NUTRITION LABELLING:
PERCEPTIONS AND PREFERENCES OF CANADIANS

June 1999

National Institute of Nutrition

PREFACE AND ACKNOWLEDGMENTS

This report presents the main findings of consumer research on nutrition labelling, conducted in early 1999 by Canadian Facts and coordinated by the National Institute of Nutrition (NIN).

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INTRODUCTION AND BACKGROUND

Nutrition labelling is a key factor in helping consumers make healthy food choices. In February 1998, Health Canada began a consumer-focused review of nutrition policy on food labelling. The intent is to improve the usefulness of nutrition labelling, increase its availability and broaden public education on its use. The vision is an improved nutrition labelling system which, combined with public education, reinforces healthy eating practices and enhances the nutritional health and well-being of Canadians. Policies regarding the nutrition information panel, nutrition claims and health claims are all under consideration.

In support of the policy review process, Canadian Facts was commissioned by the National Institute of Nutrition to conduct research on behalf of Agriculture and Agri-Food Canada, Health Canada, and industry partners to obtain detailed information on consumer attitudes and behaviour related to nutrition labelling.

The research reported herein focuses on the nutrition information panel, which provides a standardized presentation of the nutrient content of a food, encompassing considerations related to both format and content (energy and nutrient declarations).

Objectives of this research are:

- to gain insight into how consumers interpret and use the nutrition information panel;
- to understand barriers to consumers' understanding and use of the nutrition information panel;
- to assess the ability of consumers to correctly interpret and use alternative methods of nutrient declaration and bilingual formats;
- to investigate consumer preferences for alternative methods of nutrient declaration and bilingual formats;
- to assess consumer reactions to related issues, such as the order of presentation of nutrients, inclusion of zero values, and nutrition terminology; and
- to investigate the use of, and reactions to, nutrition labelling among those who have special dietary requirements.

STUDY DESIGN

Personal in-home interviews were conducted with a cross-section of 1105 Canadians 18 years of age or older between January 29 and March 1, 1999. An additional 226 interviews with French-speaking residents of Quebec were conducted to support the independent analysis of their responses for comparison with those of English-speaking Canadians. To obtain information on the impact of dietary restrictions on nutrition label usage, quotas were met for individuals who claimed to have diabetes or heart disease, or to purchase food for someone who has one of the diseases. All 1331 respondents participated in a quantitative interview of approximately 30 minutes' duration. A subsample of the total (456) also underwent an additional 30-minute interview.

Editing, coding and data processing were undertaken at the head office of Canadian Facts in Toronto. A multi-stage weighting procedure was applied at the data processing stage, thus ensuring that the data are representative of the Canadian population. Indications of statistical significance are at the 95% level of confidence. Percentages derived from a base of less than 100 should be interpreted with caution.

Table 1 – Distribution of Completed Interviews

	Cross-Section	Cross-Section plus Oversample
TOTAL	1105	1331
Region		
NET: Atlantic	89	89
Newfoundland	23	23
Prince Edward Island	6	6
Nova Scotia	34	34
New Brunswick	26	26
Quebec	288	514
Ontario	399	399
NET: Prairies	193	193
Manitoba	44	44
Saskatchewan	51	51
Alberta	98	98
British Columbia	136	136
Language		
English	830	830
French	275	501
Disease Subgroup		
Diabetes	144	172
Heart Disease	105	123

EXECUTIVE SUMMARY

This research confirms that nutrition plays a key role in the foods Canadians choose to eat:

- 90% view nutrition as extremely, very or quite important in the selection of foods.
- 71% indicate that the nutrition-related information on food packages plays at least a quite important role in their purchase decisions.
- 70% claim to refer to the nutrition information panel often or sometimes.

This interest is reflected in the expressed need for widespread nutrition labelling, with 93% of Canadians wanting to see the nutrition information panel provided on all or most foods. Among those who favour having the panel on all labels, the main reasons underscoring that interest are the need to be informed about what one is eating (54%) and to have information for people on special diets (20%).

Although 38% of Canadians indicate that there is nothing they dislike about current nutrition labels, others offer criticisms related mainly to the overall complexity (17%), insufficient (11%) and sometimes misleading (8%) information, and difficulty reading the information (9%).

Of the 30% of Canadians who rarely or never use the panel, most identify a lack of need due to their familiarity with the food products they eat (40%) or a general disinterest in the information provided (22%), and 23% indicate that it takes too much time to read.

Canadians, by and large, perceive themselves to be doing well in their understanding and use of the information provided on the current nutrition information panel.

- 83% claim some understanding of the information, with 43% believing they understand it very well.
- More than 80% of consumers claim to understand well the terms fat, calories and sugars.
- The majority can make the link between the label information and the food guide in order to pinpoint the fibre information as the means by which to choose more whole grain products (64%) or the sodium information as the means by which to monitor salt intake (75%).
- Lack of use and understanding of serving size information emerges as a barrier to the correct usage of the panel information.
- Confusion regarding the common term “calories” and its nutritional equivalent, energy, is evident. For instance, 30% of Canadians are unable to use the label information to determine the calorie content of one serving of a product.

Throughout this research, barriers to effective use of the nutrition information panel appear to be faced most often by older Canadians and those who are socioeconomically disadvantaged by lower levels of education or income.

Many Canadians indicate using the nutrition information panel often or sometimes to:

- learn the nutrient composition and breakdown of a food
  (87% to assess the content of such nutrients as fat or sodium;
  83% to assess the content of such nutrients as fibre, vitamins or minerals);
- assess the calorie content of a food (78%); or
- compare similar (76%) or different (74%) food products.

For macronutrients such as fat or protein, the perceived usefulness of information on both absolute (grams) and relative (% RDI) amounts appears sufficient to overcome the reduced ease of use resulting from the greater quantity of information.

- Absolute and relative amounts communicate macronutrient content equally well (in each case extracted correctly by >84% of Canadians).
- The information provided by both methods is said to be quite easy to find (66% for grams + % RDI; 74% for grams only).
- The complement of absolute and relative information is regarded as more useful than the absolute amount only (49% vs 44%, respectively).
- Both methods communicate relative nutrient amounts equally well among Canadians as a whole.

For micronutrients, presentation of the % RDI information only appears sufficient to help consumers'assessments. Both methods:

- perform equally well in communicating the correct micronutrient content (86% for % RDI; 87% for % RDI + mg).
- are said to be equally, but not especially, useful (30% for % RDI; 29% for % RDI + mg indicating it to be very useful).
- elicit similar perceptions about the relative amount of a micronutrient; the addition of absolute amounts increases the proportion of "don't know" responses.

Following a brief explanation of the meaning of the relative and absolute amounts, Canadians are significantly more likely to regard the % RDI information on calcium (30%) as more useful than the absolute amount (300 mg).

Consumer reactions to the bilingual label formats tested suggest that each performs equally well among Canadians as a whole.

- Each format supports the correct interpretation of nutrient content by more than 80% of Canadians.
- The information is said to be equally easy to find by Canadians exposed to each of the formats, with more than 60% indicating it to be very easy to find information on protein
- All formats are seen to be equally, but not especially useful, with fewer than half of consumers regarding each format as very useful.
- None of the bilingual formats tested enhances, or interferes with, the ability of the label to communicate relative nutrient amounts.

Although the performances of the bilingual formats are comparable, Canadians have preferences, related to perceived legibility and ease of use.

- Overall, the use of separate panels in English and French is preferred; however, the preferences of French-speaking Canadians are distributed among the three options.
- The "waterfall" format where the respondent's own language is to the left of the numbers receives consistent support among Canadians across demographic categories, and is the least likely format to elicit negative reactions.
- The format with English and French side by side draws similar levels of support as the waterfall format, but stronger negative reactions to the inclusion of both languages on one panel.

Canadians with diabetes or heart disease, who have special dietary needs, show differences in their use and understanding of the label information.

- Canadians with diabetes express a lower level of understanding of the label information than the general population, but higher levels of interest in nutrition and use of the nutrition information panel.
- Canadians with heart disease react in a similar manner as the general population, but perceive themselves to have lower levels of understanding of the panel information.

Through this research, Canadian consumers have provided helpful suggestions for improvements to the current label as well as specific areas where education should be focused.

SUMMARY OF FINDINGS

A. General Perceptions of Nutrition Labelling

1. Importance of Nutrition Information in Food Purchase Decisions

Canadians of all ages and economic subgroups regard nutrition as important in the selection of foods, with 90% viewing nutrition as extremely, very or quite important (Figure 1). Although various sources of nutrition information are available to Canadians, 71% indicate that the nutrition-related information on food packages plays at least a quite important role in their purchase decisions (Figure 2). The level of importance ascribed to nutrition in general, and to the label nutrition information in particular, is higher among women, Canadians over the age of 35 and those who have higher levels of income and education.

Figure 1 -- Importance of Nutrition in Choosing Foods

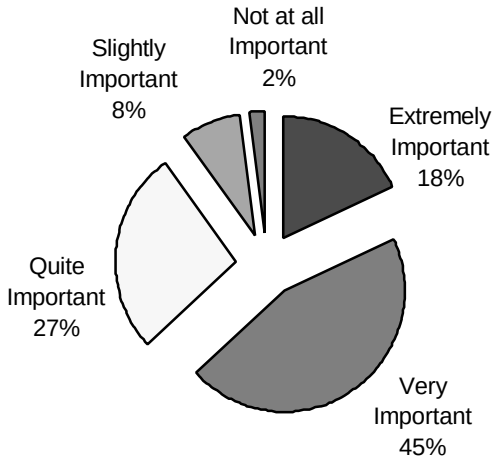
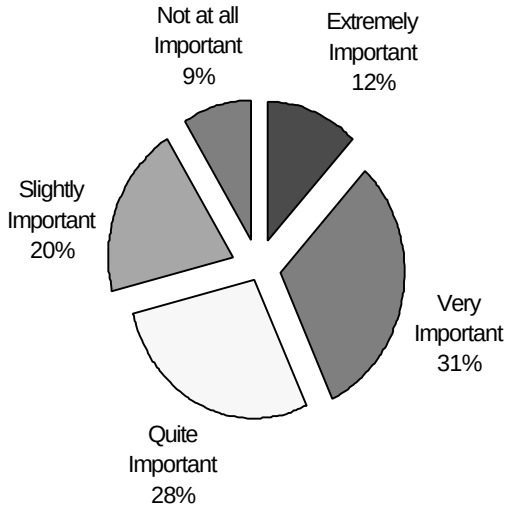


Figure 2 -- Importance of Nutrition Information on Food Packages



2. Most Liked or Useful Nutrition Information on Food Labels

Before interviewers made any specific reference to the nutrition information panel, Canadians were asked what, if anything, they like most or find most useful about the nutrition information provided on the labels of food packages.

By far the most liked nutrition information on food labels is that related to fat, with almost one-half of Canadians indicating its usefulness (Table 2). Liked to a much lesser extent is the information on ingredients in general, and calories, sugar and salt in particular.

Table 2 – Most Liked or Useful Nutrition Information on Food Labels

	Percent of Canadians (n=378)
Fat content	46
Ingredients (unspecified)	17
Calories	16
Energy	3
Sugar content	11
Salt content	9
Cholesterol	7
Nutritional content	6
What is in it	6
Preservatives	6

- Women find the fat content information more useful than do men (53% vs 39%). The same holds among Canadians 55 years of age or older compared with younger Canadians aged 18 to 34 (55% vs 36%), and among English-speaking compared with French-speaking Canadians (49% vs 29%).

- Of the specific information provided on food labels, none is volunteered as being as useful as the fat content. About 16% of Canadians mention the information on the calorie content of foods as particularly useful; this is much higher among women than men (25% vs 7%) and among those with higher incomes (21% vs 11% among those earning ≥$45,000 vs <$25,000). Despite this interest in information on calories, very few Canadians (3%) volunteer the energy content of foods as particularly useful information on food labels.

3. Disliked Nutrition Information on Food Labels

Again, before specific reference was made to the nutrition information panel, Canadians were asked what, if anything, they dislike about the information provided on the nutrition labels of food products.

Canadians appear to have mixed feelings about the nutrition information provided on food labels (Table 3). Many (38%) did not volunteer anything that they particularly dislike; however, others were critical of certain aspects of the information. The main issues relate to overall difficulty understanding or reading the information, and the impression that the information is insufficient or sometimes misleading.

Table 3 – Disliked Nutrition Information on Food Labels

	Percent of Canadians (n=378)
NOTHING DISLIKED	38
NET: DIFFICULT TO UNDERSTAND	17
Difficult to understand	8
Some words are hard to understand	7
Scientific names are hard to understand	2
NET: MISSING/NOT ENOUGH INFORMATION	11
Not enough information	8
Some products are not labelled	2
NET: DECEPTIVE/MISLEADING	8
NET: DIFFICULT TO READ	9
Print is too small	7
Difficult to read	3
NET: SERVING SIZES ARE DIFFERENT/NOT UNIFORM	3

Difficulty understanding the information is mentioned more often by Canadians with lower levels of education (21% vs 11% among those with high school vs university education) and income (21% vs 10% among those earning <$45,000 vs ≥$45,000).

In particular, some Canadians express difficulty understanding the overall nutrition concepts as well as confusion with some wording and scientific terms. Other specific complaints include insufficient information, deceptive or misleading information and lack of uniform serving sizes.

Criticisms of poor legibility and small print size are functional difficulties related to label design, and are reported more often by older Canadians (13% vs 4% among those 55 years or older vs 18-34 years old) and those with lower levels of education (10% vs 2% among those with high school vs university education).

B. Overall Use and Understanding of the Nutrition Information Panel

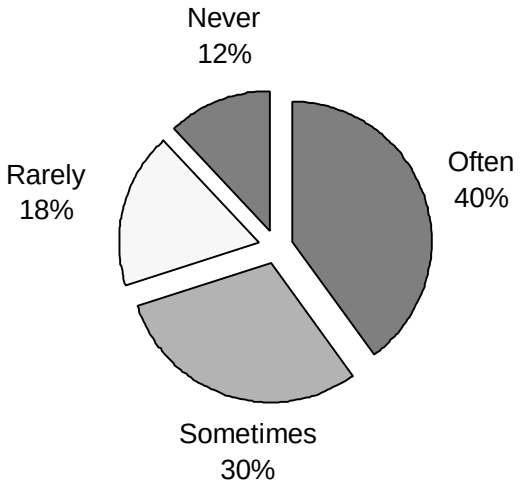
1. Frequency of Use of the Nutrition Information Panel

The majority of Canadians indicates referring often or sometimes to each of the three sections on food labels that provide nutrition information. However, the nutrition claims are used to a slightly greater extent (75%) than either the nutrition information panel (70%) or the ingredient list (70%).

Although use of the panel information is high (Figure 3), the degrees of its use among language and demographics subgroups differ markedly:

- Women are significantly more likely to report use of the panel than are men (77% versus 63%, respectively, use it often or sometimes).
- Significantly more Canadians with higher levels of education and income claim to make use of the panel than do those with lower levels (81% vs 65% among those with university education vs high school; 75% vs 66% of those earning ≥$45,000 vs <$45,000).
- English-speaking Canadians claim higher levels of use of the panel than do Francophones (71% vs 65% use it often or sometimes; 41% vs 27% use it often).

Figure 3 -- Frequency of Use of the Nutrition Information Panel



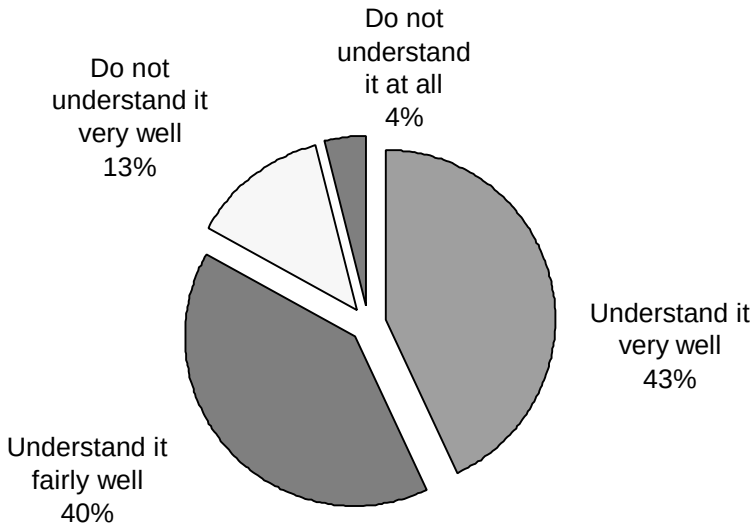
2. Level of Understanding of the Nutrition Information Panel

Although 83% of Canadians claim some understanding of the information provided by the nutrition information panel, only 43% believe that they understand the information very well (Figure 4). Overall, 17% of Canadians indicate that their understanding of the panel is poor.

- Poor understanding is more pronounced among older Canadians than the general population, with 22% of those aged 55 years or older indicating that they do not understand the information very well or at all.

- A poor understanding is also expressed by those who are socio-economically disadvantaged by low levels of education (22% vs 10% among those with high school vs university education) or income (25% vs 11% among those earning <$25,000 vs ≥$45,000).

Figure 4 -- Level of Understanding of the Nutrition Information Panel



3. Uses of the Nutrition Information Panel

When presented with a variety of possible uses of the nutrition information panel, Canadians who report using the panel often or sometimes claim to have a range of applications for the information that it contains (Table 4).

Table 4 – Uses of the Nutrition Information Panel

	Percent of Canadians Who Use the Panel **Often** or **Sometimes** (n=786)	
	Often	Often or Sometimes
To see how high or low a food is in nutrients like fat or sodium	58	87
To see how high or low a food is in nutrients like fibre, vitamins or minerals	46	83
To get a general idea of the calorie content of a food	45	78
To compare similar types of foods with each other	40	76
To compare different types of foods with each other	39	74
To see if something in the advertising/on the package is true	33	65
To figure out how much of a food product you should eat	23	54

Consumer use of the panel suggests the following:

- Canadians demonstrate a widespread interest in the specific nutrients in the foods they eat, with a sizable proportion claiming to make regular use of the panel to assess how high or low a food is in such nutrients as fat, sodium, fibre, or vitamins or minerals. Regular use of the panel is slightly more focused on fat and sodium than on assessing the levels of nutrients such as fibre, vitamins or minerals.

- Demographic differences in use of information on these specific nutrients are apparent, with women more likely than men to refer regularly to information on such nutrients as fat or sodium (62% vs 53%) and fibre, vitamins or minerals (51% vs 41%). Regular use of information on fat or sodium is also higher among English-speaking than French-speaking respondents (60% vs 44%) and those with higher levels of income (64% vs 52% among those earning ≥$45,000 vs <$25,000).

- The level of interest in the calorie content of foods is also high, with 45% of consumers indicating that they use the information often. This regular use is significantly higher among women than men (54% vs 34%) and among those with higher levels of income (50% vs 37% among those earning ≥$45,000 vs <$25,000).

- Many Canadians claim to use the panel to assist them in comparing food products. Comparison of similar types of foods is higher among women than men (80% vs 72% often or sometimes) and among those with higher income (80% vs 68% among those earning ≥$45,000 vs <$25,000).

- Fewer Canadians (54%) use the panel often or sometimes as an indication of the quantity of a food that should be eaten.

Respondents were asked whether, when they look for information on the nutrition information panel, they are generally able to find what they need. Canadians express varying degrees of success with this task, with 57% indicating that they are often able to locate the information they are seeking and 36% indicating that they find it only sometimes. The 93% of Canadians who indicate often or sometimes finding the information they look for, volunteer that they usually seek information on fat (77%), calories (28%), protein (24%), energy (18%), carbohydrate (14%), sugar (12%), salt (12%), fibre (9%) and cholesterol (8%).

Of the 6% who rarely or never find the information they are seeking, the main complaints are the difficulty locating information on fat (18%), and the general lack of sufficient information (15%). Some also indicate having difficulty finding information on vitamins (12%), minerals (10%), fibre (8%), chemicals (7%) and protein (6%).

4. Reasons for Rarely or Never Using the Nutrition Information Panel

Despite the stated importance of nutrition in choosing foods, 30% of Canadians indicate that they seldom refer to the nutrition information panel. Those who rarely or never use the panel identify a variety of reasons for their infrequent use from among a list presented to them (Table 5). Many identify a lack of need due to their familiarity with the food products that they eat regularly (40%), or a general disinterest in the information that is provided (22%).

Table 5 – Reasons for Rarely or Never Using the Nutrition Information Panel

	Percent of Canadians* Who Claim as a **Very Important** Reason (n=319)
I usually buy the same product so I am familiar with the nutrition information	40
It takes too much time to read	23
I prefer getting information from other sources	23
I am just not interested	22
It is hard to read	21
I really don't know what to do with the information	19
The information is not presented in the same way from one product to another	19
It is not always on products	16

*of those who "rarely" or "never" refer to the panel

For others, particularly older Canadians and those without advanced education, certain barriers appear to prevent use of the panel information. These barriers include the effort required to read and understand the information, the poor legibility that results from the density of information and the small print size, as well as the inconsistent way in which the information is presented from one product to another and the lack of availability of the nutrition information panel on some products.

5. Understanding and Use of Nutrition Terms

Canadians were shown a list of nutrients that often appear on the nutrition information panel, and asked to indicate whether it is information that they understand well, have heard of but do not understand well, or have no idea about.

- Fat, calories, and sugars appear to be the most widely understood terms (Table 6), with more than 80% of Canadians claiming to understand each of them well. Understanding of the terms calcium, cholesterol and protein also appears to be widespread, with at least three-quarters of adults indicating that they understanding them well.

- Notably fewer Canadians indicate having a good understanding of the term energy (69%) compared to calories (87%) [see also section E-2-ii].

- Approximately one-third of Canadians does not report a good understanding of the terms iron, dietary fibre, sodium and carbohydrate.

- Despite Canadians' widespread belief that they understand the general category of fats, they express considerable uncertainty about the specific types of fats, saturated fat and trans fats. In particular, 55% of Canadians have no idea at all about the meaning of trans fats, and 28% have heard of the term but do not believe they understand it well.

For many of the terms, understanding and familiarity are higher among those with higher levels of education and income.

Table 6 – Understanding of Nutrition Terms

	Percent of Canadians Who Claim to **Understand Term Well** (n=1105)
Fat	88
Calories	87
Sugars	83
Calcium	78
Cholesterol	76
Protein	76
Energy	69
Iron	69
Dietary Fibre	66
Sodium	65
Carbohydrate	63
Saturated Fat	53
Trans Fats	17

For each of the same terms, Canadians were asked whether it is a nutrient that they are trying to limit or reduce in their diet, increase or eat more of, or not concerned about either increasing or decreasing.

- Almost three-quarters (73%) indicate that they are trying to reduce or limit their intake of fat, with 60% mentioning saturated fat and 62% cholesterol. Confusion about trans fats is again evident, with 54% unable to respond and only 23% attempting to reduce their intake.

- Confusion between calories and energy is also apparent. Although 55% indicate trying to reduce their calorie intake, many (40%) mention aiming to increase their energy intake.

- Half (52%) of Canadians indicate not trying to change their intake of carbohydrate and 22% say they are attempting to reduce their intake, although 53% specifically mention trying to increase their fibre intake.

- The perceived value of minerals is evident by the 49% who indicate trying to increase their calcium intake and 46% their iron intake, although in each case 44% indicate not aiming to make any changes.

6. Opinions Regarding Availability of the Nutrition Information Panel

Almost all Canadians have an opinion on the availability of the nutrition information panel (Table 7). Asked near the end of the interview, there is a strong consensus among Canadians that the panel should be provided on all (74%) or most (19%) foods. A comparison of the perceptions about the current availability of the information on labels versus the ideal reveals that many Canadians believe that the panel is now present on many foods, but that they would like to see it on all foods.

- English-speaking Canadians appear to be stronger supporters of more widespread nutrition labelling than French-speaking Canadians (75% vs 69%). Conversely, more Francophones than Anglophones believe that the information already appears on all foods (26% vs 13%).

- Women and younger Canadians are also more likely to support broader nutrition labelling, with many of the opinion that the panel information should be available on all foods (77% vs 71% among women vs men; 81% vs 67% among those aged 18-34 vs 55 or older).

Table 7 – Opinions Regarding Availability of the Nutrition Information Panel —Current Versus Ideal—

	Percent of Canadians	
	How Widespread Panel **Currently Is** (n=1105)	How Widespread Panel **Should Be** (n=1105)
NET: ON ALL/MOST FOODS	71	93
On all foods	15	74
On most foods	56	19
On some foods	25	5
Not on any foods	1	1
Don't know	3	1

Among the 74% of Canadians who believe that the nutrition information panel should be on all foods, the main reasons volunteered reveal their areas of interest and concern (Table 8):

- The most important reason given is the perceived potential of this kind of information in informing and educating people about the composition of the foods they eat (54%).
- The existence of specific needs among Canadians with health conditions and allergies is also seen as an important reason for consumers to have access to detailed nutrition information. Some 20% of Canadians who believe that the panel should be on all foods cite the needs of these special interest groups.
- Some of these Canadians (14%) are interested in assessing their level of intake of specific food components, such as fat, calories and protein, and the panel provides this type of detail on individual food products.
- Widespread availability of the panel is said to be of further benefit by facilitating comparison between different types of foods and between different brands of the same food product (8%).

Table 8 – Volunteered Reasons Why the Panel Should be on All Foods

	Percent of Canadians Who Believe Panel Should be on **All** Foods (n=820)
NET: To understand what you are eating	54
NET: For people on special diets	20
NET: To monitor specific nutrients	14
NET: To help in comparison/purchase decisions	8
NET: To guide you in how much of different nutrients you need	4

Regardless of their opinion of how widespread the nutrition information panel should be on foods, Canadians believe that the panel would be very useful on a wide range of foods. The types of foods volunteered range from packaged and processed foods in general (35%) to dairy products (17%), cereal, bread and pasta products (16%), meat and seafood (13%), bakery products (12%), snack foods (8%) and dressings and sauces (7%).

C. Performance of Nutrition Information Panel Options

Respondents were shown one of six possible test labels that incorporated two alternative methods of declaring nutrient content for macronutrients and micronutrients and three different bilingual formats (Figure 5; Appendix I).

Figure 5 – Matrix of Nutrition Information Panel Options

Bilingual Format	Method of Declaring Nutrient Content: **1.** -macronutrients as grams -micronutrients as % RDI + mg	Method of Declaring Nutrient Content: **2.** -macronutrients as grams + % RDI -micronutrients as % RDI
1. English, French separate panels	*Appendix I-a*	*Appendix I-b*
2. English/French side-by-side	*Appendix I-c*	*Appendix I-d*
3. Waterfall (own language on left)	*Appendix I-e*	*Appendix I-f*

Listed on the panel were the macronutrients energy, protein, fat (with saturates and trans) and carbohydrates (with fibre), as well as sodium, and the micronutrients calcium and iron. The nutrient declaration methods addressed alternative combinations of absolute amounts, or grams (g) and milligrams (mg), and relative amounts, or % Recommended Daily Intake (% RDI). These were presented as two different options for the macronutrients and micronutrients:

1. macronutrients in grams (or mg for sodium) only, and micronutrients in milligrams plus % RDI; and
2. macronutrients in grams plus % RDI, and micronutrients as % RDI only.

As well, three bilingual label options were tested:

1. separate panels in English and French;
2. a panel with English and French text presented side-by-side; and
3. a "waterfall" format, with numbers presented in the middle of the panel and English or French text to the right and left (respondents saw their own language to the left of the numbers).

The performance of the various nutrition information panel options was tested using the following four measures:

1. Correct communication of nutrient content;
2. Ease of finding nutrient information;
3. Usefulness of the information; and
4. Effectiveness in communicating relative amounts.

1. Performance of Two Methods of Declaring Nutrient Content

i) Two Methods of Declaring Macronutrient Content

Using one of six test labels on a cookie bag as a visual prompt, Canadians were asked if they could tell from the information on the label how much protein there is in one serving, or two of the cookies. They were also asked whether they could find the amount of fat in one serving.

Without the benefit of any explanation of how to use information presented as absolute or relative amounts, Canadians appear to recognize the value of both ways of declaring macronutrient content. Reactions to, and performance of, the two declaration methods are as follows (Table 9; Figure 6):

Table 9 – Performance of Two Methods of Declaring Macronutrient Content

	Percent of Canadians					
	grams + % RDI			grams		
Performance Measure	Total (n=658)	English (n=407)	French (n=251)	Total (n=673)	English (n=423)	French (n=250)
1. Communication of nutrient content						
(NET: Any correct mentions)						
Amount of protein in one serving	90	91	87	88	89	86
Amount of fat in one serving	85	85	87	84	84	87
2. Ease of finding information on amount of protein						
Very easy to find	66	70	52	74*	75	68*
3. Usefulness of information on amount of fat						
Very useful	49	48	53*	44	45	40
NET: Useful (score 9 or 10)	57*	55	61*	50	51	48
4. Communication of relative amount of fat in one serving						
"A lot of fat"	64	66	54	63	62	65*

Notes: *Indicates significantly higher score, at the 95% level of confidence, compared with the corresponding result for the other option
Ratings for ease of finding information and for usefulness are based on a 10-point scale (respectively: 10=Very easy to find, 1=Very difficult to find; and 10=Very useful, 1=Not at all useful)

- Both methods of macronutrient declaration perform equally well in communicating the correct information on the content of the macronutrients protein and fat, with most Canadians able to correctly extract the information using either option.

- The information provided by both methods of declaring macronutrients is regarded as easy to find. However, listing of absolute amounts (grams) alone significantly enhances the ease of finding macronutrient information compared with presentation of the two methods combined (grams and % RDI) (74% vs 66%, respectively). This difference is largely driven by preferences of French-speaking Canadians.

- The information presented using a combination of both grams and % RDI is regarded as being significantly more useful in describing the macronutrient content of a food than is the information on grams only (57% vs 50%, respectively, allocate a score of 9 or 10).

- Among Canadians in general and among English-speaking Canadians, the two methods of macronutrient declaration perform equally well in communicating relative nutrient amounts. Equal proportions of Canadians provided with grams only and with both grams and % RDI information judge the fat content of two cookies as being "a lot" (63% vs 64%, respectively).

- However, among Francophones it appears that the combined format of nutrient declaration, showing both absolute and relative amounts, provides a context for the assessment of how much of a particular macronutrient a product contains. Presentation of grams only is significantly more likely to elicit a response among Francophones that the fat content is "a lot" than is presentation of both grams and % RDI (65% vs 54%, respectively).

Considerably more Canadians find it useful to have access to information on both the absolute and relative amounts of a macronutrient compared with absolute amounts only. This perceived usefulness appears sufficient to overcome, or at least offset, the reduced ease of use resulting from the greater quantity of information. Nevertheless, macronutrient information presented using either method of declaring the content is viewed as more easy to find than useful.

ii) Two Methods of Declaring Micronutrient Content

To test the performance of the two methods of declaring micronutrient content, a similar questioning procedure was following as for macronutrients, referring instead to the amount of calcium in one serving of cookies. The reactions to, and performance of, the two methods of declaring the micronutrient content are as follows (Table 10; Figure 6):

Table 10 – Performance of Two Methods of Declaring Micronutrient Content

Performance Measure	Percent of Canadians	
	% RDI (n=658)	% RDI + milligrams (n=673)
1. Communication of nutrient content		
Amount of calcium in one serving		
NET: Any correct mentions	86	87
Don't know	10*	4
2. Usefulness of information on amount of calcium		
Very useful	30	29
3. Communication of relative amount of calcium in one serving		
"A lot of calcium"	23	24
Don't know	16	22*

Notes: *Indicates significantly higher percentage, at the 95% level of confidence, compared with the other option
Rating for usefulness is based on a 10-point scale (10=Very useful; 1=Not at all useful)

- The two methods perform equally well in communicating the correct information on the amount of the micronutrient calcium that the test product contains. However, significantly more of those presented with the relative % RDI information only were unable to respond.
- Satisfaction with the usefulness of the two methods is lower than for presentation of the macronutrient information. Although the language differences are not as marked as for macronutrient declaration, more English-speaking than French-speaking Canadians find the combined absolute and relative amounts to be very useful compared with the % RDI information alone. However, Francophones have a significant preference for expressing micronutrients as % RDI only rather than as % RDI and milligrams (40% vs 28% scored as very useful).

- Assessments of the amount of a micronutrient contained in the test product do not appear to be influenced by the addition of information on absolute amounts. Each option elicits similar judgments as to whether the product contains a lot, a little, hardly any or no calcium at all. In fact, the addition of absolute amounts shows the potential to confuse some Canadians in their attempts to assess the significance of quantities, as evidenced by the significantly higher number of "don't know" responses.

Addition of information on absolute amounts of nutrients does not assist Canadians in their assessment of the quantities of a micronutrient. Thus, it appears that consumers prefer the principle of simplicity for the presentation of information on micronutrient content, specifically by being providing with only the % RDI information.

Figure 6 – Summary of Performance of Two Methods of Declaring Nutrient Content

	Macronutrients	Micronutrients
Correct Communication of Nutrient Content	Both methods perform equally well in communicating protein and fat content. Levels of correct identification of protein and fat content are high for both methods.	Both methods perform equally well in communicating calcium content. Levels of correct identification of calcium content are high for both methods. However, the use of % RDI alone resulted in significantly higher levels of "don't know" responses.
Ease of Finding Nutrient Information	In absolute terms the information provided by both methods of nutrient declaration is regarded as being quite easy to find. However, of the two methods, it is said to be significantly easier to find nutrient information when it is presented as absolute amounts (g) only, especially among French-speaking Canadians.	Not tested.
Usefulness of the Information	The complement of (g) and % RDI information is regarded as being significantly more useful than the (g) only method of declaration. Both methods of nutrient declaration are significantly more likely to be described as presenting information in a manner that is easy to find than to be described as useful.	English-speaking Canadians find the combined (mg) and % RDI information more useful than % RDI only. Francophones find the % RDI method of nutrient declaration to be more useful than the combined (mg) and % RDI method. In general, micronutrient information is not regarded as being as useful as macronutrient information.
Effectiveness in Communicating Relative Nutrient Amounts	Among Canadians as a whole, both methods communicate relative nutrient amounts equally well. Among Francophones, those seeing the (g) only information are more likely to judge the amount of fat as "a lot" than those provided with (g) and % RDI information.	Both methods elicit similar perceptions of the relative amount of calcium. The addition of absolute amounts does not appear to alter the perceptions of the amount of calcium present, and may actually increase confusion.

2. Performance of Three Bilingual Formats

The reactions to the three bilingual formats suggest that each performs equally well among Canadians as a whole (Table 11; Figure 7). In general no one format enhances, or conversely interferes with, the overall performance of the label.

Table 11 – Performance of Bilingual Formats

Performance Measure	Percent of Canadians				
	Waterfall (n=448)	E/F Side-by-Side			E, F Separate (n=451)
		Total (n=432)	English (n=269)	French (n=163)	
1. Communication of nutrient content					
Amount of protein in one serving					
NET: Any correct mentions	89	87	88	82	91
NET: All incorrect mentions	5	7	5	14	4
Amount of fat in one serving					
NET: Any correct mentions	88[1]	83	83	84	84
2. Ease of finding information on amount of protein or calcium					
Very easy to find (protein)	68	67	69	62	74[2]
3. Usefulness of information on amount of fat or calcium					
Very useful (fat)	48	45	44	48	45
Very useful (calcium)	29	30	29	33	29
4. Communication of relative amount of fat in one serving					
"A lot of fat"	67[3]	63	65	57	60
"A lot of calcium"	21	27	27	27	23

Notes: Footnotes indicate a significantly higher percentage, at the 95% level of confidence:
[1]compared with total for E/F Side-by-Side
[2]compared with all other options, except E/F Side-by-Side among English-speaking Canadians
[3]compared with E/F Side-by-Side format among French-speaking Canadians
Ratings for ease of finding information and for usefulness are based on a 10-point scale
(respectively: 10=Very easy to find, 1=Very difficult to find; and 10=Very useful, 1=Not at all useful)

- Each format supports the correct interpretation of the protein or fat content of the test labels by more than 80% of Canadians.

- The nutrition information is regarded as being quite easy to find, with more than 60% of Canadians exposed to each of the formats describing it as very easy to find. The

perception that it is easier to find the information when the English and French panels are shown separately is not surprising, given the reduced volume of text per panel.

- The only other difference of note occurs among Francophones who experience a greater degree of difficulty extracting the information on protein when presented in the "English/French Side-by-Side" format. However, this format performs on par with the "Separate Panels" and "Waterfall" layouts for fat and calcium, suggesting that the initial difficulty is quickly overcome.

- All formats are regarded as equally, but not especially, useful. None stands out in terms of ability to communicate the relative amounts of nutrients such as fat or calcium.

The results suggest that any of these three bilingual formats should be capable of supporting the effective communication of the information on the panel, provided they are well executed according to solid design principles.

Figure 7 – Summary of Performance of Three Bilingual Formats

Correct Communication of Nutrient Content	All three bilingual formats perform equally well among Canadians as a whole, and support high levels of correct interpretation of nutrition information. However, when analyzed by linguistic group, Francophones appear to be less successful in extracting information from the English/French side-by-side format at first glance than they are from the other two formats.
Ease of Finding Nutrient Information	The information based on any of the three bilingual formats is regarded as being quite easy to find. However, of the three, the use of separate panels for English and French is thought to significantly enhance the ease with which the nutrient information can be found.
Usefulness of Information	There are no significant differences in the ability of the three bilingual formats to communicate in a manner that is regarded as being useful. Fewer than half of Canadians regard the formats as being very useful.
Effectiveness in Communicating Relative Nutrient Amounts	There is no evidence that any of the three bilingual formats enhances, or conversely, interferes with, the users' ability to correctly infer the amount of macronutrients or micronutrients.

D. Preferences Among Nutrition Information Panel Options

1. Methods of Declaring Nutrient Content

A brief educational intervention was provided using calcium as an example, explaining how to interpret and use the absolute amounts and the % RDI information. Respondents were shown an example of a cheese product as a visual aid (Appendix II) and told the following:

> *"We can talk about the amount of a nutrient in a serving of food in a couple of ways…. One way is to tell you the actual amount of calcium in a serving of this food. For instance, one serving of this product contains 300 mg of calcium.*
>
> *"Or, we can tell you how the amount of calcium in one serving of this food compares to what you need for a whole day. For instance, one serving of this food gives you 30% of the calcium you need for a day. Remember, we are talking only about averages of daily needs and these needs vary from one person to another."*

i) Usefulness of Methods of Declaring Nutrient Content

Following the brief explanation, Canadians are significantly more likely to regard the % RDI information on calcium (30%) as more useful than the absolute amount (300 mg)(Table 12).

Table 12 – Usefulness of Absolute Amount versus % RDI

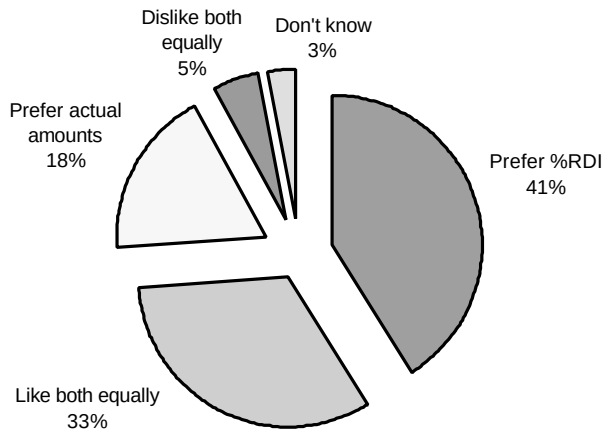
	Percent of Canadians	
	Absolute Amount (300 mg) (n=1105)	% RDI (30%) (n=1105)
Very useful (score of 10)	26	38
NET: Useful (score of 9 or 10)	30	47*
NET: Not useful (score of 1 or 2)	24*	11

Notes: *Indicates significantly higher percentage, at 95% level of confidence, than for other method
Score is based on a 10-point rating scale (10=Very useful; 1=Not at all useful)

ii) Preference for Method of Declaring Nutrient Content

When asked which means of nutrient declaration they prefer following the brief educational intervention, Canadians express a significant preference for the % RDI information, followed by equal preference for either absolute amount or % RDI (Figure 8). The preference for % RDI is consistent across gender, age, education and income categories. It could reflect the greater perceived usefulness of nutrition information expressed in a relative context and the enhanced understanding, following the brief educational intervention, of its role in the interpretation of nutrition information.

Figure 8 -- Preference for Method of Nutrient Declaration

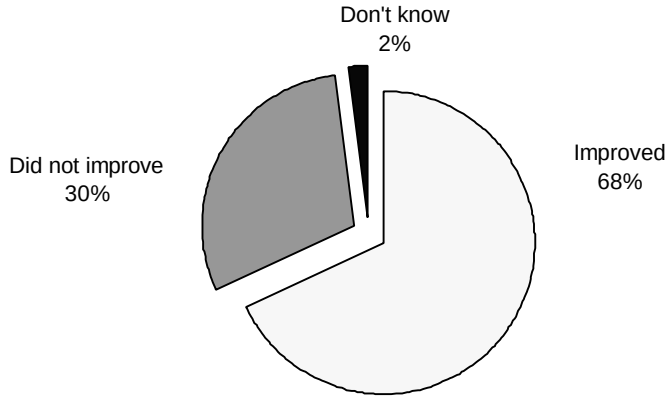


Among those who prefer the % RDI information, the primary benefits volunteered are to assist them in determining how much of a food to eat and how much of a nutrient they should have in a well-balanced diet. They also describe the information on % RDI as easy to understand and use. Those who prefer absolute amounts cite the perceived benefit of this format as the accuracy and explicit statement of the amount of the nutrient in the food product.

iii) Improvement in Perceived Understanding of % RDI

The role of education in improving the perceived understanding and value of the % RDI information is clear from the fact that 68% of Canadians claim to have a better understanding of this concept following the brief description provided (Figure 9). Among these Canadians, 93% indicate that this intervention would assist them in their future understanding and use of the % RDI information.

Figure 9 -- Impact of Educational Intervention on Perceived Understanding of % RDI



iv) Other Preferences

Canadians were also shown sample labels and asked whether they have a preference between the terms “Percent Daily Value” and “Percent Recommended Daily Intake”. Of the 71% of Canadians who indicate a preference, 84% prefer the % RDI term.

Of the 55% of Canadians who indicate a preference between the title options “Nutrition Facts” and “Nutrition Information”, 61% favour the “Nutrition Information” title.

2. Preference for Bilingual Format

Following the detailed evaluation of their assigned bilingual format, Canadians were presented with all three of the bilingual formats as well as a fourth option representing a "Reverse Language Waterfall" in which the respondent's own language appeared to the right of the numbers.

Although the performances of all three bilingual formats are comparable, Canadians have clear preferences, related to perceived legibility and ease of use (Table 13). Only the preferences of French-speaking Canadians are distributed among the three main options.

Table 13 – Preference for Bilingual Format

	Percent of Canadians				
	E, F Separate	Own Language Waterfall	E/F Side-by-Side	Reverse Language Waterfall	No Preference
Total Canadians (n=1331)	32	23	22	7	15
English-speaking Canadians (n=830)	34	23	22	6	14
French-speaking Canadians (n=501)	21[1]	27	24	11[2]	16

Note: Footnotes indicate a statistically significant difference, at the 95% level of confidence:
[1]compared with both total and English-speaking Canadians for the same format
[2]compared with English-speaking Canadians for the same format

Among Canadians as a whole, the use of separate nutrition information panels in English and French is the most popular bilingual format. Reactions among population subgroups are mixed, however, with English-speaking (34%) and upper income (37%) Canadians showing the strongest support for the separate panel layout. The perceived strengths are the ease of finding, reading and understanding the information that results from presenting only one language per panel.

Support for the separate panel format is stronger than for the "Own Language Waterfall" and "English/French Side-By-Side" formats, with the latter two being less favoured because they incorporate both English and French on the same panel. Only 7% prefer the "Reverse Language Waterfall", with 39% citing it as their least liked format. Finally, 15% indicate no preference.

When the "Waterfall" format is presented with the individual's own language on the left, it receives consistent support among Canadians of varying age, gender, language, education and income. It is also the least likely format to elicit negative reactions, with only 6% claiming to like it the least among the options. Its legibility and ease of use are regarded as its greatest strengths, mentioned by 44% of those who prefer this format.

The response to the "Reverse Language Waterfall" format suggests that, despite sensitivity to the placement of language, particularly among English-speaking Canadians, Canadians of both languages find the task of reading from right to left relatively easy. Those who have difficulty using the "Reverse Language Waterfall" cite the need to "read backwards" and the difficulty with understanding resulting from the language reversal.

The "English/French Side-By-Side" format elicits similar levels of overall support as the "Own Language Waterfall" format, and is much preferred by both English- and French-speaking Canadians to the "Reverse Language Waterfall" format. Canadians who favour the side-by-side format like the clear, straightforward presentation of information and the compact, condensed display of both languages on one panel. Conversely, those who like the side-by-side format the least mention the confusing layout, which they describe as too close together, crowded and difficult to read. This format also elicits a much stronger negative reaction to the inclusion of both languages on one panel than does the "Own Language Waterfall" format.

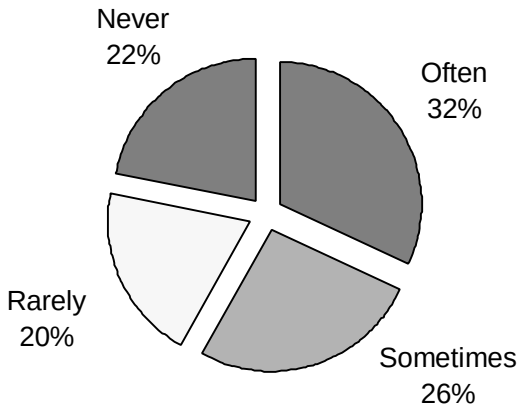
E. What Consumers Understand from Nutrition Labelling

Many variables influence the levels of understanding and use of the nutrition information panel. Those that were explored in this study are outlined in the sections that follow.

1. Understanding and Use of Serving Size Information

Understanding of serving size information is important to the correct usage of the nutrition information panel. Some 42% of Canadians rarely or never use the serving size reference on the panel in comparing products (Figure 10). This lack of use is even higher among older Canadians (54% of those 55 years or older), and those with lower levels of education or income (50% of those with high school education; 50% of those earning <$25,000). Regular use of serving size is almost twice as high among women than men (40% vs 22%).

Figure 10 -- How Often Serving Size Information is Used When Comparing Products



Many Canadians are unaware of the concept of using the serving size information in relation to the nutrient declaration on a food product. Presented with a label from a 300-mL juice bottle having a 150-mL serving size, respondents were asked how much carbohydrate would be in the whole bottle. A substantial proportion (64%) did not double the nutrient content, thereby underestimating the carbohydrate content. Having access to information on the number of servings per container (i.e. “Servings per bottle 2”) had no impact on the ability to extrapolate

serving size to the declared nutrient information (65% of respondents gave an incorrect response or were unable to answer).

The assessment of nutrition information on the basis of serving size is regarded as a challenge, with 46% of Canadians indicating that they find it very or fairly difficult to compare products that have different serving sizes. For some Canadians, the task is sufficiently difficult to prevent their use of the nutrition information panel. Although older Canadians and those with lower levels of education encounter the greatest difficulty in their attempts to use serving size information, the inconsistent way in which serving size is declared across products is reported to be a problem of notable magnitude for Canadians of all ages and levels of education and income.

2. Interpretation of Nutrition Concepts

i) % RDI

The % RDI is a difficult concept for many Canadians. Prior to the brief educational intervention, questions were asked to assess the levels of understanding of the % RDI reference.

Perceptions of the meaning of the information are varied, with only between one-third (35% for fat) and one-half (54% for calcium) of Canadians understanding that the percentage is a reference to the daily requirement of that nutrient. The complexity of this nutrition concept is further evident in the 20% of Canadians who are entirely unable to volunteer any meaning for the percentage reference shown beside fat and the 13% who do not know how to interpret the reference beside calcium. Again, substantial differences in the interpretation of the % RDI are evident by age, education and income.

A common misinterpretation is the belief that the percentage somehow refers to the amount of the nutrient in the product (e.g. “15% of it is calcium”).

ii) Calories Versus Energy

As reported earlier, Canadians have varying degrees of understanding of the terms that appear on the nutrition information panel, including "calories". The calorie information on the panel is highly valued and regularly sought by consumers. The fact that energy is the nutritional equivalent of calories is not well understood. The perceptions and presumed behaviour with respect to energy versus calories are markedly different:

- Many more Canadians cite calorie information (16%) than energy information (3%) on the panel as being useful.
- Far more Canadians believe they have a good understanding of calories (87%) than of energy (69%). Further, although 41% indicate that the terms are equally easy to understand, consumer familiarity with the term "calories" is apparent by the 51% who indicate that it is easier to understand than energy. In contrast, only 6% say that the term "energy" is easier to understand than the term "calories".
- Although 64% of Canadians understand that the terms "calories" and "energy" have the same meaning and nutritional reference, 36% respond that the terms have different meanings (28%) or that they are uncertain (8%) if the terms differ.
- Among the 28% of Canadians who believe that a difference exists between the terms "calories" and "energy", one notable distinction is the tendency to refer to calories in a negative manner, specifically in relation to weight gain and fat intake. Calories are perceived to be "things that are eaten", while energy "is power", or the positive result of what is consumed.
- An important behavioural dichotomy exists, with a majority of Canadians (55%) indicating that they are attempting to reduce their intake of calories, but many (40%) indicating attempts to increase their energy consumption.
- Within the context of presentation of information on the panel, the perceived discrepancy between the term "calories" and the nutritional reference to energy is sufficient to confuse some Canadians. For instance, in response to the request to determine the calorie content of one serving (two cookies) of the test product, 30% of Canadians offer an incorrect response or are entirely unable to respond to the task.

3. Linking the Nutrition Information Panel to the Food Guide

To determine the connection consumers make between *Canada's Food Guide to Healthy Eating* and the nutrition information panel, respondents were asked if there is any information on the label to help them in choosing more whole grain products. A full 64% of Canadians respond with a correct reference to the fibre information; however, 25% are unable to answer and the rest mention a variety of other nutrients, such as protein, carbohydrates and fat.

The concept that the specific sodium information on the panel is the means by which to monitor the intake of salt is understood by 75% of consumers. However, the other 25% are confused about the connection between the panel information and the common term.

Once again, in both cases the apparent barriers to correct use of the panel are strongly related to age and education, with those Canadians who are most likely to have difficulty using the panel information for these tasks being older and having lower levels of education and income. For example, inability to respond to the fibre question is apparent among 36% of those aged 55 years or older, 35% of those with high school education and 28% of those earning <$25,000.

Linguistic and cultural differences also emerge, with French-speaking Canadians showing a significantly lower level of understanding of the whole grain relationship than English-speaking Canadians (36% vs 23% unable to respond).

4. Order of Nutrient Presentation

Shown the proposed Canadian order of presenting nutrients along with the existing order on the United States (US) Nutrition Facts panel (Appendices III, IV), the majority of Canadians (60%) does not believe that the order in which nutrients are presented on the label has any implicit meaning. Francophones are significantly more likely than English-speaking Canadians not to attribute meaning to the order (71% vs 59%).

Among the 31% who do believe that there is an implied meaning, the greatest proportion (35%) believe that it suggests importance, with the most important nutrients listed first. The order is also thought to imply quantity, with 23% of those believing in an implied meaning stating that the nutrients present in the highest quantity are listed first. Only 9% of Canadians are unsure whether the order has any meaning.

Most Canadians (74%) find the two orders of presenting nutrients to be equally easy to use. When there is a preference, it tends to be for the proposed Canadian order over the US order (16% versus 10%, respectively). Reactions to the proposed Canadian order are quite consistent across linguistic and demographic subgroups of the population.

The preference for the order of presenting nutrients seems to be related to specific major dietary concerns (Table 14). The proposed Canadian nutrient order appeals to those who like the relatively lower emphasis that it places on fat, with the focus instead being on protein, and the grouping of energy, protein and fat together. In contrast, the US nutrient order seems to be more attractive to those who like its focus on fat and, to a lesser extent, calories. Many of those who prefer the US order indicate liking the placement of fat near the top of the label.

Table 14 – What Makes Information Easier to Find on Preferred Order

	Percent of Canadians	
	Canadian Order (n=63)	US Order (n=35)
NET: Fat is near the top	16	59
NET: Calories are at the top	7	28
Protein is near the top	22	1
Energy, protein and fat are listed together	20	-
NET: Order of importance	21	16
NET: Clear/easier to read	6	13

5. Declaration of Zero Values

To determine Canadians' reactions to whether key nutrients should be listed on the nutrition information panel regardless of whether they are present in a given food, they were shown two label formats for a cheese product. One format included trans fat and fibre in the list of declared nutrients along with zero values; in the other format, those nutrients were deleted from the nutrient list. Almost three-quarters of Canadians (73%) prefer the declaration of zero values, regardless of gender, age, education, income or language.

Many Canadians (57%) assume that if a nutrient is not listed on the panel, it is not present in the food (Table 15). However, there is a degree of uncertainty about the incomplete information and the motives for omitting a nutrient from the panel, with a minority of consumers concerned that something is being deliberately withheld by the manufacturer. Aside from the strong preference for the declaration of zero values, the explicit display of key nutrients regardless of whether they are present improves consumer confidence that they have been provided a complete listing of the nutrient content of foods.

Table 15 – Perception of Meaning When Nutrient is Omitted from the Panel

	Percent of Canadians (n=378)
NET: Nutrient is not there	57
NET: Incomplete information	18
NET: Withheld information	10
Could have been missed/neglected/forgotten	6
Something is being withheld/hidden	4

F. Groups with Special Dietary Needs

1. Canadians with Diabetes

Compared with Canadians in general, those with diabetes:

- attribute significantly greater importance to the role of nutrition in food purchase decisions (73% vs 63% of the total population cite it as extremely or very important);

- consider the nutrition-related information on food products to be of significantly greater importance (55% vs 43% extremely or very important);

- find particular value in the information on food products that provides the nutrient information (73% vs 56%), particularly the specific information on the fat content (62% vs 46%) and sugar content (29% vs 11%), and the ingredient breakdown (43% vs 30%);

- are no more likely to be critical of the nutrition information that is currently available on food products (38% in both cases dislike nothing), but are more inclined to dislike the small print size (11% vs 7%) and to report difficulty understanding how to use the information provided (14% vs 8%);

- express lower levels of understanding of the information provided on the nutrition information panel, with 26% (vs 17% of Canadians overall) claiming that they do not feel they understand the panel very well or at all. Despite this lower reported level of understanding of the panel, 77% claim to use the panel information often (42%) or sometimes (35%), a level that is slightly higher than among Canadians overall (70%).

- claim more regular use of the panel to compare similar types of foods (52% vs 40%) and to assist in assessing how much of a food to eat (33% vs 23%) (Table 16).

Table 16 – Frequency of Uses of the Nutrition Information Panel

	Percent of Canadians	
	Total (n=786)	With diabetes (n=81)
To compare similar types of foods with each other		
Often	40	52*
NET: Often/Sometimes	76	77
To figure out how much of a food product you or your family should eat		
Often	23	33*
NET: Often/Sometimes	54	66*

Note: *Indicates significantly higher percentage, at the 95% level of confidence, than for Canadians as a whole

- express similar preferences for the method of presenting nutrient information. Although they attribute considerable usefulness to the % RDI information prior to the brief educational intervention, their claimed level of understanding of how to use and interpret the % RDI improve significantly more than for Canadians in general following the explanation (81% vs 68%).

- are more likely to offer an incorrect amount or to be unable to respond when requested to determine the number of calories in one serving (two cookies) of the test product (47% vs 30% of Canadians as a whole).

2. Canadians with Heart Disease

Compared with the general population, Canadians with heart disease:

- attribute similar importance to nutrition in the food purchase decision (62% vs 63% of total population cite it as extremely or very important) and to the nutrition-related information on food packages (42% vs 43% cite it as extremely or very important).

- report lower levels of overall understanding of the information contained on the nutrition information panel (22% vs 17%), similar to Canadians with diabetes. This is further reflected in the lower levels of claimed understanding of specific nutrition terms such as carbohydrates, energy, iron and protein.

- report similar frequency of reference to the panel information (69% vs 70%), suggesting that their use of the panel is not correspondingly lower as a result of the lower levels of claimed understanding of the information it contains.

- are significantly more likely to be attempting to reduce or limit their intake of sodium (59% vs 45%) and saturated fats (70% vs 60%), although their expressed interest in the overall fat information on labels is not much higher than average (55% vs 46%).

- are less likely to be critical of the general information provided on food labels (52% vs 38% dislike nothing). However, they are distinct in their complaint about insufficient nutrition information provided on foods, with 17% (vs 8% in general) volunteering lack of, or insufficient, information on food labels as an aspect of current labelling on food products that they dislike. Furthermore, Canadians with heart disease are less likely than average to believe that the information panel is currently available on all or most foods (61% vs 71%).

- respond in a similar manner overall to the alternative methods of nutrient declaration. However, following the educational intervention on the interpretation of % RDI, significantly fewer Canadians with heart disease rate the % RDI information as being useful compared with the general population (Table 17).

Table 17 – Perceived Usefulness of % RDI and Absolute Amounts

	Percent of Canadians			
	% RDI		Absolute Amounts	
	Total (n=1105)	Heart disease (n=144)	Total (n=1105)	Heart disease (n=144)
Very useful (score of 10)	38	30	26	30
NET: USEFUL (score of 9 or 10)	47*	35	30	34

Notes: *Indicates significantly higher percentage, at 95% level of confidence, than for Canadians with heart disease
Score is based on a 10-point rating scale (10=Very useful; 1=Not at all useful)

APPENDICES

Appendix I (a-f) – Nutrition Information Panel Options

Appendix II – Exhibit Used in Explanation of Absolute (mg) and Relative (% RDI) Amounts

Appendix III – Proposed Canadian Order of Presenting Nutrients

Appendix IV – Existing US Order of Presenting Nutrients