



Nutrition Labelling: Comprehension and Use of Nutrition Facts Tables among Young People in Canada

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Background

- Dietary patterns are associated with nutrition-related chronic diseases such as obesity, diabetes, cardiovascular disease, and cancer
- Poor dietary patterns among adolescents and young adults in Canada



Adolescents and Young Adults



CAUTION

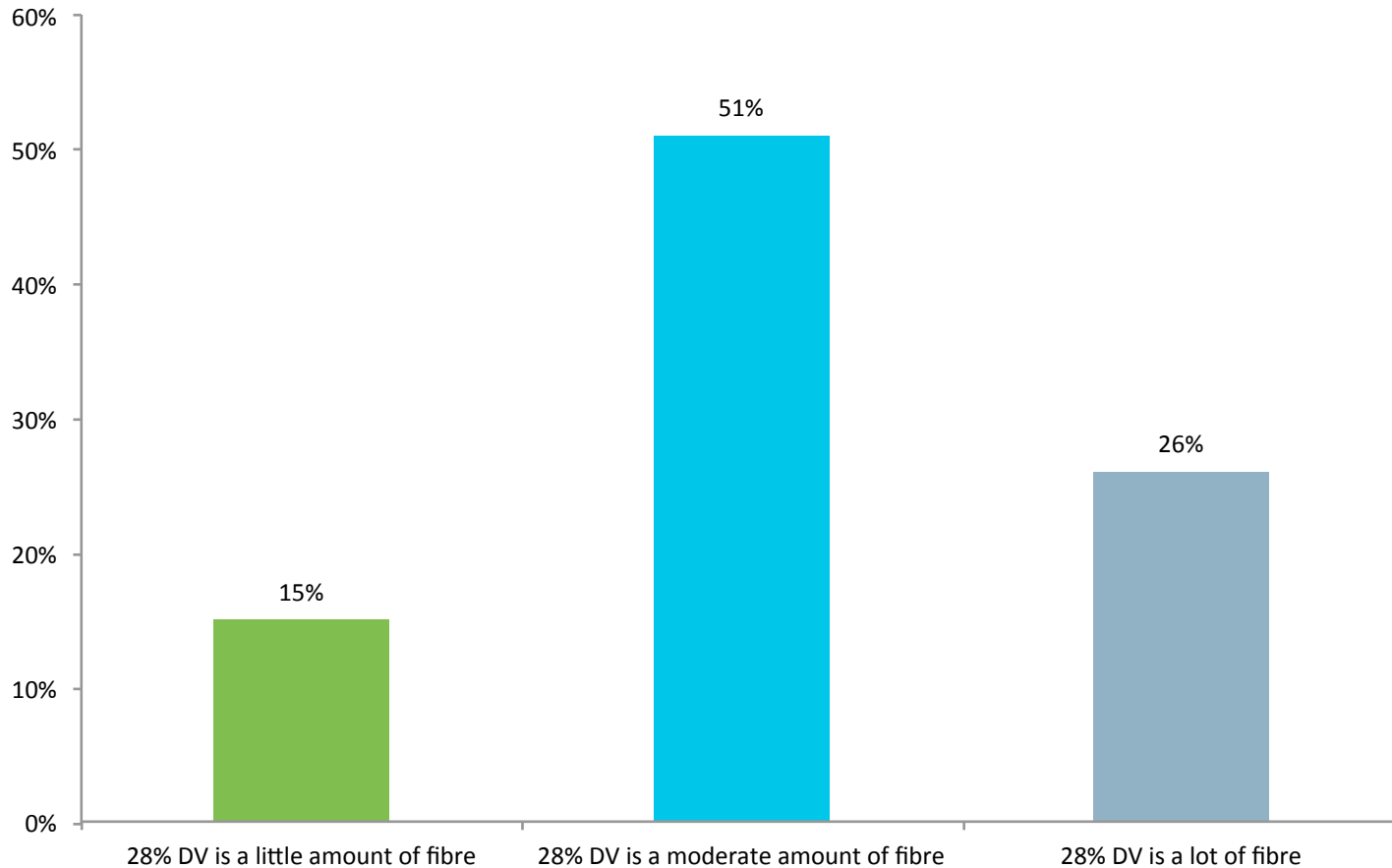
MASS

CONFUSION

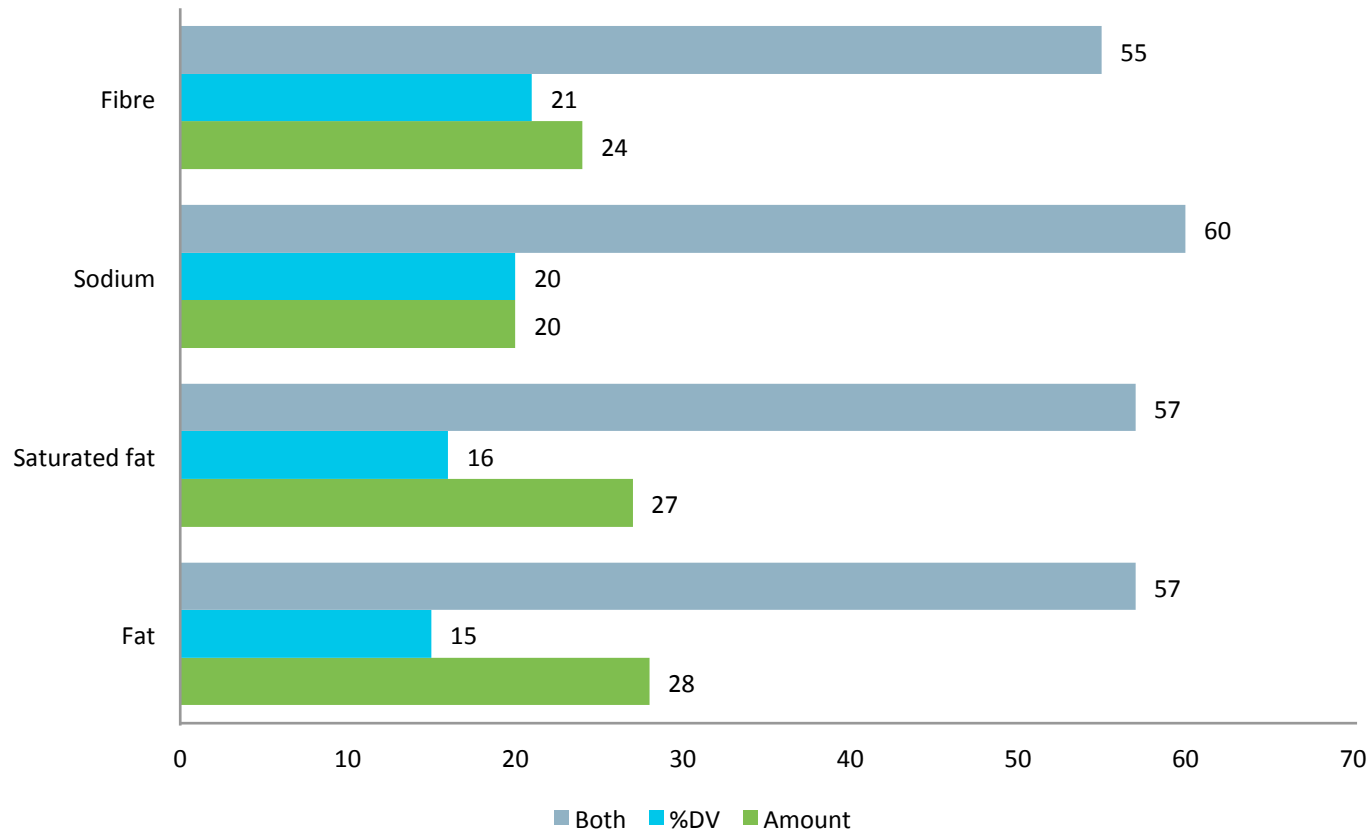
Daily Value (% DV) provides a quick overview of the nutrient profile of a food. The NFT claims and the ingredient list, provide Canadians with information to help them make informed choices. Since 2007, widespread awareness of the NFT, found on a wide range of food products, has increased. Previous research conducted shows that most Canadians are aware of the NFT and many are using it to make food choices. However, a significant amount of research on how Canadians use the NFT has been reviewed and points to several consumer challenges related to its effective use. Identified challenges include:

- Confusion with the % DV concept and the use of different serving sizes;
- Poor knowledge of their own requirements for Calories and nutrients;

Is 28% DV a little or a lot of fibre?



What information did you rely on most to compare the Fibre content of these two products?



Nutrition Facts Education Campaign implemented as of December 2010

Nutrition Facts	
Valeur nutritive	
Per 1 tray (212 g) / Pour 1 plat (212 g)	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 170	
Fat / Lipides 2.5 g	4 %
Saturated / saturés 0.5 g + Trans / trans 0 g	3 %
Cholesterol / Cholestérol 25 mg	8 %
Sodium / Sodium 620 mg	26 %
Carbohydrate / Glucides 25 g	8 %
Fibre / Fibres 2 g	8 %
Sugars / Sucres 5 g	
Protein / Protéines 12 g	
Vitamin A / Vitamine A	4 %
Vitamin C / Vitamine C	15 %
Calcium / Calcium	2 %
Iron / Fer	8 %



Previous Research

- **Not a single** published study in Canada has examined the understanding and use of NFTs among young people



Primary Research Objective

To investigate if and how young people in Canada comprehend and use serving size and %DV information on the current and modified NfTs when choosing and comparing foods.



STUDY 1 used qualitative methods to explore the process by which young people engage with, understand, and use serving size and %DV information on the current and modified NFTs.

STUDY 2 consists of a quantitative survey with 2,000 participants between the ages of 16-24 years from across Canada.



Stimulus Conditions

	Current Serving Sizes	Standard Serving Sizes
% Daily Value (%DV) only	Condition #1 - control	Condition #2
% Daily Value (%DV) + HIGH / LOW Descriptors**	Condition #3	Condition #4
% Daily Value (%DV) + HIGH / LOW Descriptors** + Colour	Condition #5	Condition #6

**HIGH = $\geq 15\%$ DV per serving; LOW = $\leq 5\%$ DV per serving

CONDITION #6

Product A

Nutrition Facts / Valeur nutritive	
Per: 19 crackers (20g) /par 19 craquelins (20g)	
Amount	% Daily Value
Teneur	% valeur quotidienne
Calories / Calories 100	
Fat / Lipides 3.5g	5%
Saturated/ saturates 1g + Trans / trans 0g	5%
Cholesterol/ Cholesterol 5mg	
Sodium/Sodium 200mg	13%
Carbohydrate/ Glucides 22g	4%
Fibre 1.7g	4%
Sugars 1.7g	
Protein 5g	
Vit A/Vit A	2%
Vit C/Vit C	0%
Calcium/Calcium	6%
Iron/Fer	6%
% DV = LOW/BAS MED/MOY HIGH/HAUT	

Product B

Nutrition Facts / Valeur nutritive	
Per: 7 crackers (30g) /par 7 craquelins (30g)	
Amount	% Daily Value
Teneur	% valeur quotidienne
Calories / Calories 145	
Fat / Lipides 2.6g	4%
Saturated/ saturates 0.8g + Trans / trans 0g	4%
Cholesterol/ Cholesterol 4mg	
Sodium/Sodium 60mg	4%
Carbohydrate/ Glucides 19g	6%
Fibre 1g	0%
Sugars 5g	
Protein 2g	
Vit A/Vit A	0%
Vit C/Vit C	0%
Calcium/Calcium	0%
Iron/Fer	6%
% DV = LOW/BAS MED/MOY HIGH/HAUT	

CONDITION #4

Christie

Watt's

CRACKERS

Nutrition Facts

Per 32 crackers (30g)

Amount	% Daily Value		
Calories	MED* 154		
Fat 2.1g	LOW*	4%	
Saturated 0.4g	LOW*	4%	
+ Trans 0g			
Cholesterol 0mg		0%	
Sodium 240mg	HIGH*	16%	
Carbohydrate 20g		7%	
Fibre 1.75g		4%	
Sugars 1.4g			
Protein 2.8g			
Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	8%

*LOW, MED, HIGH indicate the amount of each nutrient per serving. You may want less of these nutrients in your daily diet.

INGREDIENTS ENRICHED WHEAT FLOUR, GRAHAM FLOUR, VEGETABLE OIL, SHORTENING (VEGETABLE, MODIFIED PALM, MODIFIED PALM KERNEL), ROLLED OATS, MULTIGRAIN BLEND (ROLLED OATS, CORN MEAL, CRACKED WHEAT, CRACKED RYE, BARLEY FLAKES), SUGAR, GLUCOSE-FRUCTOSE, SALT, FANCY MOLASSES, MONOCALCIUM PHOSPHATE, MALT FLOUR, ONION POWDER, SODIUM BICARBONATE, SOYA LECITHIN, AMYLASE, PROTEASE, PAPAIN, IL# D5030

PACKAGE FILLED BY WEIGHT. CONTENTS MAY HAVE SETTLED DURING SHIPPING.

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CONDITION #6

Watt's

CRACKERS

Nutrition Facts

Per 19 crackers (20g)

Amount	% Daily Value	
Calories 100		
Fat 3.5g		5%
Saturated 1g		5%
+ Trans 0g		
Cholesterol 5mg		0%
Sodium 143mg		10%
Carbohydrate 13g		4%
Fibre 1g		4%
Sugars 1g		
Protein 2g		
Vitamin A 2%	Vitamin C	0%
Calcium 6%	Iron	6%

% DV = **LOW** **MED** **HIGH**

LOW, MED, HIGH indicate the amount of each nutrient per serving. You may want less of these nutrients in your daily diet.

INGREDIENTS: ENRICHED WHEAT FLOUR, GRAHAM FLOUR, VEGETABLE OIL, SHORTENING (VEGETABLE, MODIFIED PALM, MODIFIED PALM KERNEL), ROLLED OATS, MULTIGRAIN BLEND (ROLLED OATS, CORN MEAL, CRACKED WHEAT, CRACKED RYE, BARLEY FLAKES), SUGAR, GLUCOSE, FRUCTOSE, SALT, FANCY MOLASSES, MONOCALCIUM PHOSPHATE, MALT FLOUR, ONION POWDER, SODIUM BICARBONATE, SOY LECITHIN, AMYLASE, PROTEASE, PAPAIN. S# 05030

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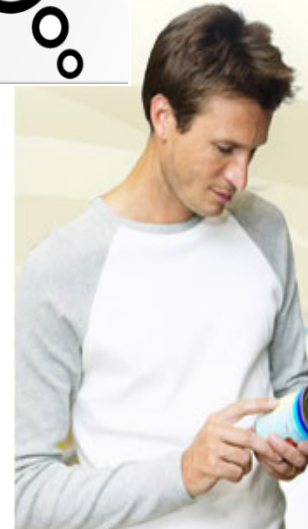
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STUDY 1

Design Overview:

- Verbal Protocol + semi-structured interviews within randomized stimulus conditions and asked to “think aloud” while participating in 2 Behavioural Tasks
- 26 participants
- 50% 16 – 18 years / 19 – 24 years
- 50% Male / Female
- June – August 2013





Task #1 – Hypothetical purchase situation

- Price and taste are most important factors when choosing foods.

“Get more, get a better bang for my buck.”

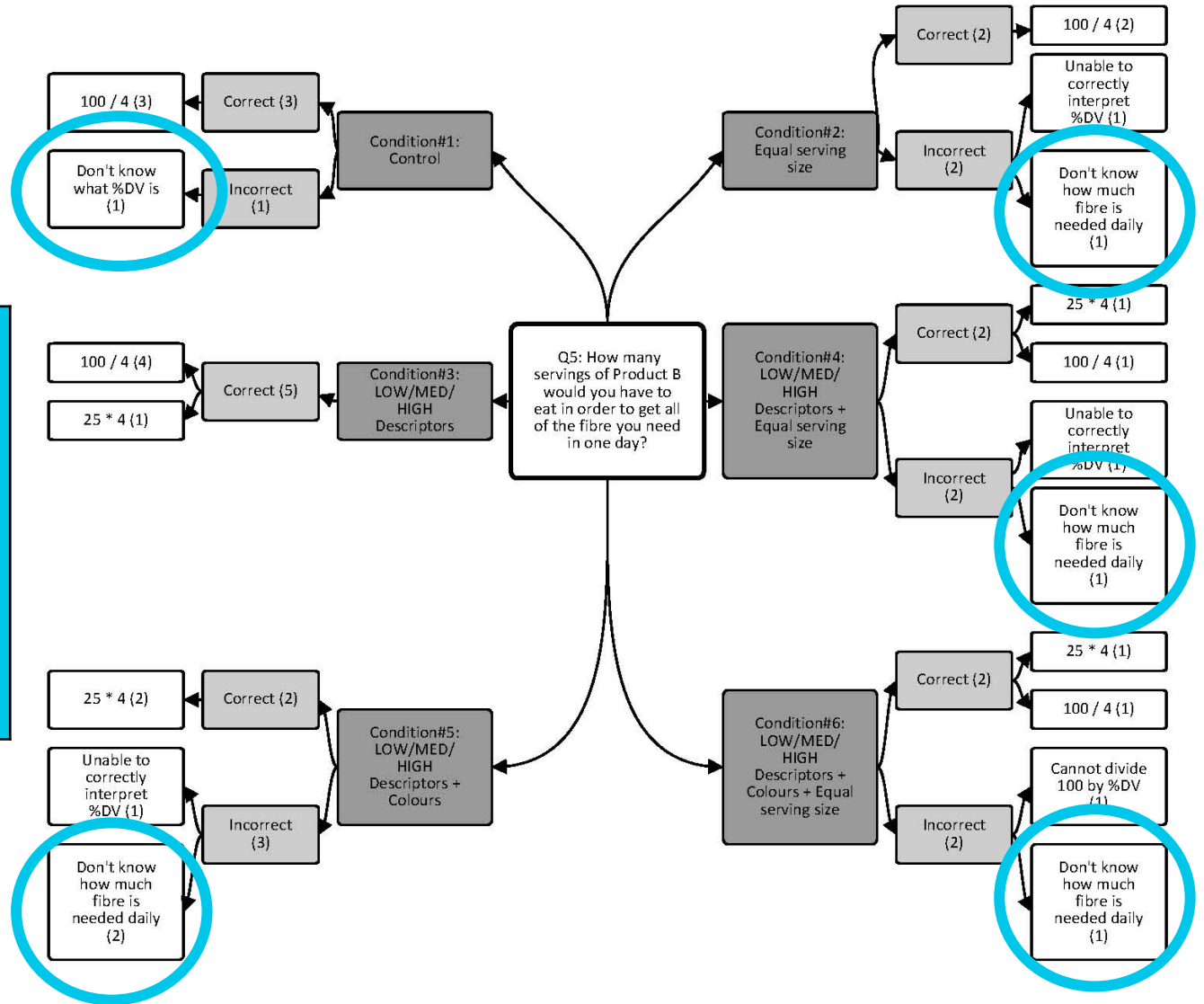
- The nutrition information on the NfT considered when choosing foods varies between participants.

“I mean I don’t personally know too much about like the pros and cons of different vitamins, and different stuff.”

- Simple at-a-glance symbols and colours can support interpretation of nutrition information.

“There is a term next to calories that I noticed immediately when scanning the box. I have never seen both those terms before.”

Task #2: Functional Survey with NFTs

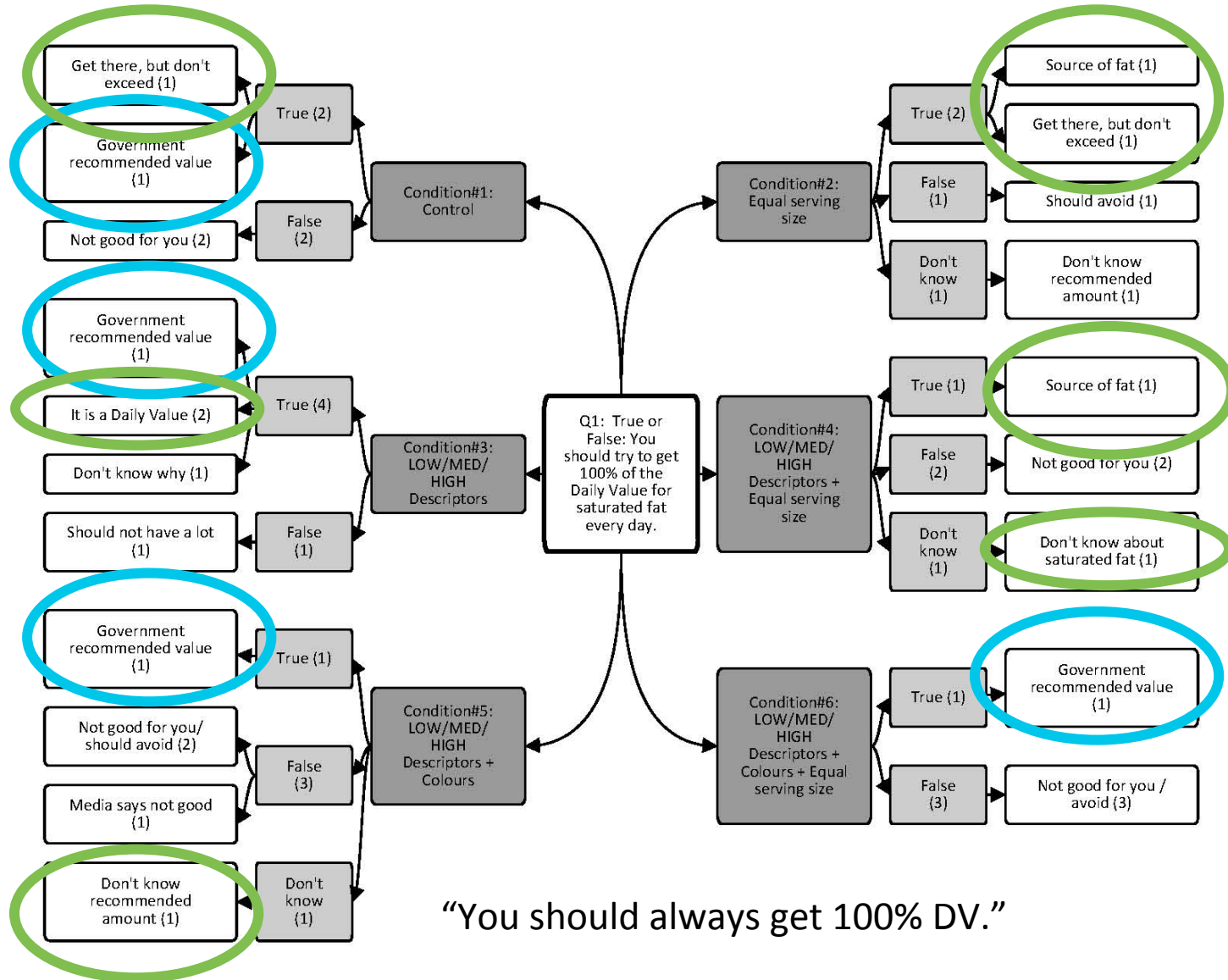


Do not know what the daily recommended amount is for different nutrients and were unable to use %DV information.

"I don't know what the daily value is."

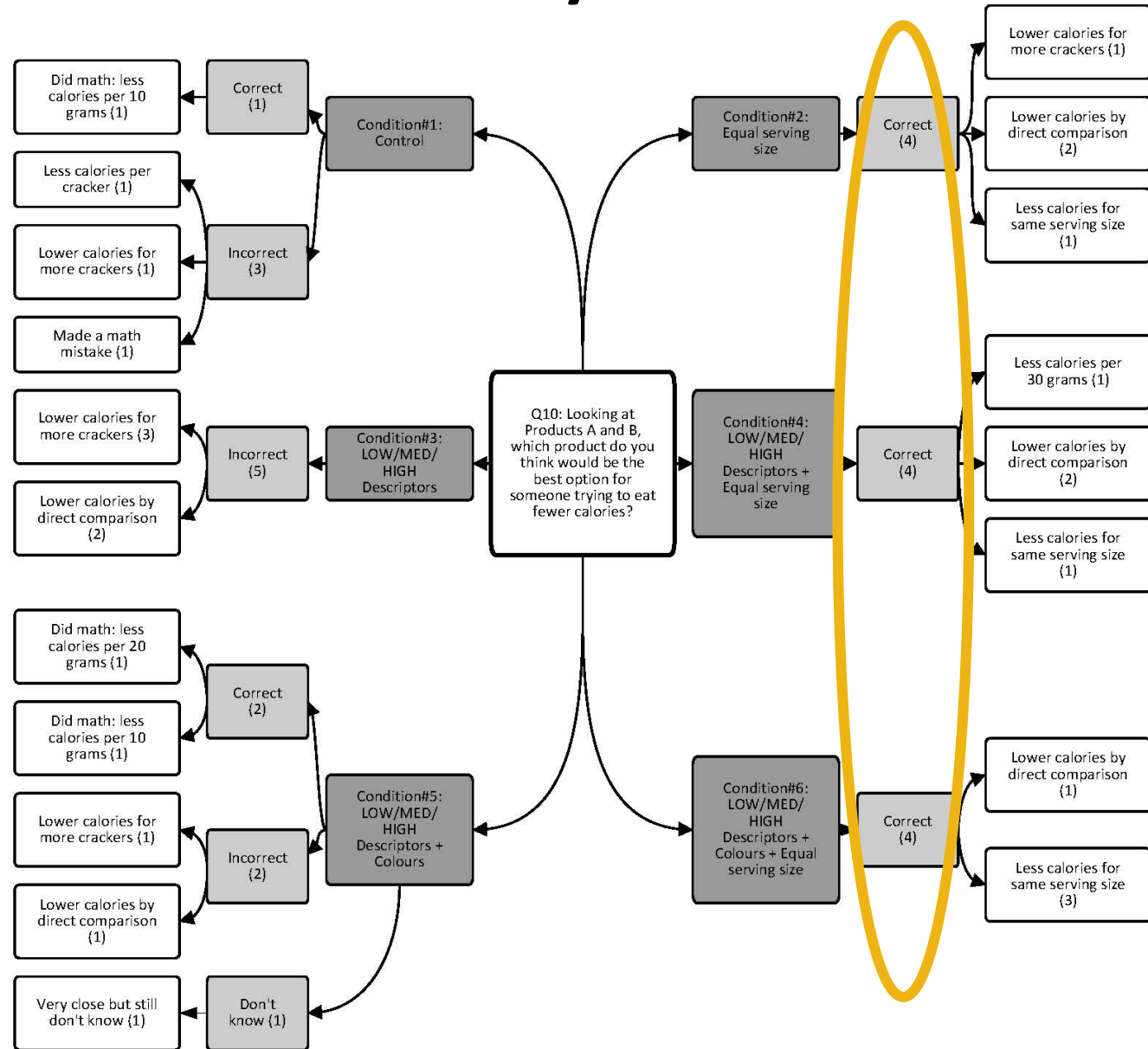
Task #2: Functional Survey with NFTs

- Using the same metrics (e.g., %DV) for positive nutrients (e.g., calcium) and negative nutrients (e.g., saturated fat) may cause confusion for participants.



Task #2: Functional Survey with NFTs

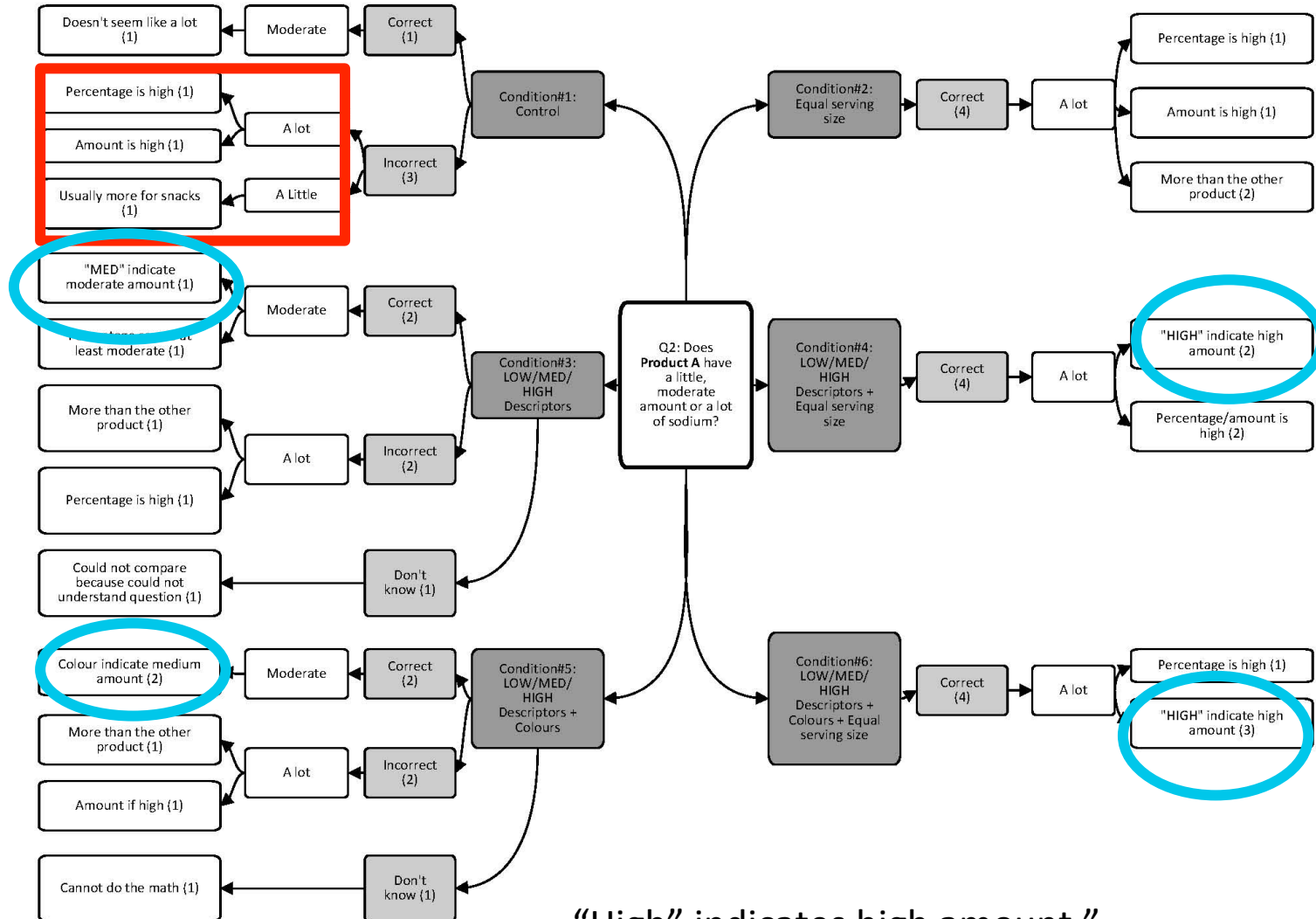
Participants randomized to the NFT conditions with standard serving sizes performed significantly better on survey tasks requiring comparisons across products.



"More than the other product."

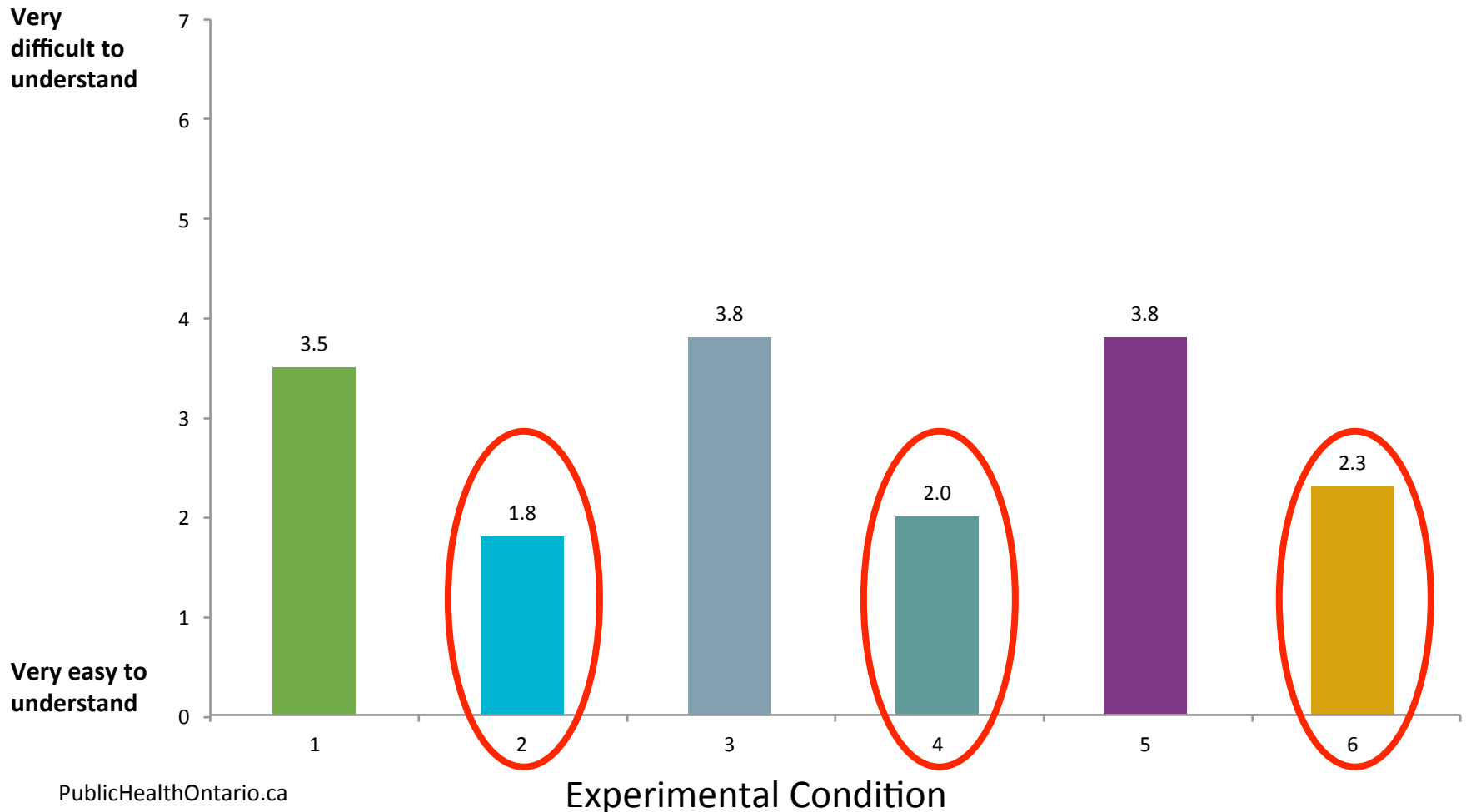
Task #2: Functional Survey with NFTs

- Participants randomized to the NFT conditions with simple descriptors or colour coded %DV information performed significantly better on survey task requiring interpretation of %DV information.

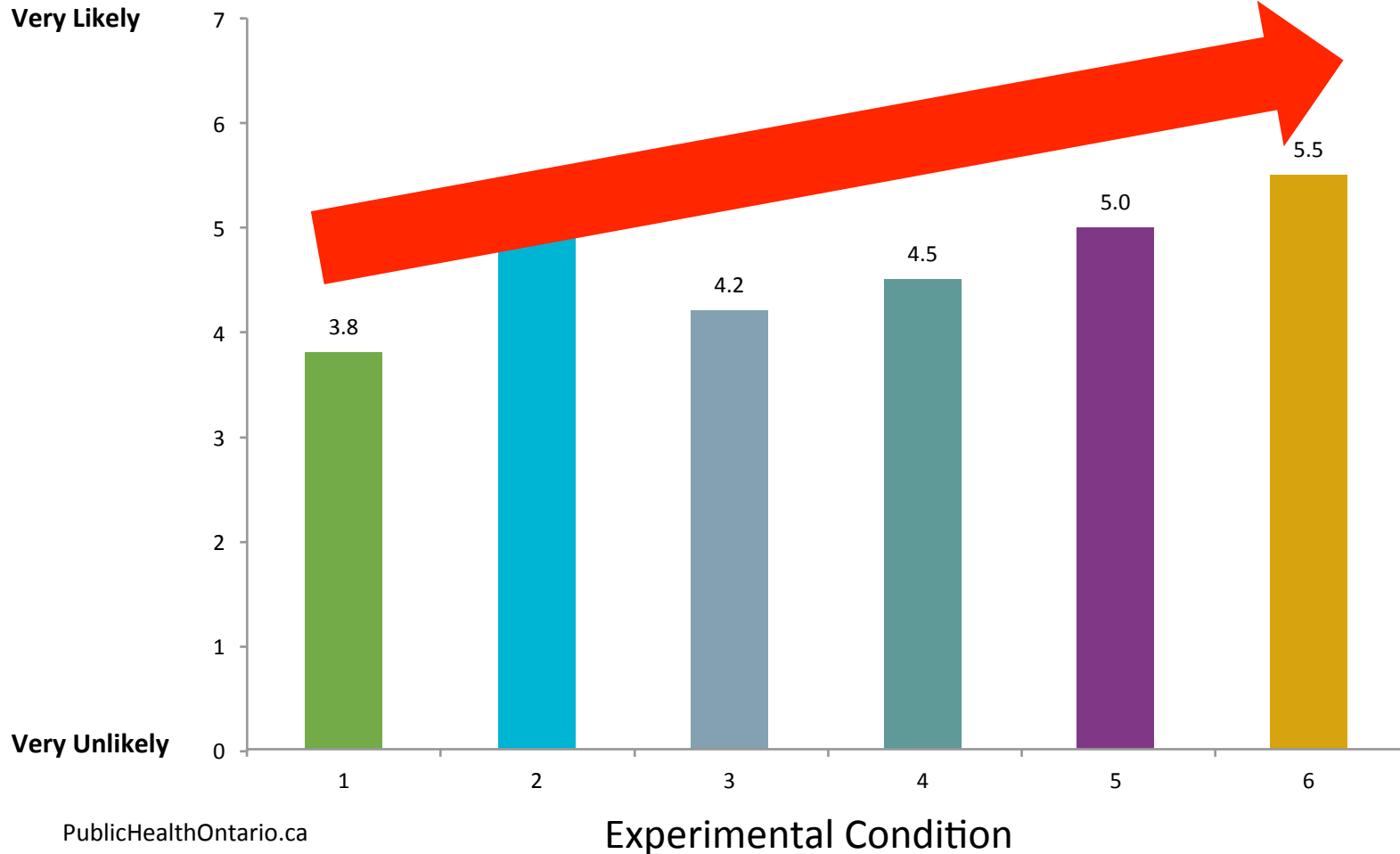


"High" indicates high amount."

Overall how easy or difficult is it to understand the % Daily Value on this Nutrition Facts table?



How likely or unlikely are you to use this Nutrition Facts table to choose foods?



Key take-away message

- Standard serving sizes across similar products can support food choices and more prescriptive information leaves less for interpretation and places information into context.



STUDY 2

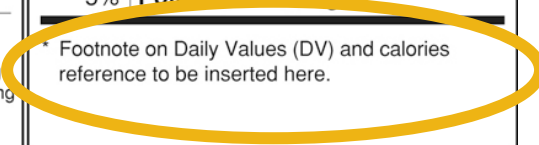
- Part 1: Demographic and Background Information
 - Age, gender, ethnicity, socioeconomic status, height, weight, education, shopping and label use habits, interest in nutrition and measures related to body weight concerns and attitudes towards eating using an adapted version of the EAT-26
- Part 2: Efficacy of NFts on Comprehension and Use
 - Between-groups experiment to test comprehension and use of modified formats of the NFt compared to the current NFts using a nutrition knowledge survey

Stimulus Conditions

	Current Serving Sizes	Standard Serving Sizes
% Daily Value (%DV) only	Condition #1 - control	Condition #2
% Daily Value (%DV) + HIGH / LOW Descriptors**	Condition #3	Condition #4
% Daily Value (%DV) + HIGH / LOW Descriptors** + Colour	Condition #5	Condition #6

**HIGH = $\geq 15\%$ DV per serving; LOW = $\leq 5\%$ DV per serving

Nutrition Facts		Nutrition Facts	
Serving Size 2/3 cup (55g)		Serving size 2/3 cup (55g)	
Servings Per Container About 8		Amount per 2/3 cup	
Amount Per Serving		Calories 230	
Calories 230		Calories from Fat 40	
		% Daily Value*	
Total Fat 8g	12%	12%	Total Fat 8g
Saturated Fat 1g	5%	5%	Saturated Fat 1g
Trans Fat 0g			Trans Fat 0g
Cholesterol 0mg	0%	0%	Cholesterol 0mg
Sodium 160mg	7%	7%	Sodium 160mg
Total Carbohydrate 37g	12%	12%	Total Carbs 37g
Dietary Fiber 4g	16%	14%	Dietary Fiber 4g
Sugars 1g			Sugars 1g
Protein 3g			Added Sugars 0g
Vitamin A	10%		Protein 3g
Vitamin C	8%		10% Vitamin D 2mcg
Calcium	20%		20% Calcium 260mg
Iron	45%		45% Iron 8mg
* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.			5% Potassium 225mg
	Calories: 2,000 2,500	* Footnote on Daily Values (DV) and calories reference to be inserted here.	
Total Fat	Less than 65g 80g		
Sat Fat	Less than 20g 25g		
Cholesterol	Less than 300mg 300mg		
Sodium	Less than 2,400mg 2,400mg		
Total Carbohydrate	300g 375g		
Dietary Fiber	25g 30g		





Nutrition Facts	
Serving Size 8 fl oz (240 mL)	
Servings Per Container about 2.5	
Amount Per Serving	
Calories 110	
% Daily Value*	
Total Fat 0g	0%
Sodium 70mg	3%
Total Carbohydrate 31g	10%
Sugars 30g	
Protein 0g	
*Percent Daily Values are based on a 2,000 calorie diet	

Nutrition Facts	
Serving Size 1 bottle (600 mL)	
Servings Per Container 1	
Amount Per Serving	
Calories 275	
% Daily Value*	
Total Fat 0g	0%
Sodium 175mg	7%
Total Carbohydrate 78g	26%
Sugars 75g	
Protein 0g	
*Percent Daily Values are based on a 2,000 calorie diet	

Relevance

- Aligned with several food-related recommendations made in the **Healthy Kids Report section 2.5**.
- Results can provide evidence to support more effective regulatory changes to Nutrition Facts tables.
- Translate findings to communicating nutrition information on front-of-package and menu labelling initiatives.
- Guide school curricula.



RESEARCH TEAM

Food and Nutrition

Experimental Design and Survey Methods

Qualitative Methods and Think Aloud

Young People

- Dr. David Hammond
Associate Professor, U Waterloo
- Dr. Erin Hobin
Scientist, Public Health Ontario
- Dr. Judy Sheeshka
RD, Professor, Victoria University
- Ms. Mary Fodor O'Brien
RD, Public Health Ontario
- Dr. Gail McVey
Scientist, Hospital for Sick Kids

TIMELINE: September 2012 through to June 2014