME ON A 100% ORANGE JUICE PRODUCT IMPROVED PERCEPTIONS OF ITS HEALTHFULNESS

Study participants in the two cells (C, D) that were exposed to the 100% orange juice product images with a prototype FDA GDA FOP scheme were more likely to rate the product as healthy (88% and 91%, respectively) compared with the two cells (A, B) exposed to 100% OJ product images that did not include a prototype FDA GDA FOP scheme (83% and 84%, respectively). See TABLE 7 below.

A PROTOTYPE FDA "HEALTHY" SYMBOL ON A 100% ORANGE JUICE PRODUCT DID NOT INFLUENCE PERCEPTIONS OF HEALTHFULNESS

Study participants in the two cells (A, B) were exposed to the 100% orange juice product images that did not include a prototype FDA GDA FOP scheme. Among these two cells, one was exposed to an FDA "Healthy" symbol prototype (84% of cell B rated it as healthy) and the other was not exposed to the FDA "Healthy" symbol prototype (83% of cell A rated it as healthy). The other two cells (C, D) were exposed to a prototype FDA GDA FOP scheme on the same 100% orange juice product image. Among these two cells, one was also exposed to the FDA "Healthy" symbol prototype (88% of cell C rated it as healthy) and the other was not exposed to the FDA "Healthy" symbol prototype (91% of cell D rated it as healthy). See TABLE 7 below.

Study participants in the two cells (C, D) exposed to the prototype FDA GDA FOP scheme were significantly more likely to rate the product as healthy (88% and 91%, respectively) compared with participants in the two cells (A, B) that were not exposed to the FOP scheme (83% and 84%, respectively). Similarly, study participants exposed to both the prototype FDA GDA FOP scheme and the prototype FDA "Healthy" symbol was significantly more likely to rate it as healthy (88% of cell C) compared with participants exposed to only the "Healthy" symbol prototype (84% of cell B). See TABLE 7 below.

In other words, the presence of a prototype FDA GDA FOP scheme on a 100% orange juice product image impacted perceptions of healthfulness more than the FDA "Healthy" symbol prototype, even among the 54% who (elsewhere in the study) agreed that they "would be more likely to purchase a food that has a symbol or image on the package indicating that it is healthy."

TABLE 7

Cell	Label Exposure	% "HEALTHY" Rating*
A	No Prototype FDA GDA FOP Scheme / No Prototype FDA Healthy" Symbol	83%
B	No Prototype FDA GDA FOP Scheme / Prototype FDA "Healthy" Symbol	84%
C	Prototype FDA GDA FOP Scheme / Prototype FDA "Healthy" Symbol	88%[A,B]
D	Prototype FDA GDA FOP Scheme / No Prototype FDA "Healthy" Symbol	91%[A,B]

**Combined rating includes "Slightly," "Moderately," and "Very" healthy (i.e. 4, 5, or 6 out of a 6-point scale)*
Superscript letters indicate a statistically significant difference between cells

TEST 5 IMPLICATIONS

The FDA is considering establishing a standardized, science-based FOP scheme for packaged foods and beverages. The FDA is also considering developing a "Healthy" symbol for voluntary use on food and beverage products that meet an updated FDA definition for healthy. Understanding the differences in perception and the potential interactions between these two potential food labeling policies is critical for clear and concise consumer communications about nutrition labeling information found on packaging.

ADDITIONAL FINDINGS ON NUTRITION FACTS LABEL USE: CALORIES AND NUTRIENTS

The prototype FDA FOP schemes include three nutrients that many Americans consume above recommended amounts: added sugars, saturated fat, and sodium. These nutrients also happen to be some of the most accessed information on Nutrition Facts panel labels. According to participants in this IFIC FOP labeling consumer study, sodium is the most looked at and one of the top two most important pieces of nutrition information on the Nutrition Facts label. Additionally, sodium is also the top criteria among information on the Nutrition Facts label that people report using to define a healthy food.

Calorie information is not included in prototype FDA FOP schemes. According to participants in this IFIC FOP labeling consumer study, calories are the second most looked at and one of the top two most important pieces of nutrition information on the Nutrition Facts label. Participants in this study placed more importance on calories than added sugar or saturated fat when considering what makes a food healthy. Further, calories are also the top response for the one piece of nutrition information that study participants said they want to see displayed on the front of small, individually wrapped snack-size packages.

See FIGURES 15, 16, 17, and 18 below.

ADDITIONAL FINDINGS ON NUTRITION FACTS LABEL USE: NUTRITION LITERACY AND INCOME

The approach and frequency in which Americans consult the Nutrition Facts label differs by population segments. In this IFIC FOP labeling consumer study, 54% reported using the Nutrition Facts label always (20%) or most of the time (34%) when purchasing a product for the first time. Among these self-reported Nutrition Facts label users, those with low nutrition literacy (50% compared with 58% for those with high nutrition literacy) and those with lower incomes (49% who make <$35K compared with 53% who make $35-74K and 59% who make $75K+) consult Nutrition Facts labels significantly less frequently during a first-time purchase. Low nutrition literacy study participants are also significantly more likely to report rarely (15% vs. 12%) or never (6% vs. 4%) using the Nutrition Facts label to compare between products compared with high nutrition literacy study participants.

One factor that may be contributing to low Nutrition Facts label usage is the confidence reported for understanding the Nutrition Facts label. Nearly half (48%) of this study's participants said that they were extremely or very confident in their understanding the Nutrition Facts label, with low nutrition literacy (43% vs. 52% of those with high nutrition literacy) and lower income (41% making <$35K and 44% making $35-74K vs. 55% making $75K+) participants reporting significantly less confidence.

FIGURE 15

Sodium and Calories are sought out most often when using the Nutrition Facts label.

Those with lower nutrition literacy are more likely to say they look at multiple pieces of information on the Nutrition Facts label, including cholesterol, dietary fiber, calcium, iron, potassium, vitamin D, total fat, and trans fat.

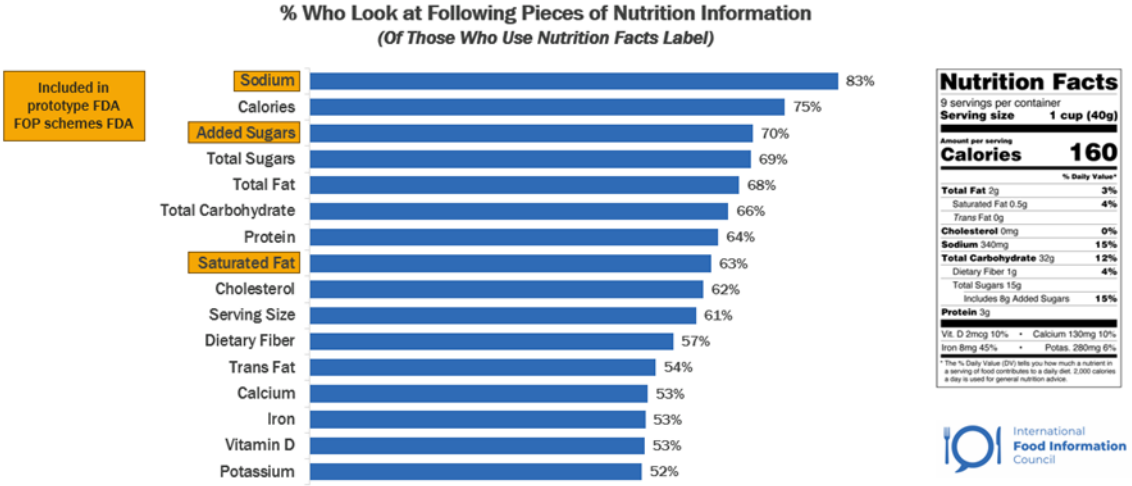


FIGURE 16

Calorie and Sodium information ranked as most important by Nutrition Facts label users.

While Calories wins out slightly as the factor most often ranked first, half ranked Sodium in their top three.

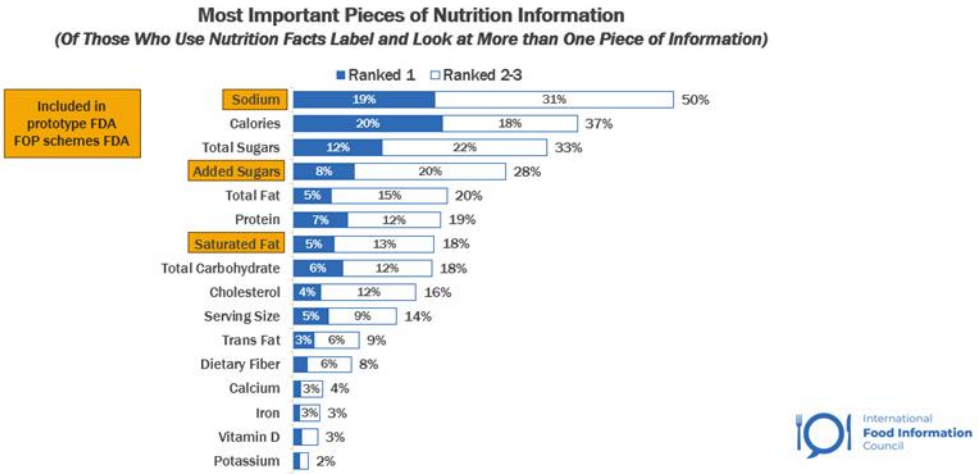


FIGURE 17

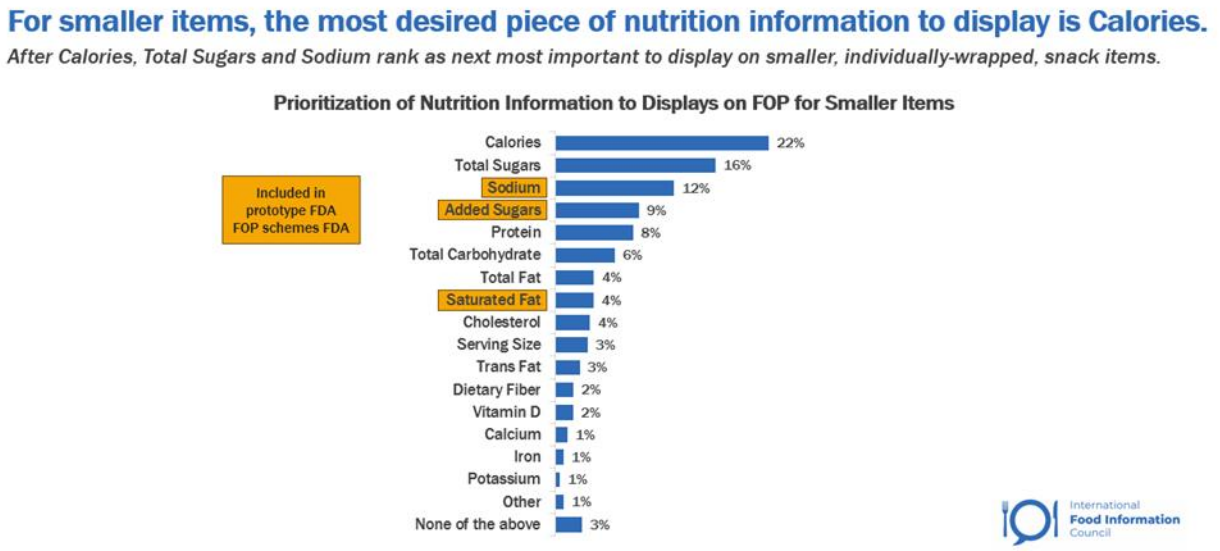
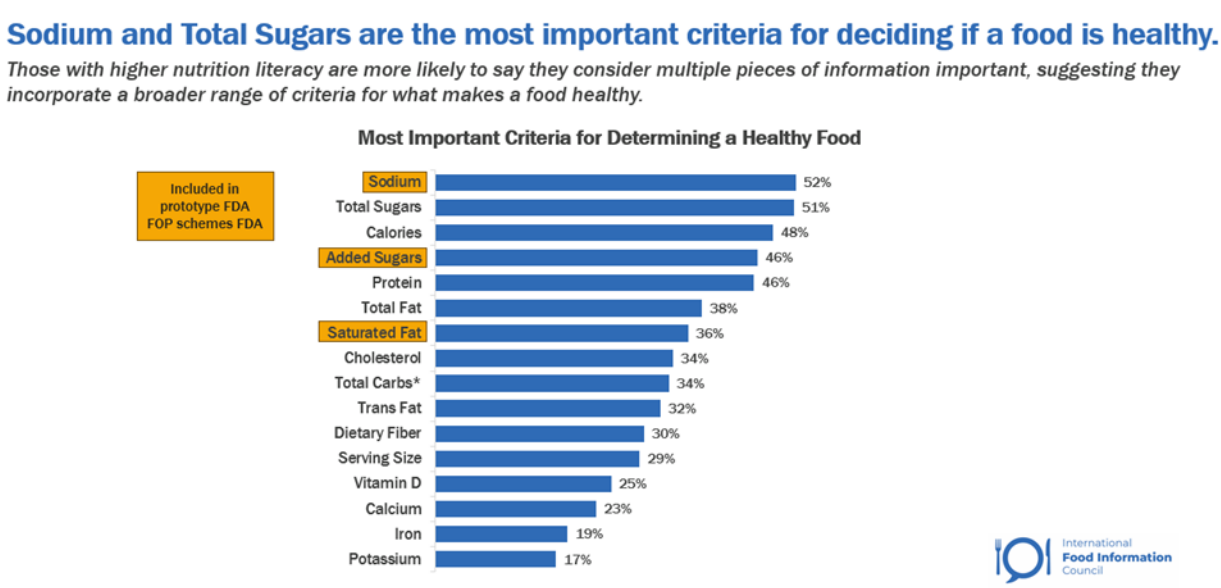


FIGURE 18



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STUDY LIMITATIONS

It should be noted that this research was conducted in an online setting that attempted to replicate real-world scenarios in which food decisions are made. Decisions made in real-world scenarios, however, may be different than those captured in this study, given that life demands do not always allow consumers to focus on label information in the same way that they may respond to questionnaires like the one used for this study. More research conducted in real-world settings to capture consumer interpretation, application, and behavior in response to current and proposed food label information would be valuable.

CONCLUSIONS

The debate about which FOP labeling scheme is best and what information it should contain will continue among industry, labeling experts, policy makers, social scientists, and a variety of other interested stakeholders. Yet the voice often missing from these debates is the consumer. Insights from this IFIC FOP nutrition labeling study can help inform a variety of stakeholders on preferred FOP labeling approaches that provide the type and amount of information that enables consumers to make healthy dietary decisions and build overall healthier eating patterns.

One of IFIC's objectives is to elevate the understanding of Americans' eating habits through its consumer research. IFIC has been exploring Americans' attitudes toward nutrition and health for three decades and views consumer research as a critical first step in determining Americans' understanding of nutrition information and examining how consumer knowledge, perceptions and attitudes can impact behavior.

Specifically, IFIC has a long history of understanding consumer perceptions of food and food labeling. Food and nutrition communications, both on and off-label, from a wide variety of sources, influence dietary choices and behaviors. IFIC consumer research studies, among others, have repeatedly found that many factors such as taste, price, convenience as well as mental and emotional well-being, influence food and beverage purchase and consumption decisions.[9]

Successful introduction and use of any potential new food labeling schemes and symbols will require significant consumer education. This would include how the potential new pieces of information relate to other information currently provided on food packing such as health claims, the Nutrition Facts label, and ingredient lists, to improve the public understanding and use of as well as trust in food label information overall.

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REFERENCES

1. World Health Organization (2004) Global Strategy on Diet, Physical Activity and Health. Accessed May 15, 2024. https://iris.who.int/bitstream/handle/10665/43035/924?sequence=1
2. U.S. Food and Drug Administration. UPDATED Appendix E FOP Exp and Pretests 1 2 Questionnaire 8-18-23. Accessed August 30, 2023. https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=202306-0910-004&icID=260638
3. U.S. Food and Drug Administration. Appendix D FOP Exp and Pretests 1 2 Screener FINAL. Accessed July 31, 2023. https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=202306-0910-004&icID=260638
4. U.S. Food and Drug Administration. Appendix F FOP Schemes and Mock Product Labels FINAL. Accessed June 15, 2023. https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=202306-0910-004&icID=260638
5. U.S. Food and Drug Administration. Daily Value on the Nutrition and Supplement Facts Labels. Accessed May 16, 2024. https://www.fda.gov/food/nutrition-facts-label/daily-value-nutrition-and-supplement-facts-labels
6. U.S. Food and Drug Administration. Appendix A – FOP Focus Groups 2 Schemes and Product MockUps 8-23-2023. Accessed September 19, 2023. https://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=202008-0910-021&icID=262002
7. U.S. Food and Drug Administration. Appendix G Healthy Symbols Figure. Accessed September 19, 2023. https://www.regulations.gov/document/FDA-2021-N-0336-0003
8. Code of Federal Regulations. USDA Seal. 7 CFR 205.311. https://www.ecfr.gov/current/title-7/section-205.311
9. International Food Information Council. 2023 Food & Health Survey. 23 May 2023. https://foodinsight.org/2023-foodhealth-survey/

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