

**Usefulness and Importance of Front-of-Pack Nutrition Labeling to Health-Conscious Consumers:
Natural Grocers Survey Results
July 28, 2010**



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Attn: DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration [Docket No. FDA-2010-N-0210] Front-of-Pack and Shelf Tag Nutrition Symbols; Establishment of Docket; Request for Comments and Information	DATES: Submit electronic or written comments by July 28, 2010. ADDRESSES: Submit electronic comments to http://www.regulations.gov . Submit written comments to the Division of Dockets Management (HFA-305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.
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Usefulness and Importance of Front-of-Pack Nutrition Labeling by Health-Conscious Consumers: Natural Grocers Survey Results

Pursuant to a Request for Comment by the Food and Drug Administration (FDA), Vitamin Cottage Natural Food Markets, Inc. (“Natural Grocers”) conducted a survey of consumers to help understand the usefulness of front-of-pack nutrition labels. This paper is submitted in response to the FDA’s Request for Comments as referenced above.

Survey Methodology. The survey was created using existing internet-based survey tools¹. All responses were received electronically in database format. Participants were recruited primarily through announcements to subscribers to the electronically broadcast version of the Natural Grocers Health Hotline Nutrition Newsletter. The survey was attempted by 209 participants, completed by 204 participants, and each individual question received between 194 to 204 completed responses. Minimal demographic information was collected due to privacy considerations and to maximize the number of respondents. The online survey system allows only one use of the survey for each IP (computer) address, so multiple use is unlikely. Based on the respondents being subscribers to the Health Hotline, we believe it is safe to assume that the majority of respondents can be

classified as “health-conscious health food consumers” for which the FDA was looking for specific relevant data. Note that employees of Natural Grocers were *not* invited to participate.

The product ingredients and Nutrition Facts are taken from an actual product that can be found in most supermarkets, and the food image was taken from the prepared, cooked product. The product was chosen based on its average nutritional profile and that it was not unappealing in taste or appearance.

The survey has three parts. **Part One** requests basic demographic information (mostly optional) and asks questions about where they shop for food (mild preference for health food stores) and if they are the primary food shopper (98% are primary shoppers). Other data from this part are not included in this report, but are not material to its analysis.

Part Two begins by displaying a color image of a boxed, prepared frozen meal of chicken, rice and vegetables as shown in **Illustration (1)**. We first asked the baseline question “Based on the information shown, would you consider this a healthy food?” In the following set of pages, eleven different nutritional labels are added to the packaging image, one at a time, and the question asked, “How does this affect

your view of how healthy this food is?” One of four choices is allowed: More Healthy, Less Healthy, No Change, and I Don’t Know.

At the end of part two, an image of the full package is shown with all nutrition labels, as seen in **Illustration (2)**, and the baseline question posed again: “Based on the information shown now, would you consider this a healthy food?”

In the **Part Three** of the survey, respondents are asked to rank all eleven labels as “Not Important,” “Somewhat Important,” and Very Important”. Finally, respondents are asked to *force rank* all eleven labels from 1 (least important) to 11 (most important).

From time to time during the survey, respondents were also asked to provide any other opinions they might have on the issue of food and nutrition related to the product image and label information.

Highlights of the Natural Grocers Survey Results

Do nutritional labels change perceptions if healthiness? Overall, respondents experienced a small 10% positive shift towards an increased perception of healthiness of the food after viewing all of the nutrition labeling. The number of respondents who initially claimed they could not decide either way (95), dropped to only 2 remaining undecideds. **Graph (1)** shows the total overall shift from “less healthy” to “more healthy” based on total starting responses to the baseline question about the product image without nutrition information, as compared to total ending responses to the same question about the product with all nutrition information provided. More relevant than the small total shift toward a perception of healthiness is the respondents’ demonstrated ability and willingness to make a clear decision, as demonstrated by the small 1% portion of remaining undecideds.

Graph (2) shows in detail how perceptions of each starting response group changed after the full nutrition labeling was provided. Although this survey changed the perceptions of 77% of respondents (only 23%

reported having the same perception at the start as at the end of the survey), there was an even divide between respondents who perceived this food to be healthy or somewhat healthy (98) versus those who perceived the food to be not healthy or probably not healthy (92) at the end of the survey. *This result points to a significant divergence between what consumers consider to be healthy food, even when given fairly complete nutrition and ingredient information to judge with.* A review of the open comments from the survey may help explain this divide, as many respondents took issue with a single ingredient that, to them, changed an otherwise healthy meal into an unhealthy one. High fructose corn syrup was most often mentioned as the worst culprit, with sodium, soy and processed (white) rice also heavily disfavored.

It seems clear from their open text comments that many of the respondents rely heavily, if not exclusively, on the Ingredients panel in determining the healthiness of a packaged food. Many respondents who rated the food “not healthy” did so because of specific findings in the Ingredients panel, but often noted that small changes to the ingredients would significantly improve the products healthiness. The comments often took the form of a game of “gotcha”, where respondents understood the front-of-pack images and nutrition labels to be *deliberately misleading*, and thus used them as clues about to where to look for the “full truth” in the Ingredients list and Nutrition Facts panel.

Which nutrition information is most valued? **Graph (3)** shows the results for each of the eleven nutrition labels. The salient result in this data set is that no front-of-pack label was perceived *significantly* as making the food appear “less healthy.” In other words, respondents often found that *any* nutrition information provided on the package helped them gain more confidence in the healthiness of the food. One minor exception is “Nutrition Highlights,” which was perceived as denoting *less healthy* food by 15 respondents (8%), the highest of any front-of-pack label, probably owing to the calories (300) and sugar (16g) content of the example provided. However, these “less healthy” responses nearly doubled to 27 (14%) after viewing the side-panel

Nutrition Facts and increase further to 102 (51%) after viewing the Ingredients list on the side panel.

Although almost *no* respondents thought the front-of-pack nutritional labels denoted “less healthy” food, it must be noted that the predominant response was “No Change,” meaning *the front-of-pack nutrition labels in question did not affect perception of the healthiness of the food either way. Furthermore, based on the sudden increase in “less healthy” responses when presented with the Ingredients and Nutrition Facts panels, it is clear that many consumers disregard front-of-pack nutrition labels in favor of the “full disclosure” of facts listed on the side panel.*

The survey provided two opportunities for respondents to compare the 11 nutrition labels side by side and rank their importance. The first of these two questions listed all 11 labels at once and asked respondents to rank each one either “Very Important,” “Somewhat Important,” or “Not Important.” **Graph (4)** shows the results of this exercise. Far different from the individual label results shown in Part Two, in this group comparison there is a very clear pattern of preference. Each of the more complete “hard” data labels, including Ingredients, Nutrition Facts, USDA Organic, No GMO, and No Preservatives are considered “important” or “somewhat important” by at least 178 (89%) of respondents. By contrast, the least important label scored only 32% by the same measure.

Possibly the most interesting page of the survey is the second group comparison question, where respondents are asked to “force rank” all 11 nutrition labels from “least important” to “most important”. As represented in **Graph (5)**, the labels for Ingredients, Nutrition Facts, USDA Organic, No GMO, and No Preservatives again dominate the “most important” responses, while USDA Inspected, AMA Heart Check, Smart Choices, and All Natural dominate the “least important” responses. (Note that **Graph (6)** and **Graph (7)** use the same data, but separate the eleven labels into two groups to simplify analysis.)

We discussed previously the pattern of respondents apparently relying on the Nutrition Facts and Ingredients panels for their most important cues to healthiness of the food inside the box. The high rank of USDA Organic, No GMO, and No Preservatives in the forced ranking exercise deserves special mention. Their high ranks seem to be related to the clarity and definiteness of their message as well as that these three labels simply matter more to the respondents. This is especially important when one considers that overall the respondents were split between perceiving this food as “healthy” or “not healthy,” yet all respondents are in close agreement on what nutritional information is most important. Open text comments support this explanation.

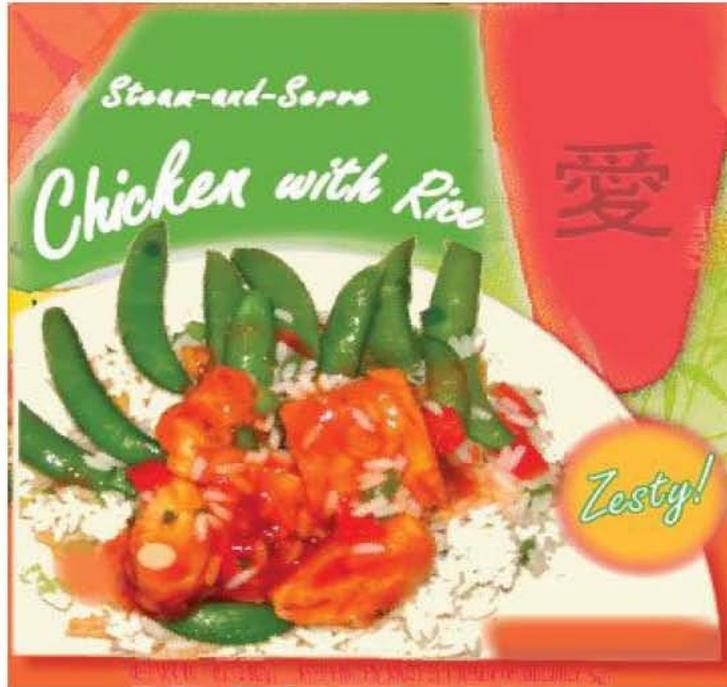
HIGHLIGHTS

- **Most front-of-pack nutrition labeling has a neutral effect on health-conscious consumers’ perceptions of healthiness of food.**
- **Health-conscious consumers rely primarily on the Ingredients list and somewhat on the Nutrition Facts label to determine healthiness of foods.**
- **Health-conscious consumers have specific ingredients that can cause a food to be rated unhealthy, no matter what other healthy attributes the food has.**
- **Certain front-of-pack labels provide respondents with high correlation to healthiness, including “No GMOs,” “USDA Organic,” and “No Preservatives.”**

Footnote:

1. The original survey can be viewed at:
<http://www.surveymonkey.com/s/2V7VXDQ>

Illustration 1: baseline healthiness question about prepared meal with no nutritional labeling.



6. Based on the information shown, would you consider this a healthy food?

- No, I don't think this is a healthy food.
- Hmm, I probably would not consider this a healthy food.
- Well, I can't really tell from just the information provided.
- Ok, this looks like a somewhat healthy food.
- Yes, I would consider this a healthy food.

Illustration 2: baseline healthiness question about prepared meal with complete nutritional labeling.



Nutrition Facts
Serving Size 1 Meal (286g)

Amount Per Serving	
Calories 300	Calories from Fat 40
% Daily Value*	
Total Fat 4g	6%
Saturated Fat 1g	5%
Trans Fat 0g	
Polyunsaturated Fat 1g	
Monounsaturated Fat 2g	
Cholesterol 35mg	12%
Sodium 380mg	18%
Potassium 360mg	10%
Total Carbohydrate 49g	16%
Dietary Fiber 4g	16%
Sugars 16g	
Protein 17g	34%
Vitamin A 10%	Vitamin C 10%
Calcium 4%	Iron 13%
Vitamin E 6%	Thiamine 4%
Riboflavin 4%	Niacin 20%
Vitamin B6 10%	Folic Acid 15%
Vitamin B12 15%	Phosphorus 20%
Magnesium 8%	Zinc 4%

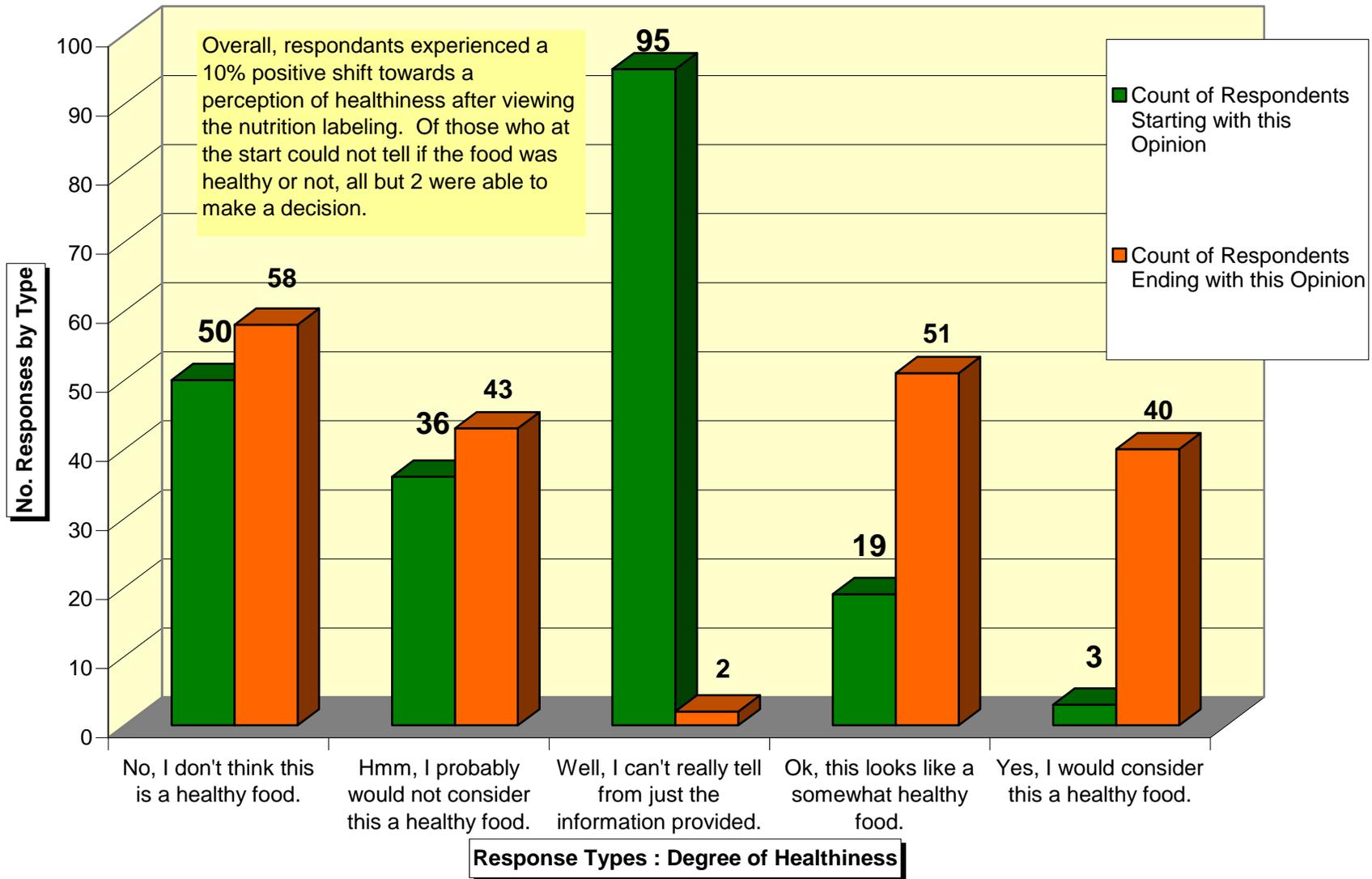
*Percent Daily Values are based on a diet of 2,000 calories a day. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cooked Rice, Cooked Chicken Tenderloin, Water, Olive Oil, Contains 2% Or Less Of: Isolated Soy Protein Product [Isolated Soy Protein, Modified Food Starch, Starch, Carrageenan, Soy Lecithin], Dextrose, Salt, Sodium Phosphate, Potassium Chloride, Paprika, Flavoring, Caramel Color, Sugar Snap Peas, Water, Orange Marmalade (High Fructose Corn Syrup, Corn Syrup, Orange Juice, Orange Peel, Natural Fruit pectin, Citric Acid, May contain Natural Flavor), Red Peppers, Scallions, Brown Sugar, Contains 2% Or Less Of: Soy Sauce (Water, Wheat, Soybeans, Salt, Alcohol, Vinegar, Lactic Acid), Vinegar, Modified Cornstarch, Ginger, Lemon Juice Concentrate, Garlic, Soybean Oil, Salt, Oleoresin Paprika, Crushed Red Pepper Contains: Soy, Wheat.

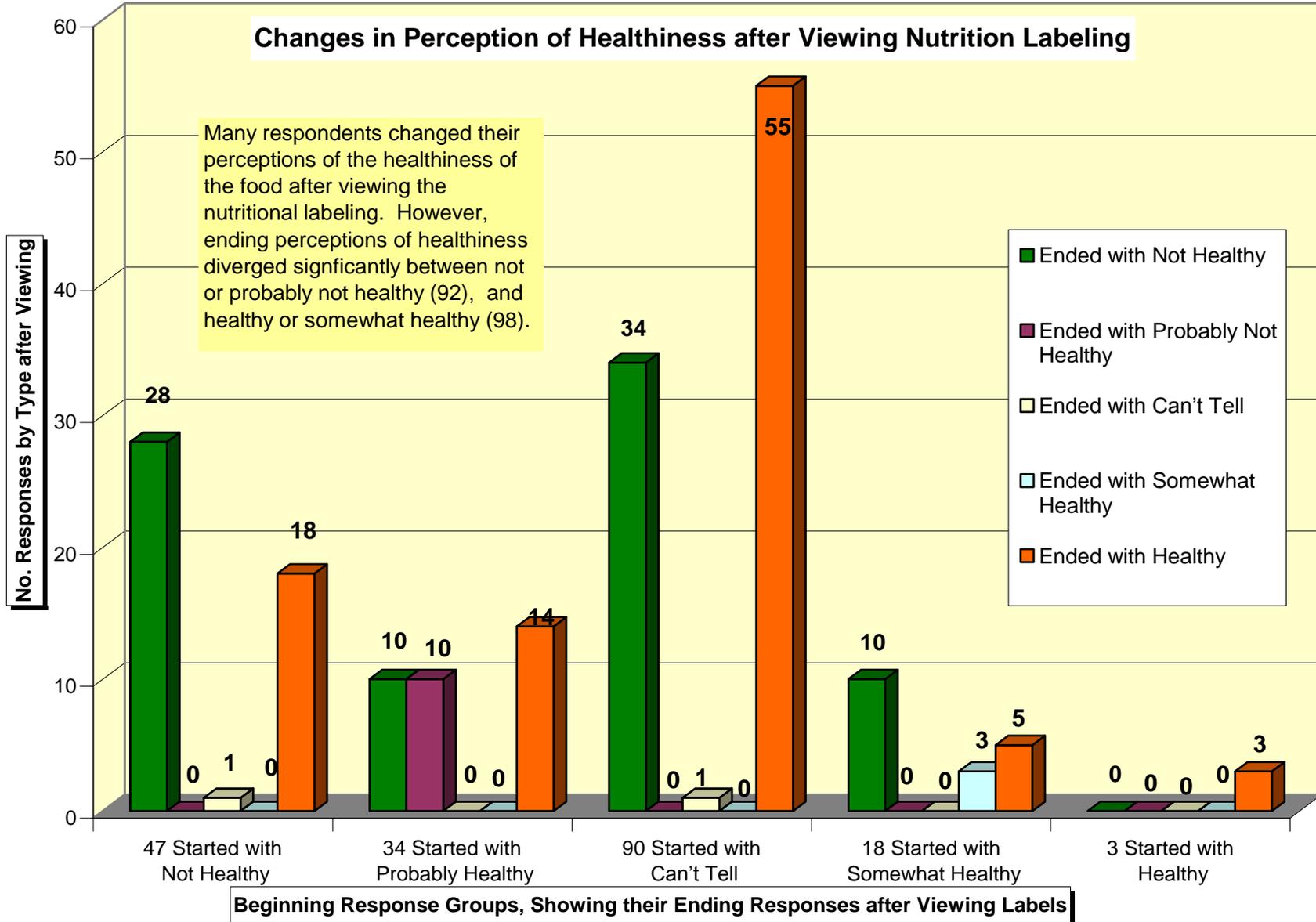
20. Here is the whole package again. Based on the information shown, would you now consider this a healthy food?

Graph 1

Change in Perception of Healthiness After Viewing all Front of Package Nutrition Labeling

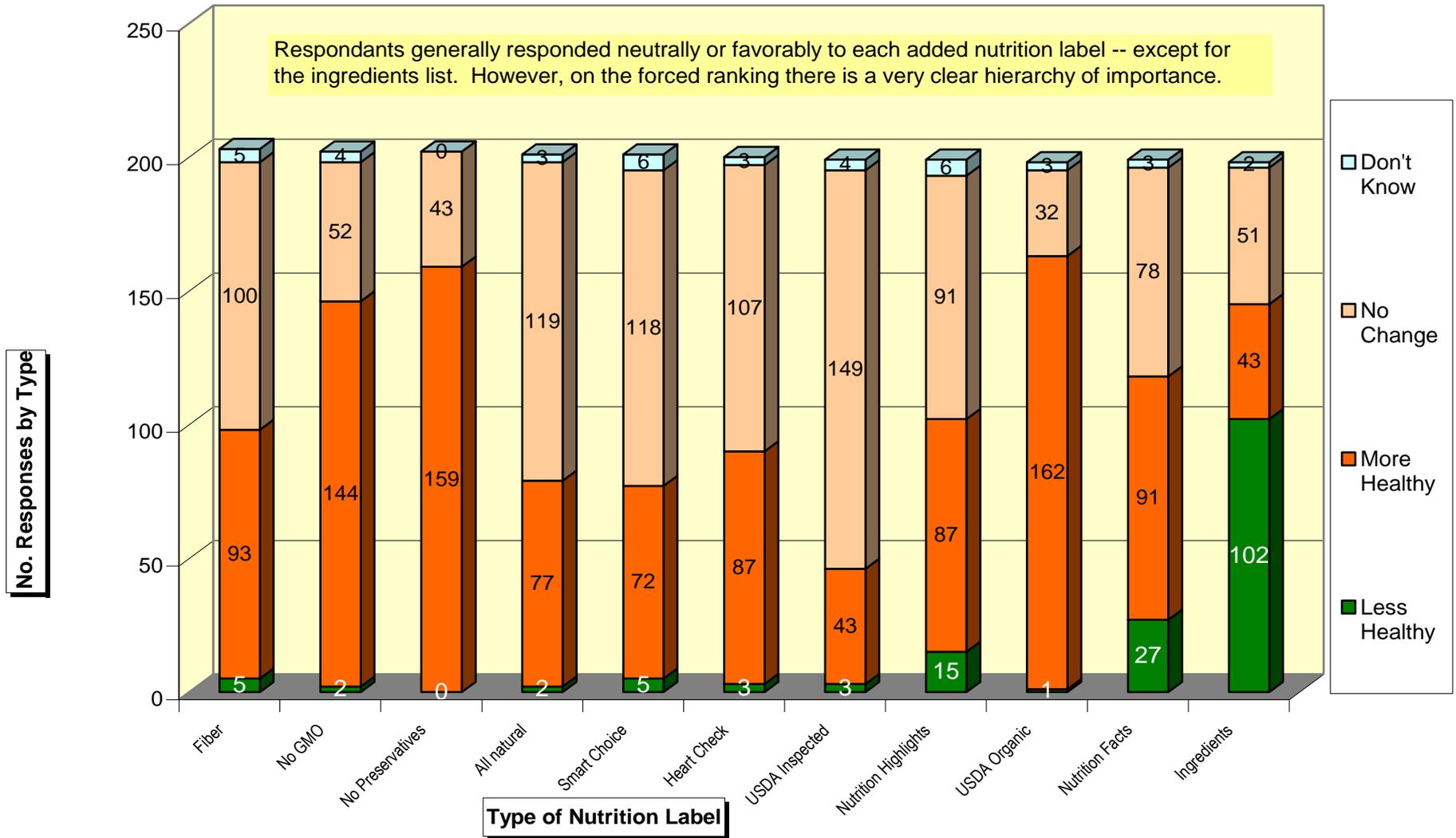


Graph 2



Graph 3

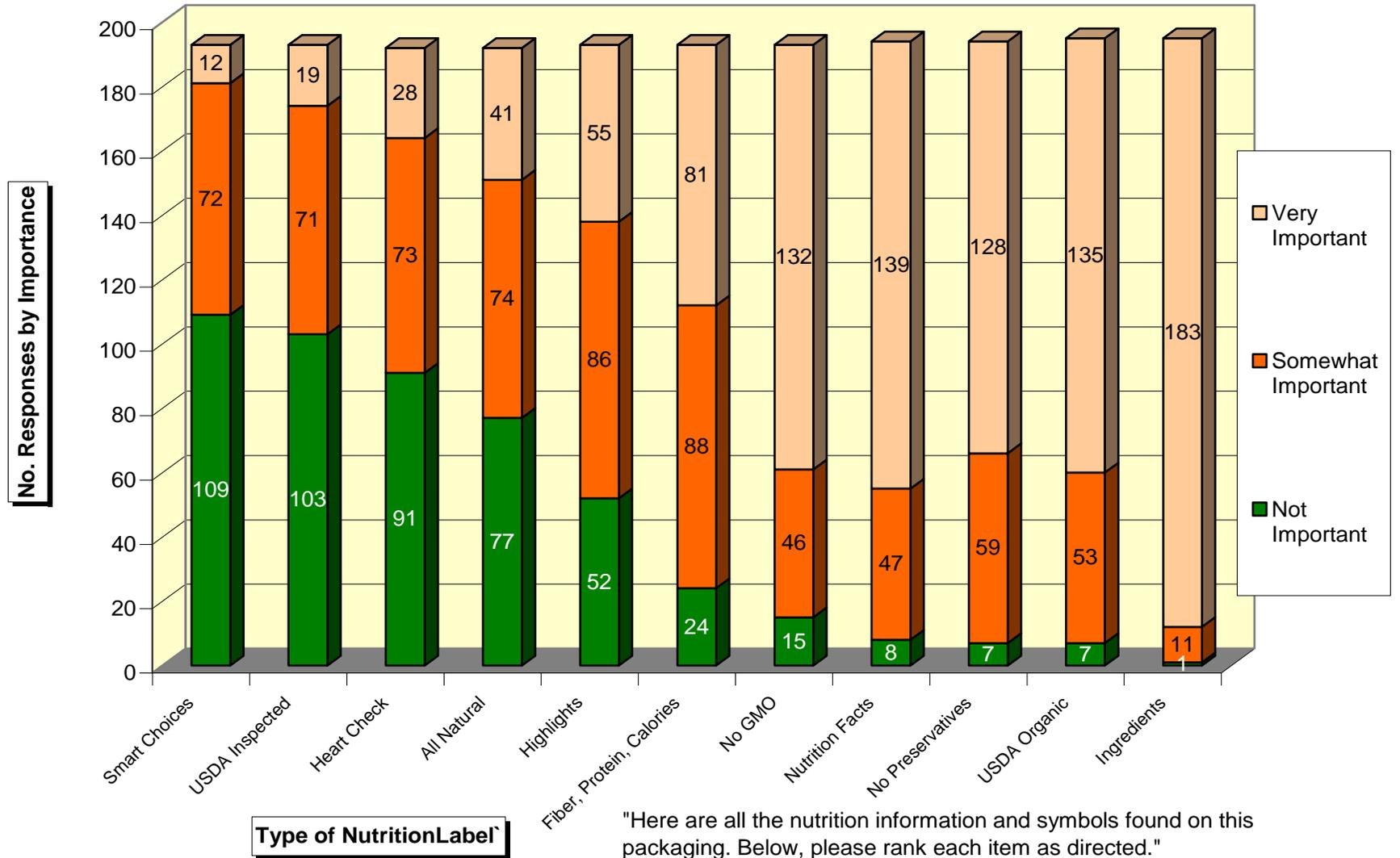
Relevance to Perception of Healthiness of Different Front of Pack Nutrition Labels



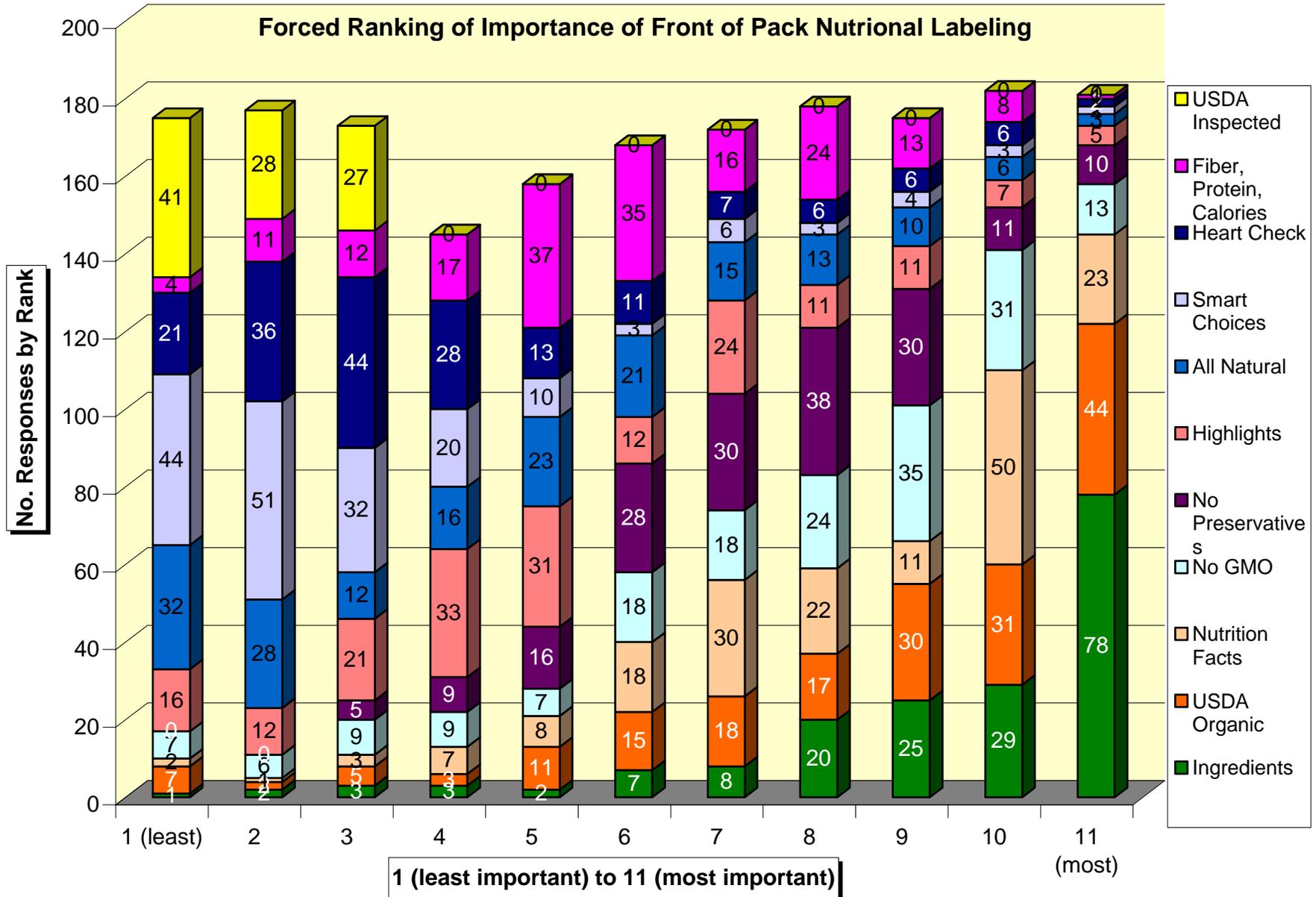
Survey Question: "We have added new information to the packaging. How does this affect your view of how healthy this food is?"

Graph 4

Importance of Front of Pack Nutrition Labels

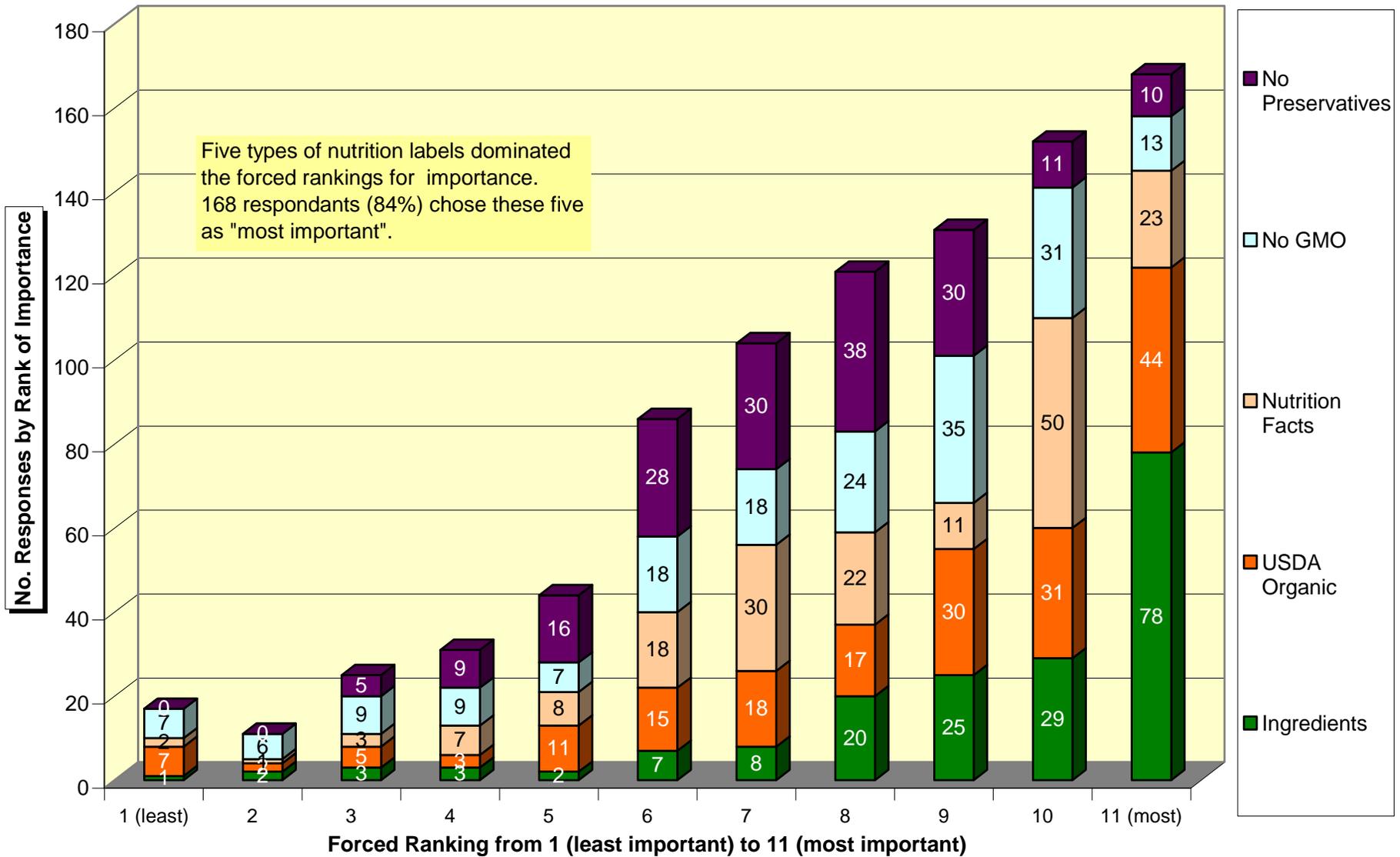


Graph 5

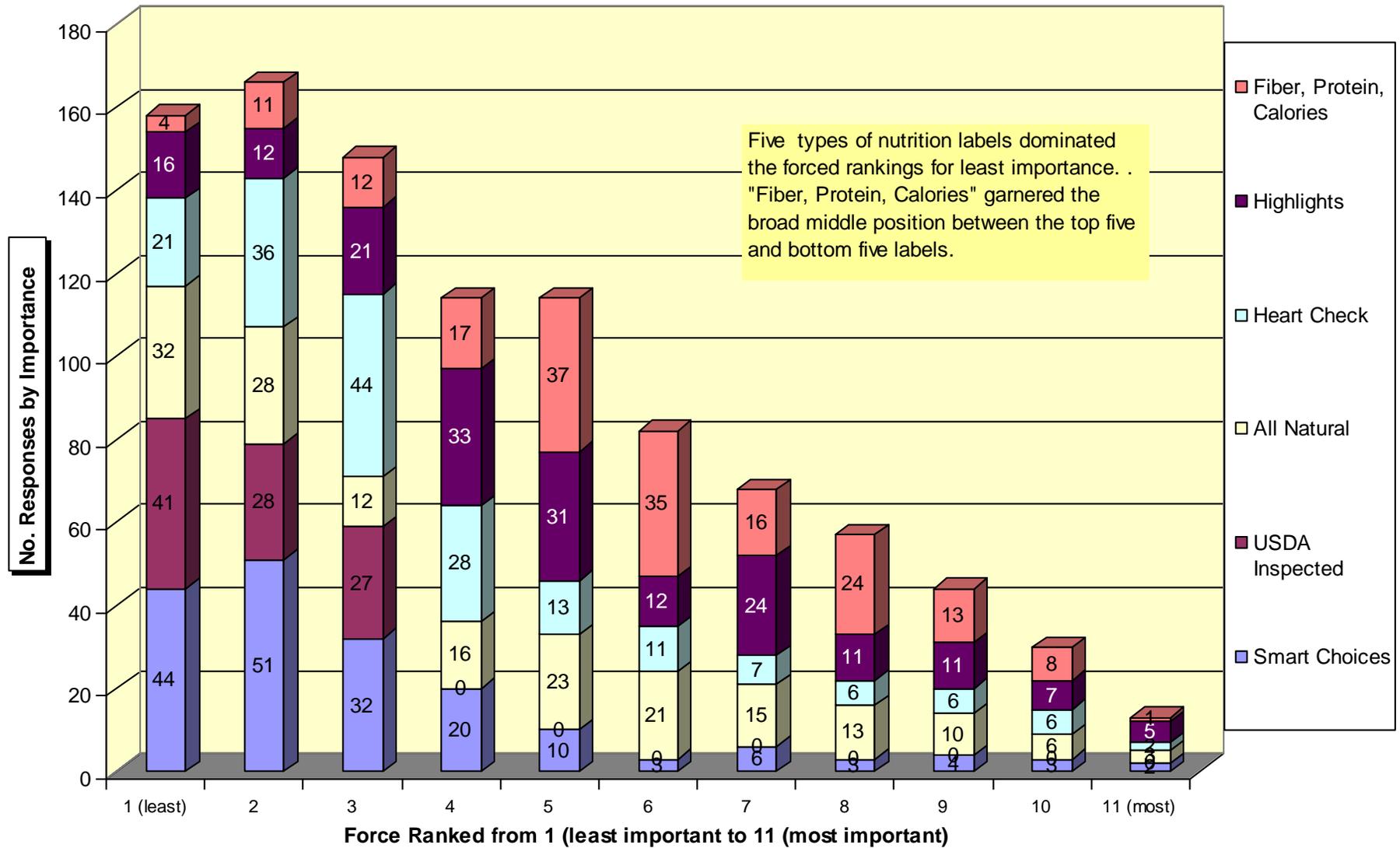


Graph 6

Forced Ranking of Importance of Nutrition Labels (top 5 of 11)



Force Ranking of Importance of Discretionary Nutrition Labeling (Lowest 6 of 11 Labels)



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Document ID: FDA-2010-N-0210-0001: Front-of-Pack and Shelf Tag Nutrition Symbols; Establishment of Docket; Request for Comments and Information:

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