



# Dads' vs. Moms' Attitudes Related to Fruit & Vegetable Consumption 2015



## About Produce for Better Health Foundation



### Produce for Better Health Foundation

Produce for Better Health Foundation (PBH) is a non-profit 501 (c) (3) consumer education foundation whose mission is to motivate Americans to eat more fruit and vegetables to improve public health. PBH partners with government agencies like CDC, non-profit organizations, health professionals, educators, and members of the fruit and vegetable industry to promote increased consumption of fruit and vegetables. We leverage private industry and public sector resources, influence policy makers, motivate key consumer influencers, and promote fruit and vegetables directly to consumers.



### Fruits & Veggies—More Matters

Managed by PBH, Fruits & Veggies—More Matters® is the nation's largest public-private fruit and vegetable nutrition education initiative. The foundation of Fruits & Veggies—More Matters is a brand logo and messaging designed to motivate Americans to eat more fruit and veggies. Fruits & Veggies—More Matters' materials are widely featured in print, on websites, and in social media channels like Facebook, Twitter, Pinterest, YouTube, and blogs. Since its inception in 2007, it is estimated that the Fruits & Veggies—More Matters logo has been seen an average of 214 times by every American.

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# Dads' vs. Moms' Attitudes Related to Fruit & Vegetable Consumption 2015

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# Executive Summary

Since 1991, Produce for Better Health Foundation (PBH) has been dedicated to producing a healthier America through increased fruit and vegetable consumption. PBH conducts regular consumer surveys to identify psychosocial factors associated with fruit and vegetable consumption in an effort to inform industry, health influencers, and policy makers.

Moms have traditionally been the primary caregiver of young children, but with more maternal employment outside the home over the past forty years, dads' role has evolved. The time dads spend with their children has increased, including their role in feeding the child. In fact, 72% of dads who live with children under the age of 5 report that they feed their child or eat meals with them. A recent review of dads' child feeding practices, however, suggests that there are many gaps in understanding dads' influence or how they differ from moms. Not only is this important for their child's health, but for their own health as well. Males have a shorter life expectancy, participate less in preventive health services, are more cynical about health messages, and are more likely to reject healthy foods due to poor taste or inability to satisfy. A lack of willpower, time, and motivation has also been identified as factors that hinder healthy eating among males. With this background, a new PBH study comparing 600 moms with 600 dads, conducted throughout 2014, form the basis of this report. Highlights include:

## Men Eat Fewer Fruits and Vegetables

Lower fruit and vegetable consumption among men than women has been widely documented elsewhere, and is seen in this report as well. Dads are significantly less likely than moms to report that they eat 2 or more cups of vegetables each day. Dads also report eating less fruit than moms, though not significantly. Dads are more likely than moms to say that fruit and vegetables are not appetizing and they are more likely to forget to buy them.

## Men Have Weaker Beliefs about Fruits and Vegetables

Males generally have poorer nutrition knowledge, weaker beliefs in the importance of fruit and vegetables for health, and a lower confidence in their ability to eat fruit and vegetables at various occasions, which are all born out in this PBH study. For example, dads are more likely than moms to think it is not important to

include fruit and vegetables in family's meals and snacks, they aren't as motivated to serve them, and aren't as interested in using a variety of approaches to encourage their families' consumption of them. In fact, dads are more likely to say that their families eat too many vegetables and that there aren't as many in the home overall. However, dads appear to be more accepting than moms of 'all forms' of fruits and vegetables given the higher availability of canned, frozen, and dried fruits and vegetables they report having in their homes.

## Communications

Supermarket flyers, ads, and displays and television were the top communication methods for both dads and moms when it comes to making a food decision. However, dads report supermarket flyers, ads, or displays significantly lower than moms. Scores were also statistically lower for dads than moms with respect to social media as an effective communication method. Instead, dads were more likely to cite radio commercials, internet advertisements, and billboards as an effective communication method.

## More Matters Brand

Regarding Fruits & Veggies—More Matters, there is a significantly higher **awareness** of the brand and **likeliness to purchase** products that bear the brand among moms than dads, but the brand appears to be more **motivating** to dads. Higher awareness of the brand among moms is not surprising, given the campaign has primarily targeted moms through supermarkets and social media, two of their top preferred methods of food communication. Dads higher motivation level differs from an earlier PBH report of male vs. female primary shoppers (who may or may not be parents) that showed female shoppers more motivated by the brand than male shoppers, though this was not a significant difference. Impressions of Fruits & Veggies--More Matters are predominantly favorable for both moms and dads, though dads appear less likely to agree that the campaign is a reminder to eat more fruits and vegetables.

As seen in this and other studies, dads generally have weaker beliefs about the importance of fruit and vegetables for health and for their family. In fact, females have reported that male partners were obstructive to their efforts to increase their families' fruit and vegetable consumption. While continued focus on moms is important, finding ways to motivate dads is also important for future consideration.

# Key Trends

## Introduction

For several years, recommendations in public health policy have encouraged an increase in fruit and vegetable consumption by adults and children in the United States.<sup>1,2</sup> The health benefits of increasing fruit and vegetable consumption continue to grow<sup>3</sup>, despite the daily intake of fruit and vegetables remaining well below recommended levels for most Americans.<sup>4,5</sup>

A variety of factors influence fruit and vegetable consumption. Perceived obstacles (including social, personal and economic challenges), intrinsic and or extrinsic motivation, beliefs, confidence in coping with barriers to change behavior (self-efficacy), and self-management are all factors that impact fruit and vegetable intake among adults and children.<sup>6-9</sup> However, much of the research on the influence of parents and food consumption has focused on moms, with very little research focused on dads.

Moms have traditionally been the primary caregiver of young children, but with more maternal employment outside the home over the past forty years, dads' role has evolved. The time dads spend with their children has increased, including their role in

feeding the child. In fact, 72% of dads who live with children under the age of 5 report that they feed their child or eat meals with them.<sup>10</sup> A recent review of dads' child feeding practices, however, suggests that there are many gaps in understanding dads' influence on child feeding practices and how this differs from moms' child feeding practices.<sup>11</sup> Not only is this important for their child's health, but for dad's own health as well. Males have a shorter life expectancy, participate less in preventive health services, are more cynical about health messages, and are more likely to reject healthy foods due to poor taste or inability to satisfy.<sup>12</sup> A lack of willpower, time, and motivation have also been identified as factors that hinder healthy eating among males.<sup>13</sup>

In an effort to better understand differences between dads and moms attitudes and behaviors related to fruit and vegetables for themselves and their children, PBH conducted an on-line survey throughout 2014. All respondents were either solely responsible for, or normally participated in, their household's grocery shopping and had children ten years of age or younger in the household. The survey included 600 dads and 600 moms. Most questions were answered using a 5-point Likert scale. For more information about methodology and demographics, see Appendix A and B. Questions about various factors related to fruit and vegetable consumption are outlined below.



## Self-Reported Intake

Lower fruit and vegetable consumption among men than women has been widely documented,<sup>14, 15</sup> and is seen in this PBH study as well. Dads are significantly less likely than moms to report that they eat 2 or more cups of vegetables each day (Chart 1). Dads also report eating less fruit than moms, though not significantly. This is consistent with the portion of fruit and vegetables that dads and moms say make up their plate (Chart 2), where significantly fewer dads than moms say that half of their plate is made up of fruits and vegetables. Instead, dads are more likely to

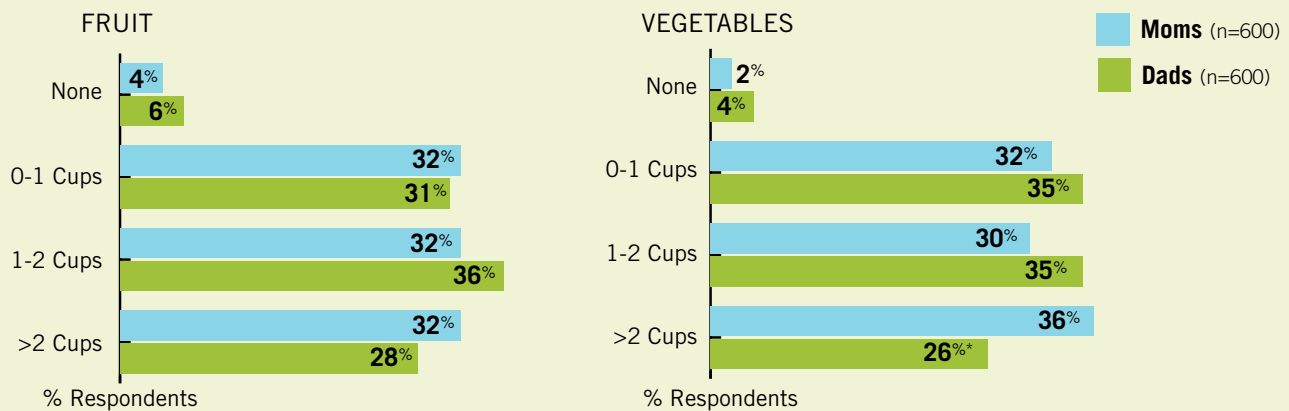
say that fruits and vegetables make up only a quarter of their plate despite the fact that they almost equally believe (42% of dads and 45% of moms) that half of the plate should be comprised of fruit and vegetables (Chart 3).

## Attitudes & Intentions

In terms of consumption, knowledge of health benefits and recommendations are an important mediating variable in children's and mother's intake of fruits and vegetables.<sup>16</sup> Further, positive attitudes and beliefs about the relationship of

**Chart 1: Self-Reported Fruit & Vegetable Consumption: Moms vs. Dads**

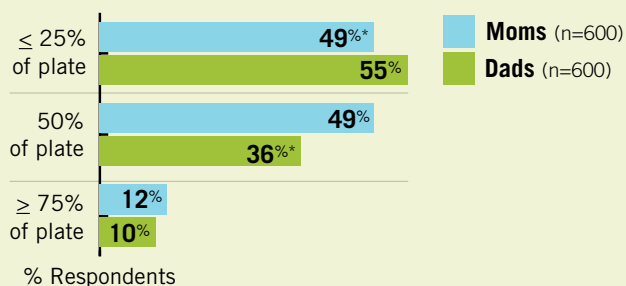
*About how many cups of fruit (including 100% fruit juice) do you eat or drink each day?*



\*Represents statistically significant difference between moms and dads.

**Chart 2: Self-Reported Fruit & Vegetable Portion of Plate: Moms vs. Dads**

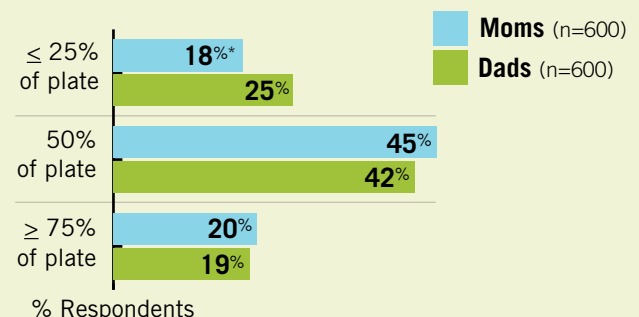
*Thinking about all the food you consume in a typical day, what portion of your 'plate' (total food consumed) would be made up of fruits and vegetables (versus all other foods)?*



\*Represents statistically significant difference between moms and dads.

**Chart 3: Knowledge About Fruit and Vegetable Recommendations: Moms vs. Dads**

*What portion of your 'plate' (total food consumed) is RECOMMENDED to be made up of fruits and vegetables?*

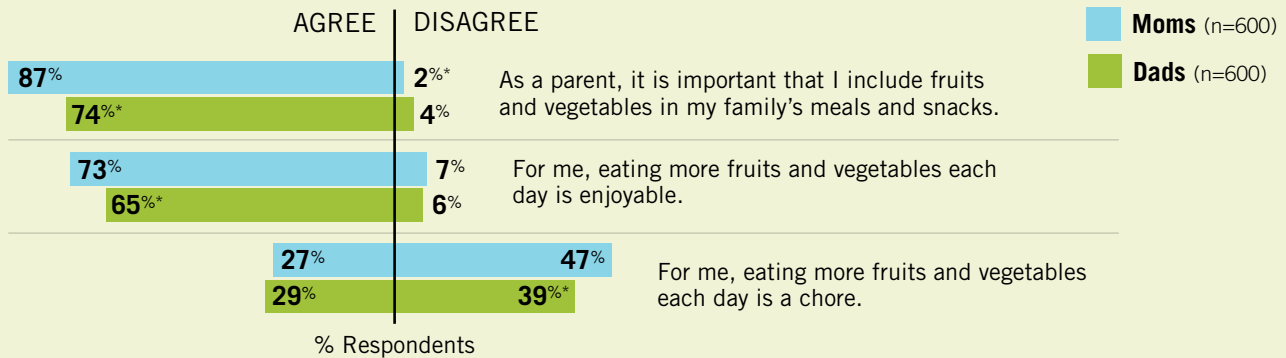


consumption of fruits and vegetables to disease prevention have predicted intake of children and adults in general.<sup>16-19</sup> Males generally have poorer nutrition knowledge, weaker beliefs in the importance of fruit and vegetables for health, and a lower confidence in their ability to eat fruit and vegetables at various occasions (e.g. when they are really hungry, tired, when junk food is around, at work, or while watching TV), which helps explain the lower fruit and vegetable consumption.<sup>20, 21</sup>

Weaker beliefs by men about the importance of fruit and vegetables can be seen throughout this PBH study. For example, dads are less convinced than moms about the importance of including fruits and vegetables in meals and snacks; they are also less likely to enjoy eating them (Chart 4). Dads are more likely to say that they eat fruit because they want to, which appears to be true of vegetables as well (Chart 5). Moms are more likely to feel a combination of both obligation and desire to eat fruit and vegetables.

**Chart 4: Personal Attitudes about Fruits and Vegetables: Moms vs. Dads**

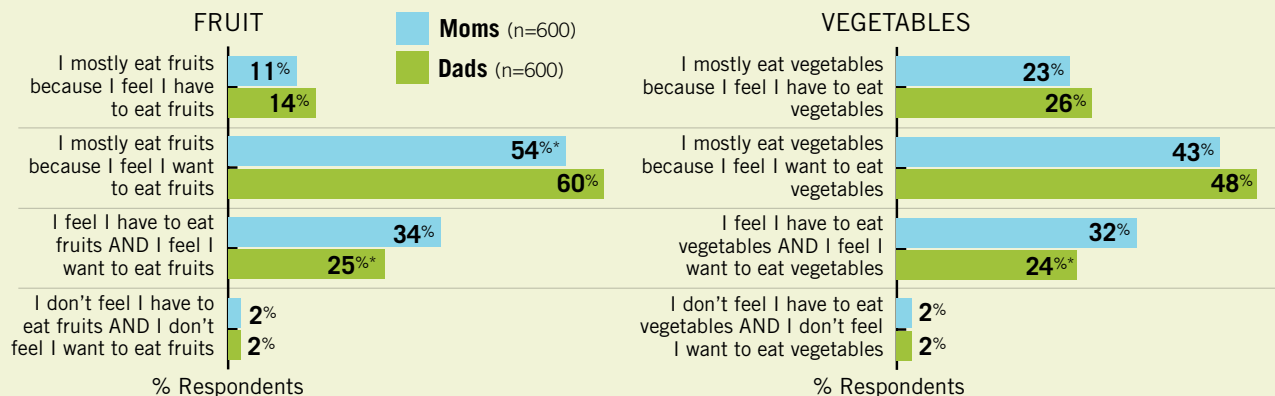
Please rate your level of agreement or disagreement with the following statements:



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

**Chart 5: Attitude Towards Eating Fruits and Vegetables: Moms vs. Dads**

Which of the following best describes your attitude toward eating VEGETABLES? Which of the following best describes your attitude toward eating FRUITS?



\*Represents statistically significant difference between moms and dads.

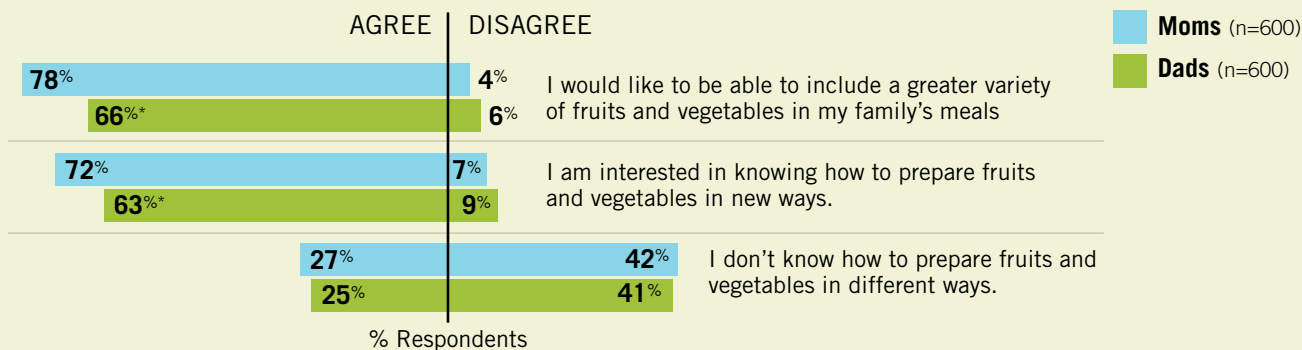
Dads are less likely to express interest in learning about new ways to prepare fruit and vegetables or to include a greater variety of them in meals (Chart 6), though they are similar to moms in their perceived ability to prepare them in different ways. Dads ultimately are more likely to feel that it's not necessary to take action with respect to feeding their families more fruits and vegetables, and that it's not worth the effort (Chart 7). As a result, they are less likely to say that they will include fruits and vegetables in meals and snacks going forward (Chart 8). In fact, dads are more likely to say that their families eat too many vegetables, but appear less likely to say that their families' fruit consumption is sufficient (Chart 9).

## Beliefs & Social Support

Dads and moms equally report that their spouse/partner believes it is important that their children include fruits and vegetables at meals and snacks, yet dads are more likely to report that they do not have the support they need to include fruits and vegetables in their family's meals (Chart 10). Exactly what 'support' dads are looking for is unclear. When moms were asked what 'support' they were looking for in 2010, they reported that they were lacking spousal/family support, had various dislikes of fruit or vegetables within the family, needed different ideas/recipes, cost reduction or financial support, and more time.

**Chart 6: Attitude Towards Fruits and Vegetables: Moms vs. Dads**

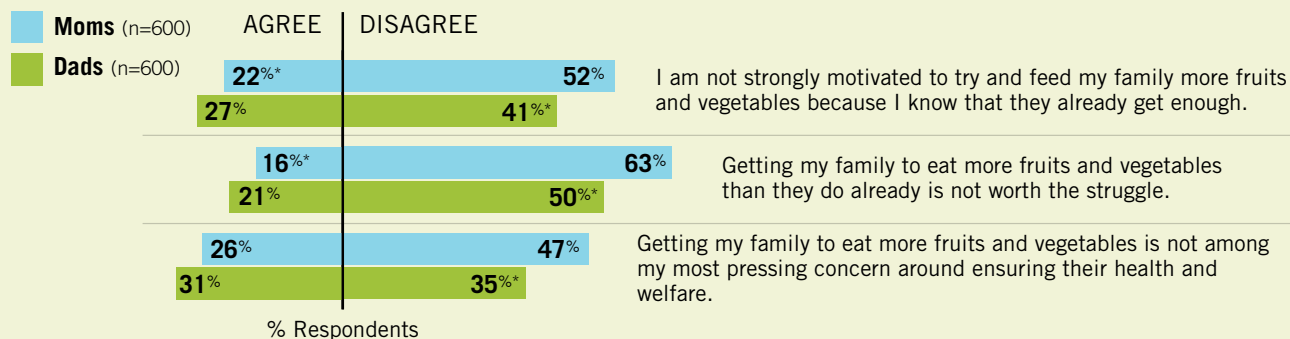
Please rate your level of agreement or disagreement with the following statements:



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

**Chart 7: Motivation to Introduce More Fruits and Vegetables: Moms vs. Dads**

Please indicate your agreement or disagreement with these statements.

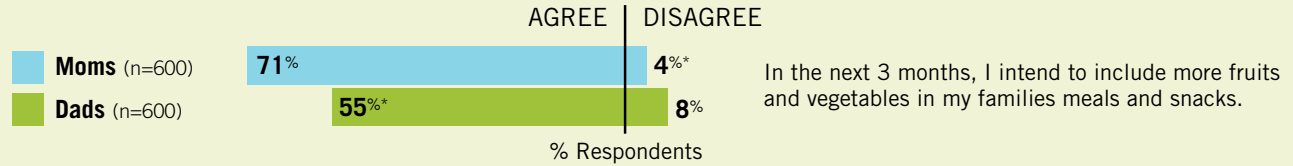


\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.



### Chart 8: Intention to Serve More Fruit & Vegetables: Moms vs. Dads

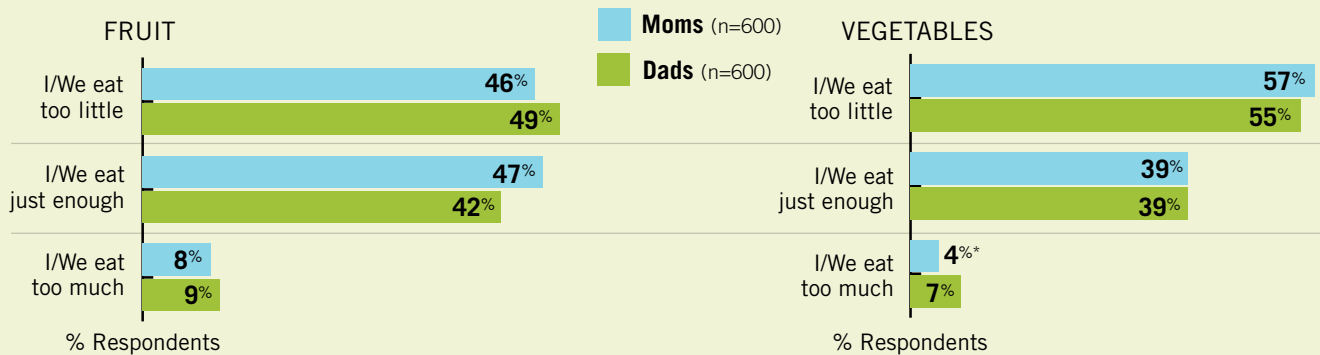
Please rate your level of agreement or disagreement with the following statement:



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

### Chart 9: Perceptions Regarding Adequacy of Fruit & Vegetable Consumption

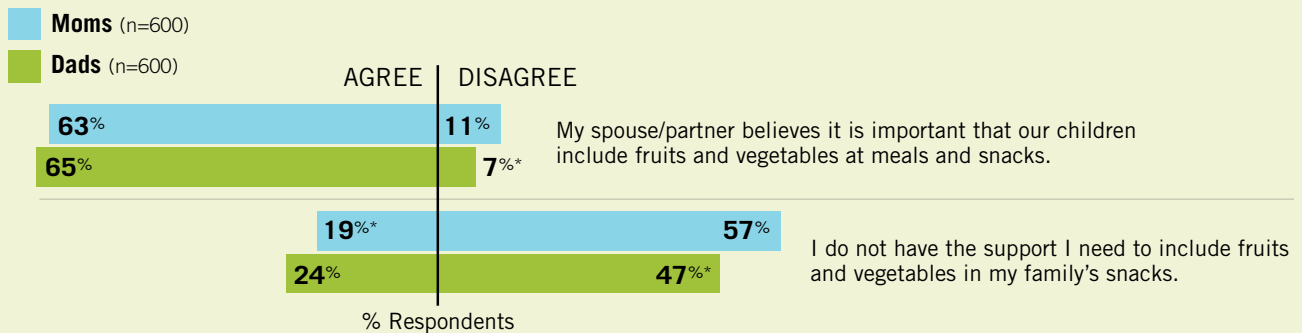
Which of these statements best represents you or your families eating habits for each of the following?



\*Represents statistically significant difference between moms and dads.

### Chart 10: Sense of Social Support to Increase Family Fruit & Vegetable Consumption: Moms vs. Dads

Please rate your level of agreement or disagreement with the following statements:



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.



## Self-Efficacy

Both dads and moms find it equally difficult to get their children to eat fruits and vegetables at a fast food establishment, though it is somewhat easier at a restaurant (**Chart 11**). Moms have reported a steady increase since 2007 in finding fruit at either of these establishments, though the ease in getting vegetables was less consistent year to year.<sup>22</sup>

## All Forms

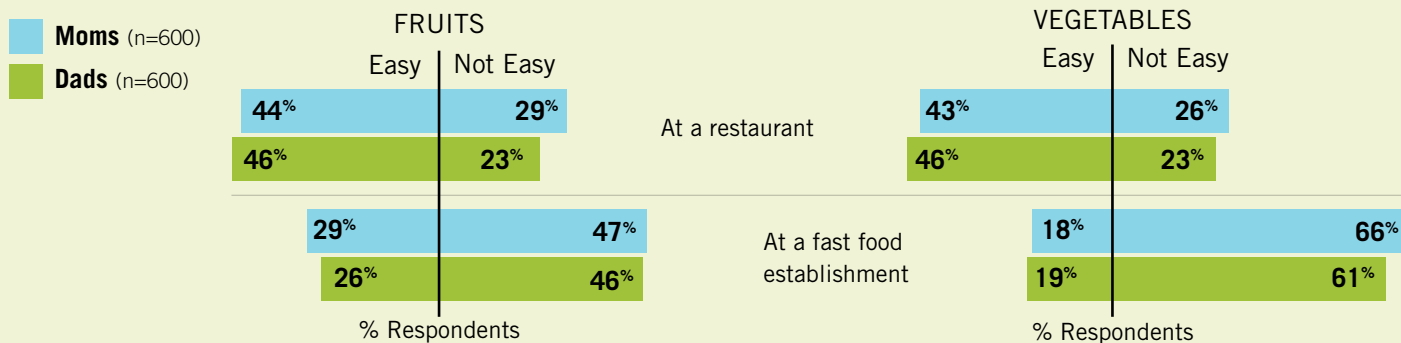
A recent literature review that summarized the health benefits of fruits and vegetables was not specific to populations only eating fresh produce.<sup>3</sup> All forms of fruits and vegetables provide much needed nutrients that are currently under-consumed in the United States, including folate, magnesium, potassium, dietary fiber, and vitamins A, C, and K.<sup>2</sup> All forms of fruits and vegetables also contain various phytochemicals that are thought to play an important role in disease prevention.<sup>23-28</sup>

## Availability in the Home

Availability of fruits and vegetables in the home has been associated with higher intakes, particularly in children.<sup>29-34</sup> It has been suggested that availability may be a determinant of consumption by making choosing fruits and vegetables easy, stimulating consumption through visual cues, and increasing preference through consistent exposure.<sup>29</sup> Encouraging a home environment that facilitates choosing fruits and vegetables is a practical way to promote consumption. Furthermore, food familiarity has been shown to be a predictor of consumption and making fruits and

**Chart 11: Ease in Getting Family to Eat Fruit and Vegetables When Eating Out: Moms vs. Dads**

*How easy is it for you to get your family to eat vegetables/fruits at the following times?*



\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

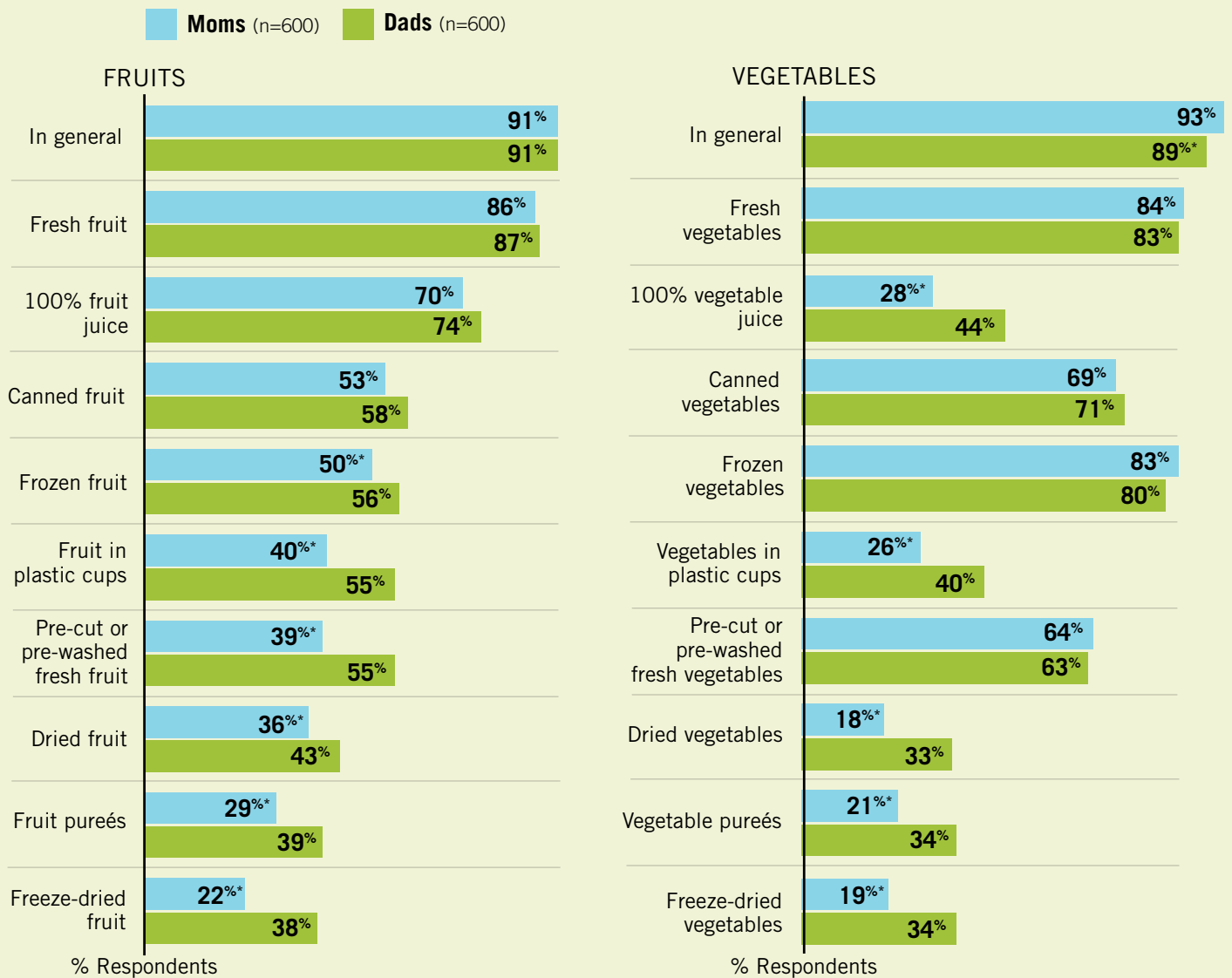
vegetables available at all eating occasions will cultivate eating patterns that include them.<sup>35</sup>

Fresh fruit and vegetables remain the most popular form available in the home (**Chart 12**). Dads are less likely to say that vegetables in general are present in the home, but are more likely than moms to say that a variety of forms (e.g. canned, frozen, dried, fresh-cut, purees, 100% juice, etc.) are available in the home.



**Chart 12: Home Availability of Various Forms of Fruit and Vegetables: Moms vs. Dads**

Please rate the availability of fruit and vegetables in your home.



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.



## Purchase Drivers

### FRUIT

Each type of fruit is purchased for key reasons (**Chart 13**). Both moms and dads think fresh fruit is healthier and preferred by their family, but canned and frozen fruit keep well and are easy to use. However, dads are significantly more likely than moms to cite “Quality” as a reason to purchase 100% fruit juice. Dads are less likely than moms to cite “Good snack” or “Family likes them” as reasons to purchase fresh fruit. They also rate many reasons for lower purchase of frozen fruit. Dads are more likely than moms to cite “Quality” as a reason to purchase fruit in plastic cups. Dads are less likely than moms to cite “Good snack” as a reason to purchase almost any form of fruit.

**Chart 13: Reasons for Purchasing Various Forms of Fruit: Moms vs. Dads**

*Why do you purchase [various forms of] fruit? (Please select all that apply)*

% Respondents

Reasons for Purchasing <b>FRUIT</b>	Fresh	Frozen	Canned	Dried	100% Juice	Freeze-Dried	Pre-cut or Pre-washed	Pureés	In Plastic Cups
	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads
Healthy	87 / 80	45 / 31	17 / 11	40 / 34	52 / 61	19 / 21	41 / 35	31 / 23	30 / 16
Tastes Good	76 / 72	35 / 31	32 / 28	46 / 42	66 / 74	19 / 21	33 / 30	37 / 22	38 / 31
Good Snack	82 / 71	30 / 16	41 / 34	73 / 66	18 / 19	31 / 33	51 / 35	43 / 29	72 / 59
I and/or my family likes them	81 / 72	41 / 31	43 / 38	49 / 34	76 / 74	21 / 19	35 / 28	38 / 25	55 / 47
Easy to Use	43 / 38	56 / 44	62 / 56	40 / 40	36 / 33	38 / 24	53 / 51	38 / 28	72 / 59
Quality	39 / 39	19 / 15	7 / 8	10 / 13	17 / 29	12 / 13	15 / 16	11 / 11	4 / 10
Variety	32 / 26	23 / 11	17 / 15	15 / 17	12 / 20	15 / 11	16 / 12	18 / 10	15 / 17
Quick to prepare	31 / 26	43 / 41	56 / 47	18 / 25	17 / 19	30 / 20	60 / 47	33 / 21	47 / 41
Cost	22 / 20	33 / 31	44 / 46	14 / 13	14 / 15	14 / 17	19 / 11	16 / 14	24 / 21
Use in recipes	21 / 17	54 / 38	22 / 15	30 / 14	2 / 4	22 / 12	15 / 11	16 / 25	4 / 2
Keeps well	13 / 10	67 / 56	68 / 64	45 / 44	17 / 19	30 / 32	16 / 17	35 / 15	46 / 28
Other	1 / 0	7 / 1	2 / 1	4 / 3	1 / 0	2 / 3	2 / 1	11 / 6	5 / 5

(n=189/137) (n=181/128) (n=180/144) (n=141/131) (n=190/140) (n=112/178) (n=148/161) (n=141/171) (n=148/174)

■ Dads score significantly lower than moms. ■ Dads score significantly higher than moms.

Please note: number of respondents will vary as this question was only asked of those respondents who reported keeping the form of fruit in question available in their homes

### VEGETABLES

Similar to fruit, both moms and dads think fresh vegetables are healthier than other forms, but canned and frozen vegetables keep well and are easy to use (Chart 14). However, moms are more positive than dads about all of the listed reasons for purchasing most forms of vegetables. One exception is that dads are more likely than moms to cite “Quality” as a reason to purchase fresh vegetables.

Moms more favorable responses as to why they purchase both fruit and vegetables is an indication that they have stronger beliefs than dads about their importance in the diet, as seen elsewhere in this report.



**Chart 14:** Reasons for Purchasing Various Forms of Vegetables: Moms vs. Dads

*Why do you purchase [various forms of] vegetables? (Please select all that apply)*

% Respondents

Reasons for Purchasing <b>VEGETABLES</b>	Fresh	Frozen	Canned	Dried	100% Juice	Freeze-Dried	Pre-cut or Pre-washed	Pureés	In Plastic Cups
	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads
Healthy	88 / 80	53 / 29	21 / 16	17 / 24	53 / 49	22 / 17	40 / 38	26 / 19	22 / 17
Tastes Good	74 / 65	43 / 26	28 / 21	23 / 22	43 / 36	22 / 17	28 / 23	15 / 14	23 / 17
Good Snack	44 / 32	5 / 5	6 / 7	30 / 25	23 / 19	17 / 12	39 / 23	23 / 14	38 / 30
I and/or my family likes them	70 / 53	44 / 35	42 / 31	19 / 13	49 / 34	14 / 15	37 / 28	16 / 12	24 / 17
Easy to Use	34 / 27	71 / 59	72 / 62	31 / 24	27 / 18	35 / 29	66 / 63	34 / 26	49 / 40
Quality	38 / 50	20 / 17	10 / 8	11 / 15	16 / 14	15 / 13	14 / 17	9 / 11	14 / 10
Variety	30 / 29	24 / 17	18 / 16	10 / 12	17 / 14	18 / 15	10 / 16	15 / 10	19 / 12
Quick to prepare	29 / 26	72 / 59	70 / 58	18 / 22	20 / 10	31 / 21	62 / 54	30 / 22	47 / 27
Cost	22 / 29	50 / 47	59 / 56	24 / 17	17 / 10	27 / 25	18 / 25	17 / 18	20 / 19
Use in recipes	49 / 55	42 / 26	42 / 40	14 / 18	20 / 13	26 / 17	21 / 28	36 / 24	15 / 12
Keeps well	11 / 11	73 / 63	62 / 66	31 / 21	27 / 16	29 / 29	12 / 14	18 / 18	30 / 13
Other	1 / 1	0 / 2	2 / 2	4 / 4	2 / 4	2 / 3	2 / 0	7 / 6	1 / 3
	(n=193/123)	(n=196/133)	(n=199/125)	(n=105/179)	(n=113/154)	(n=103/188)	(n=197/128)	(n=121/189)	(n=111/181)

■ Dads score significantly lower than moms.
 ■ Dads score significantly higher than moms.

Please note: number of respondents will vary as this question was only asked of those respondents who reported keeping the form of fruit in question available in their homes

## Uses

Each type of fruit has clear primary uses, with most fruit eaten as a snack or ‘as is’ and with frozen fruit used in smoothies (Chart 15). Nevertheless, dads are less likely than moms to use fresh fruit ‘as is’ or in baking, canned fruit as a snack, and dried fruit in baking or on cereal. The primary uses of vegetables are not as apparent as they are with fruit, though use as a side dish is very common (Chart 16). Dads are less likely than moms to use fresh vegetables in salads, and frozen vegetables as a side dish or in casseroles.

### Chart 15: Usage of Different Forms of Fruit: Moms vs. Dads

Uses of Different forms of <b>FRUIT</b>	Fresh	Frozen	Canned	Dried	100% Juice
	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads
Snacks	76 / 74	34 / 28	63 / 53	82 / 76	- / -
Desserts	43 / 37	35 / 36	31 / 34	- / -	- / -
Smoothies/Beverages	44 / 41	86 / 79	13 / 19	- / -	26 / 24
Fruit Salads	33 / 30	17 / 19	26 / 26	- / -	2 / 3
As is	92 / 84	27 / 23	62 / 60	- / -	96 / 96
Baking	30 / 20	27 / 22	18 / 26	37 / 20	- / -
On Cereal	33 / 29	- / -	- / -	39 / 27	- / -
In Salads	22 / 18	3 / 9	9 / 13	38 / 40	- / -
Added to sauces/salsas	7 / 7	9 / 6	4 / 5	6 / 7	2 / 7
Side Dish	- / -	11 / 8	30 / 26	10 / 14	- / -
Trail Mix	- / -	- / -	- / -	47 / 44	- / -
Other	1 / 1	4 / 1	1 / 1	5 / 2	2 / 1

% Respondents

(n=189/137) (n=181/128) (n=180/144) (n=141/131) (n=190/140)

■ Dads score significantly lower than moms. ■ Dads score significantly higher than moms.

Please note: number of respondents will vary as this question was only asked to those respondents who reported keeping the form of fruit in question available in their homes



### Chart 16: Usage of Different Forms of Vegetables: Moms vs. Dads

Uses of Different forms of <b>VEGETABLES</b>	Fresh	Frozen	Canned	100% Juice
	Moms / Dads	Moms / Dads	Moms / Dads	Moms / Dads
Snacks	47 / 74	- / -	- / -	- / -
Desserts	2 / 3	- / -	- / -	- / -
Smoothies/Beverages	18 / 8	- / -	- / -	38 / 33
As is	70 / 63	- / -	- / -	65 / 57
Baking	19 / 29	- / -	- / -	- / -
In Salads	80 / 65	13 / 11	10 / 14	- / -
Side Dish	77 / 71	89 / 81	84 / 86	- / -
Casserole	36 / 32	46 / 32	47 / 41	- / -
Soups/Stews	55 / 54	49 / 42	53 / 53	31 / 34
Stir-fry	53 / 58	50 / 56	19 / 27	- / -
Added to Sauces/Salsas	34 / 29	17 / 20	15 / 21	24 / 21
Other	1 / 1	1 / 0	1 / 0	4 / 2

% Respondents

(n=193/123) (n=196/133) (n=199/125) (n=113/154)

■ Dads score significantly lower than moms. ■ Dads score significantly higher than moms.

Please note: number of respondents will vary as this question was only asked to those respondents who reported keeping the form of fruit in question available in their homes

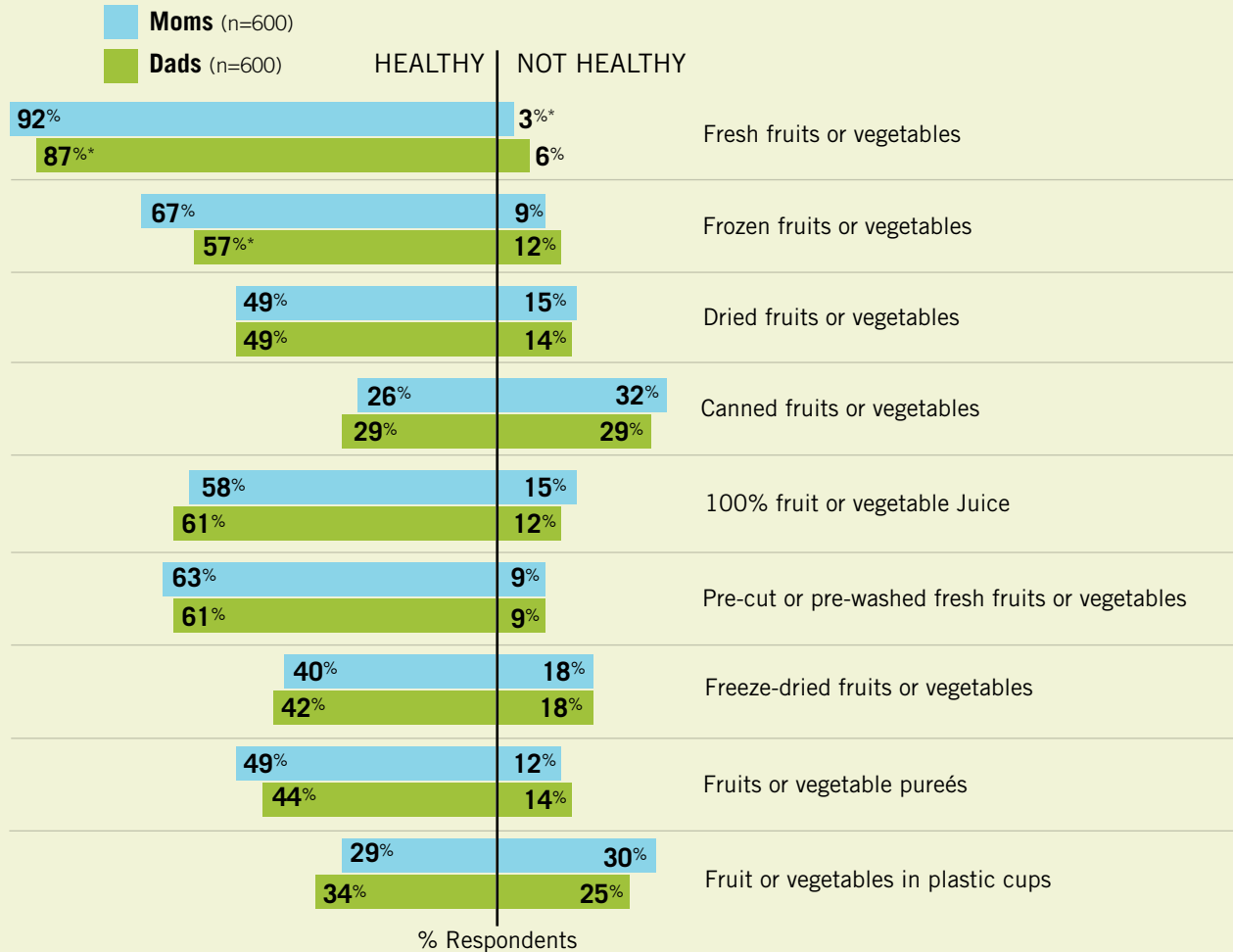
### Perception of Healthfulness

Fresh continues to be perceived as the healthiest form of fruit or vegetable, followed by frozen and fresh-cut (Chart 17). Canned fruit or vegetables are ranked as the least healthy. However, dads are less likely than moms to rate fresh and frozen fruit and vegetables as healthy.



**Chart 17: Perceived Healthfulness of Various Forms of Fruits and Vegetables: Moms vs. Dads**

*In general, how healthy do you consider the following foods to be?*



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

## Barriers

Differing family preferences, a lack of new ideas, cost, and spoilage are key obstacles to the inclusion of fruit and vegetables in meals and snacks for both dads and moms (Chart 18).

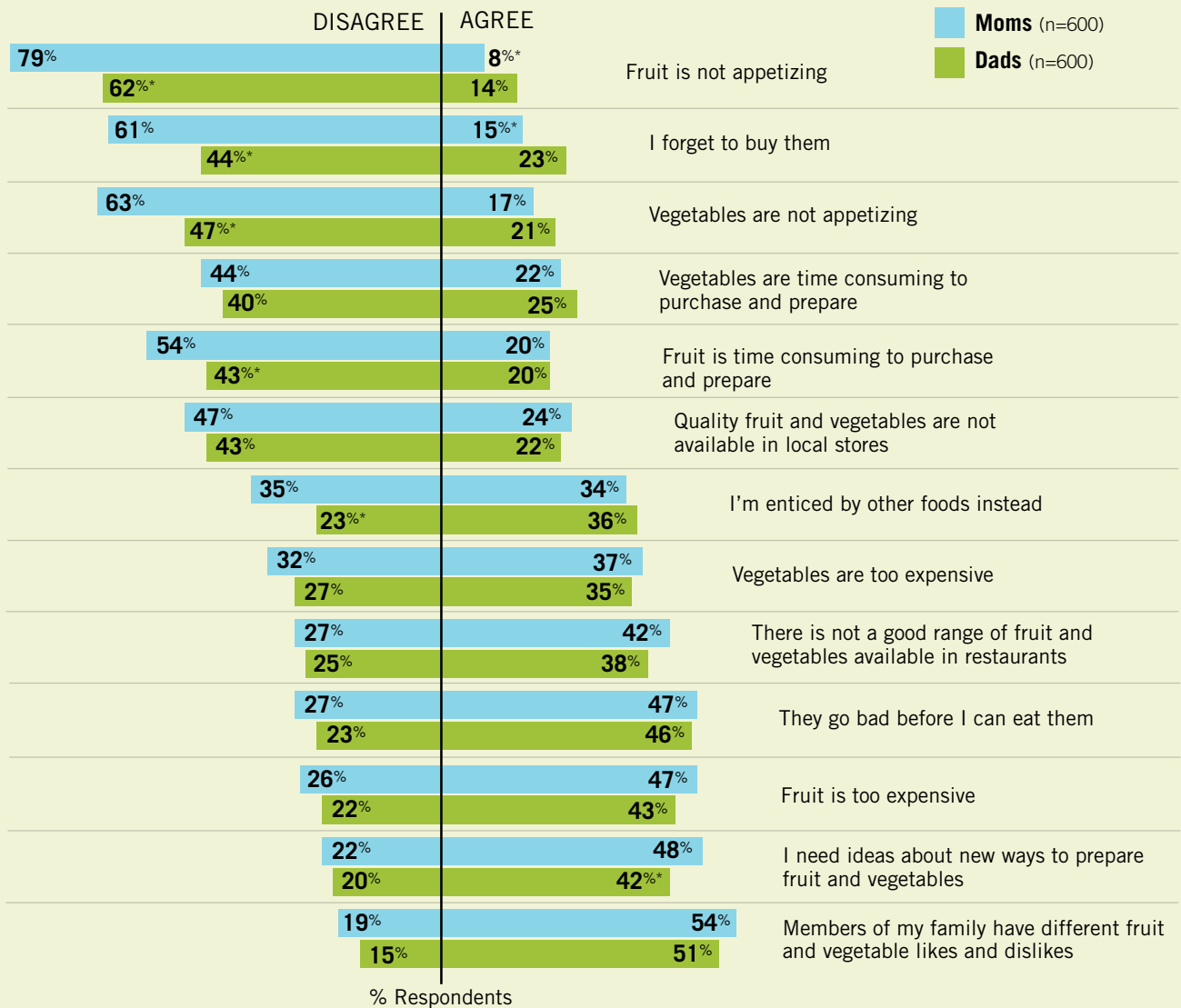
However, dads are more likely than moms to say that fruit is not appetizing and they are more likely to forget to buy them. Moms

are more likely to say that they need new ideas about ways to prepare fruit and vegetables.

For some men, fruits and vegetables are consumed only when somebody else prepares them, making it difficult to eat if they are not able or willing to prepare these foods themselves.<sup>20, 36</sup> Men

**Chart 18: Perceived Barriers to Increased Fruit & Vegetable Consumption: Moms vs. Dads**

Please indicate your level of agreement or disagreement in relation to how difficult each is for you personally to include fruits and vegetables in meals and snacks.



\*Represents statistically significant difference between moms and dads. \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

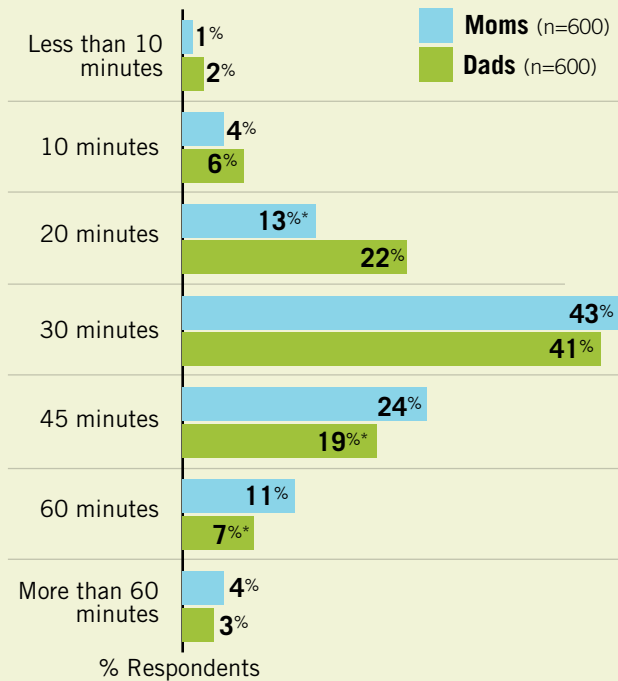


say they don't consider fruit or vegetables filling or satisfying,<sup>12</sup> or have difficulty in finding fruits and vegetables when eating out.<sup>36</sup> Females have reported that male partners were obstructive to their efforts to increase their families' fruit and vegetable consumption.<sup>37</sup> Cost is often reported as a barrier to healthful eating, including fruits and vegetables, especially for low income populations.<sup>38-44</sup> However, analysis by the USDA Economic Research Service (ERS) and others indicate that the total recommended cups of fruits and vegetables each day can be purchased for \$2.50, or 50 cents per cup.<sup>45-47</sup> Parents should be encouraged to eat more 'at-home' since it is, on average, one-third the cost of eating out.<sup>4</sup>

Dads are statistically less likely than moms to spend time preparing dinner (Chart 19). A 30-minute preparation period is most common for both groups.

**Chart 19: Time Spent Making a Dinner Meal: Moms vs. Dads**

*On average, how much time do you spend making a dinner meal?*

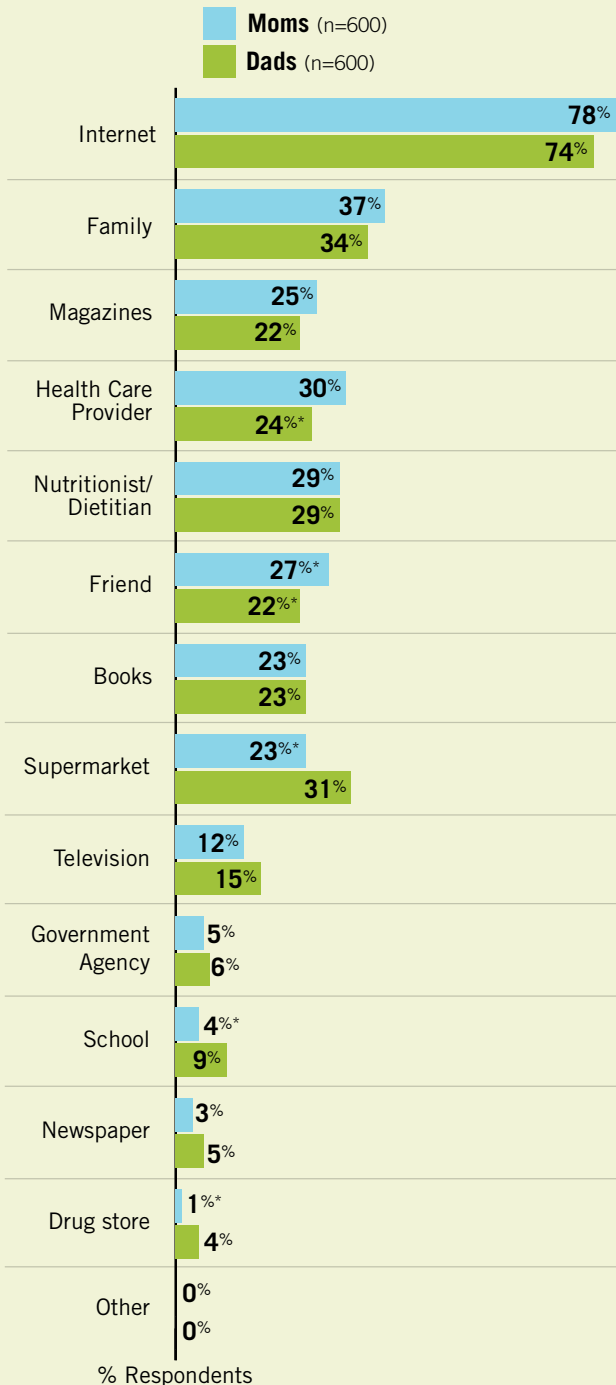


\*Represents statistically significant difference between moms and dads.



**Chart 20: Sources of Information About Eating More Fruit and Vegetables: Moms vs. Dads**

*If you wanted information about how to get yourself and/or your family to eat more fruits and vegetables, where would you go to obtain it? (Please rank your top 3 choices.)*



\*Represents statistically significant difference between moms and dads.

## Sources of Information

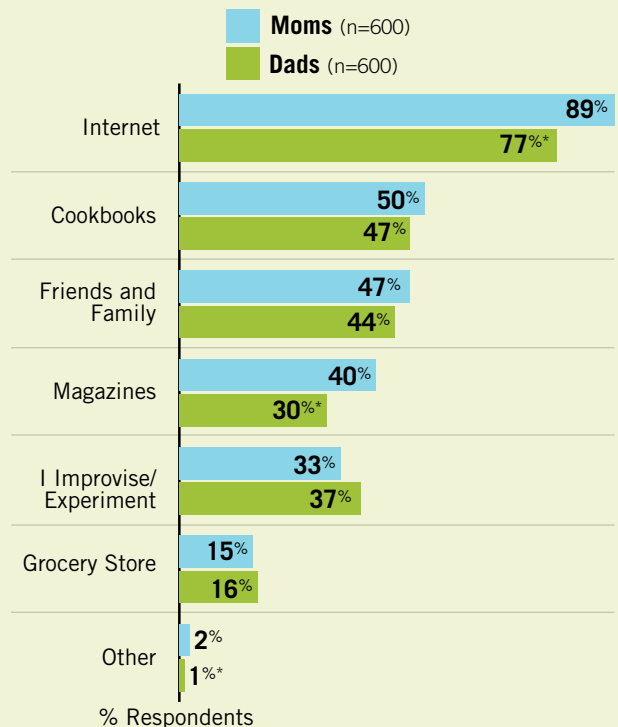
The Internet remains the most popular information source for both dads and moms about fruit and vegetables (**Chart 20**). Dads are less likely than moms to seek fruit or vegetable-related information from health care providers and friends, but they are more likely to seek it from supermarkets, schools, and drug stores.

The Internet is also the most popular source used to find recipes for both dads and moms (**Chart 21**), though dads are significantly less likely than moms to use the internet to find recipes. Dads use magazines significantly less than moms to find recipes, though they both similarly use cookbooks, friends, family, and grocery stores. Dads are more likely to say they improvise or experiment with recipes, though not statistically different from moms.

When asked about which websites they normally visit for recipes, the most popular site for dads appears to be *Foodnetwork.com*, though they are also more likely than moms to use a search engine (**Chart 22**). *Allrecipes.com* appears to be the most consulted site for recipes among moms.

**Chart 21: Recipe Sources: Moms vs. Dads**

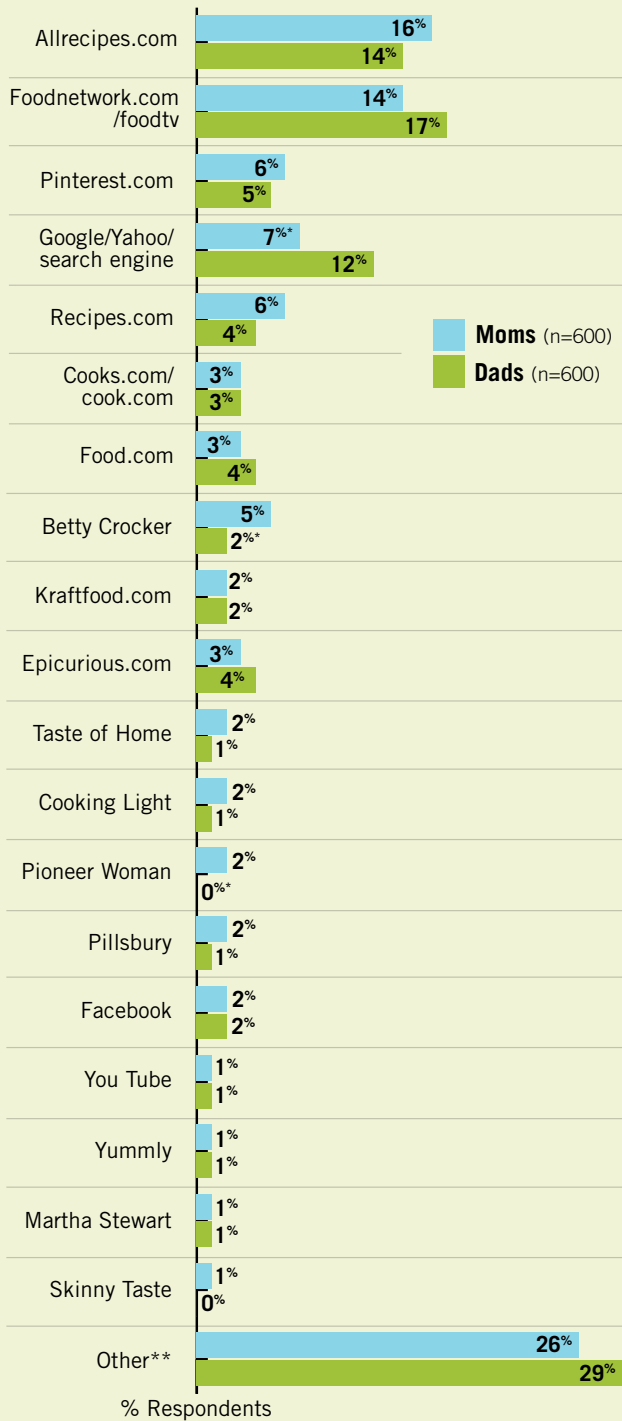
*Where do you normally go to find recipes? (Please select all that apply.)*



\*Represents statistically significant difference between moms and dads.

**Chart 22: Websites Used to Find Recipes: Moms vs. Dads**

*What websites do you normally visit to find recipes?*



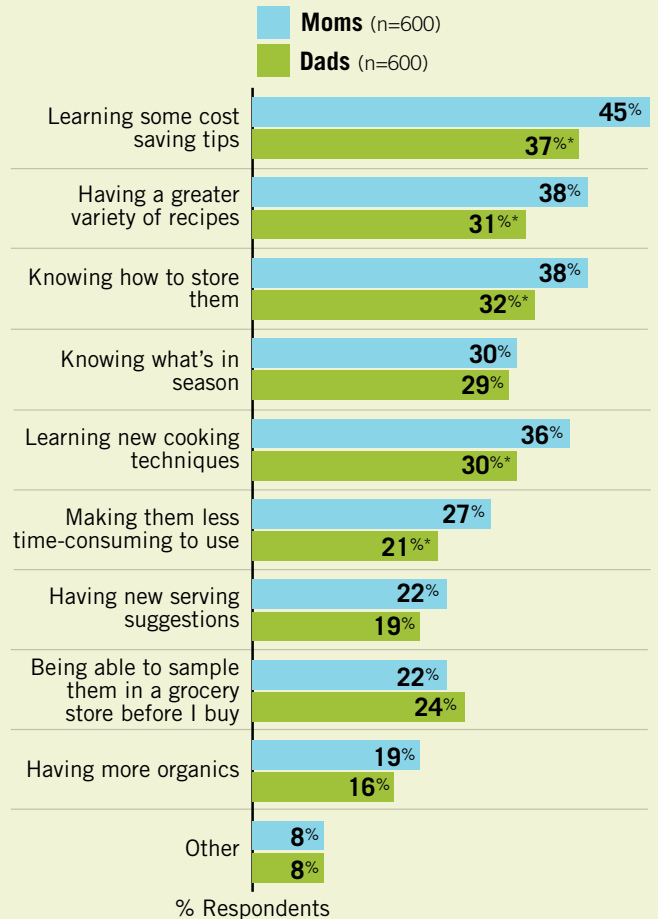
\*Represents statistically significant difference between moms and dads. Includes only those who use the internet to find recipes. No response/don't know were not included.  
 \*\* Mentioned less than 5 times.

## Helpful Aids

Both dads and moms cite tips related to cost-savings as most useful to them to help them eat more fruit and vegetables, but dads in general are less interested in most aids, including having a greater variety of recipes, knowing how to store them, learning new cooking techniques, and making them less time consuming to use (Chart 23). Only being able to sample them in a grocery store before they buy them was ranked higher as an aid by dads than moms, though this was not statistically different.

**Chart 23: Perceived Most Useful Tips to Help Eat Fruits & Vegetables: Moms vs. Dads**

*What would be most useful to help you eat more fruits and vegetables?*

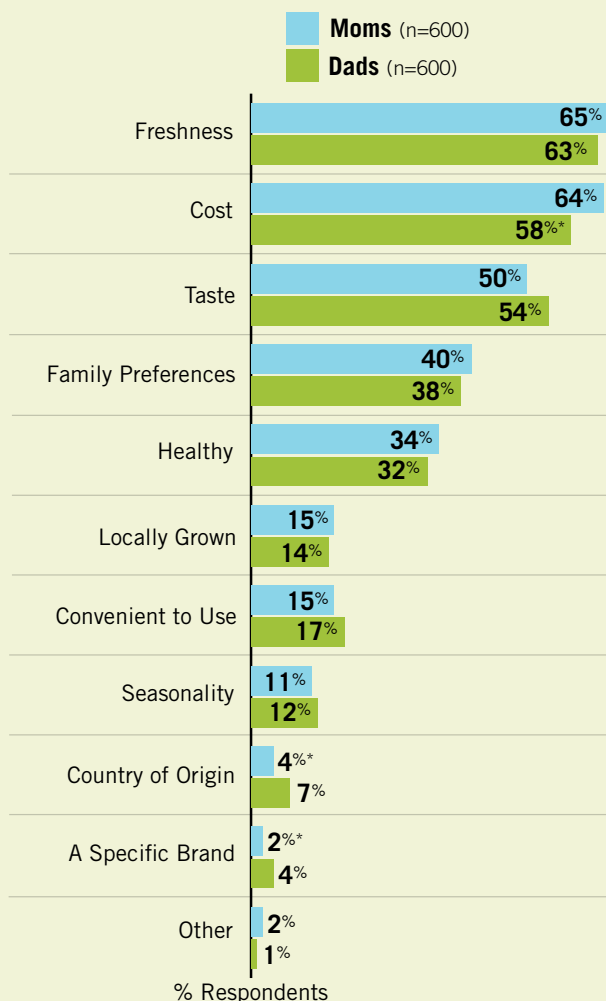


\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.



**Chart 24: Important Factors When Shopping For Fruits & Vegetables: Moms vs. Dads**

When shopping for fruits and vegetables, these factors are most important to me? (Please rank your top 3 choices.)



\*Represents statistically significant difference between moms and dads.

## Important Factors When Purchasing

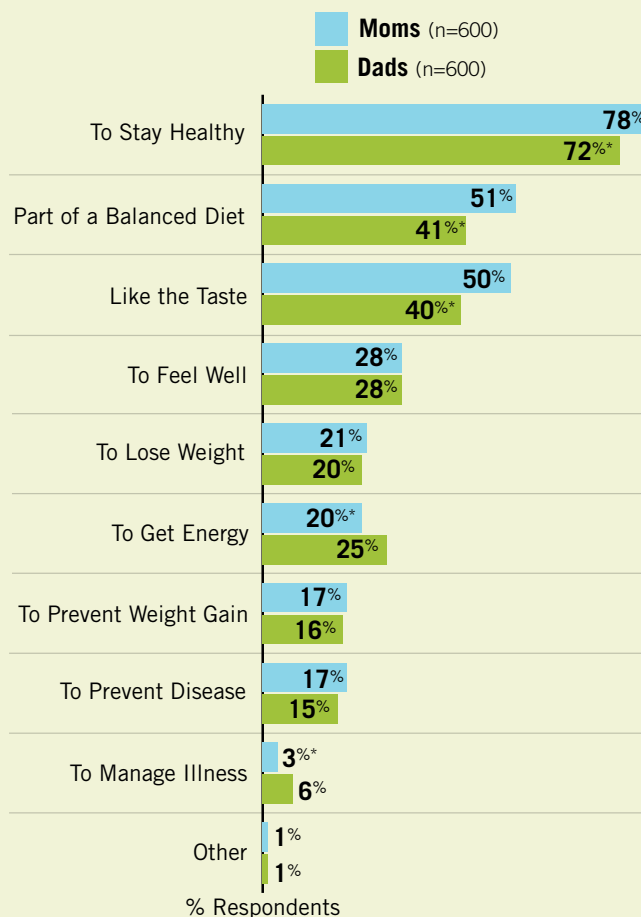
Freshness and cost are the most important factors for dads and moms when they shop for fruits and vegetables (**Chart 24**). However, cost is statistically less important to dads than moms. While low in terms of importance, more dads than moms cited country of origin and brands as being important to them.

## Perceived Benefits

Both dads and moms report that they eat fruit and vegetables to stay healthy, to maintain a balanced diet, and because they like the taste, though dads were significantly less likely than moms

**Chart 25: Most Important Reasons to Eat Fruits & Vegetables: Moms vs. Dads**

Please select up to three of the most important reasons why you, yourself, eat fruits and vegetables.



\*Represents statistically significant difference between moms and dads.

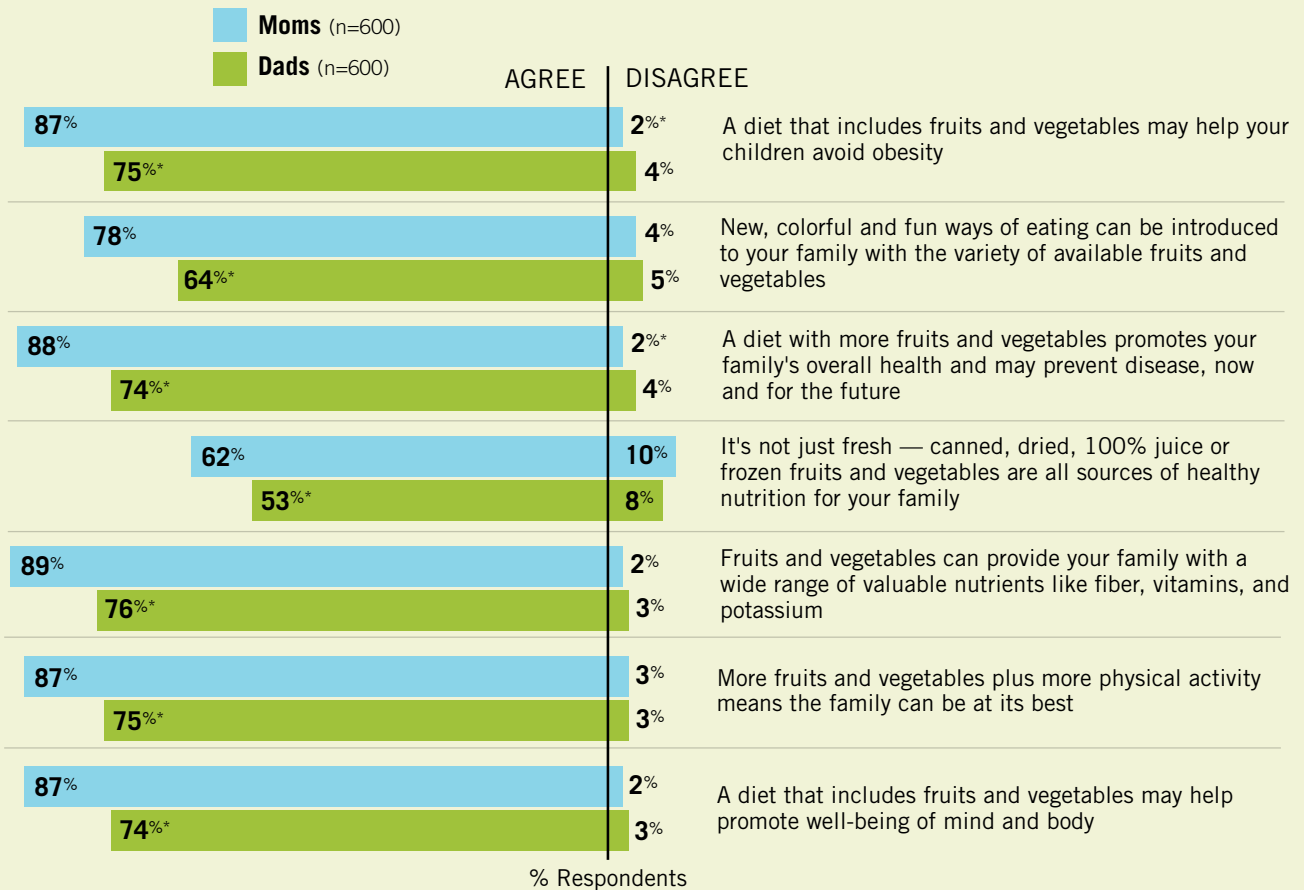
to cite these as important reasons overall (**Chart 25**). Dads were significantly more likely than moms to indicate that they ate fruit and vegetables to get energy and to manage illness.

The perception of fruits and vegetables and various health and nutrition issues can be seen in **Chart 26**. Dads were significantly less likely than moms to agree with all of the benefit statements pertaining to eating fruits and vegetables, consistent with previously mentioned research that suggests men have weaker beliefs about the importance of fruit and vegetables.<sup>20, 21</sup>



**Chart 26: Perception of Key Fruit & Vegetable Benefit Statements: Moms vs. Dads**

Please rate your level of agreement or disagreement with the following statements:



\*Represents statistically significant difference between moms and dads.  
 \*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

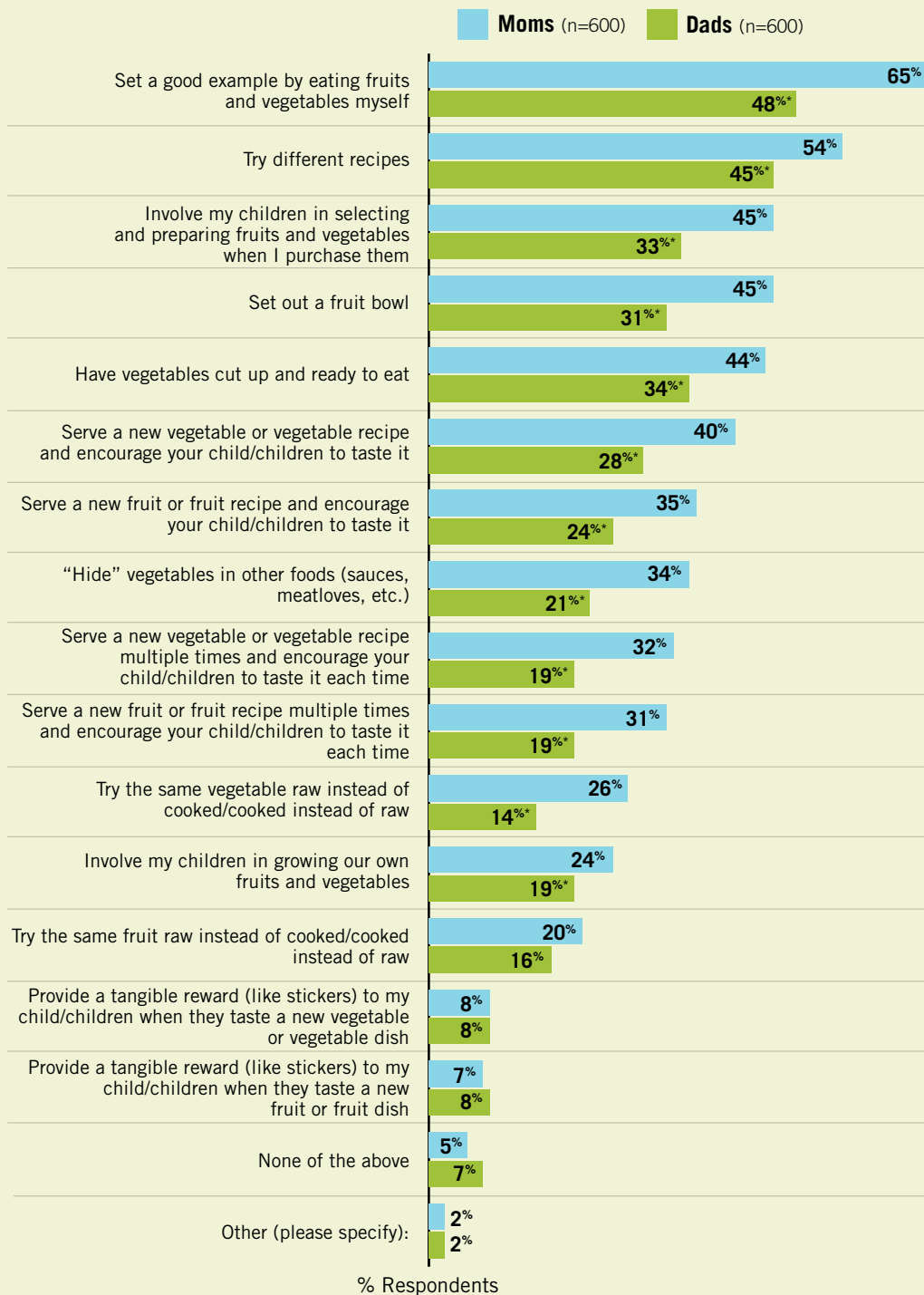
## Varied Approaches

Parenting practices have been studied extensively, though child feeding practices have primarily focused on moms. A recent review of dads' child feeding practices suggests there are many gaps in knowledge, but from what is currently known, dads perceive themselves as having lower responsibility for child feeding.<sup>11</sup> Compared to moms, dads are less likely to monitor their child's food intake, to limit access to snacks, or to ensure daily access to fruits and vegetables. Dads are more focused on getting their children to eat, with less concern about specific foods. Dads are more likely than moms, however, to pressure children to eat or restrict food for weight-related reasons.

The Fruits & Veggies—More Matters campaign has provided parents with various suggested approaches to encourage their families' consumption of fruits and vegetables. Setting a good example and trying different recipes are the most popular approaches used by dads and moms to encourage fruit and vegetable consumption (Chart 27). However, dads are less likely than moms to use most of the approaches listed in Chart 27. This is consistent with mealtime observation research that dads use fewer feeding strategies in general per meal than moms and are less likely to use neutral prompts, reasoning, or praise.<sup>48</sup>

**Chart 27: Approaches Tried by Moms and Dads to Increase Their Family's Fruits & Vegetable Consumption**

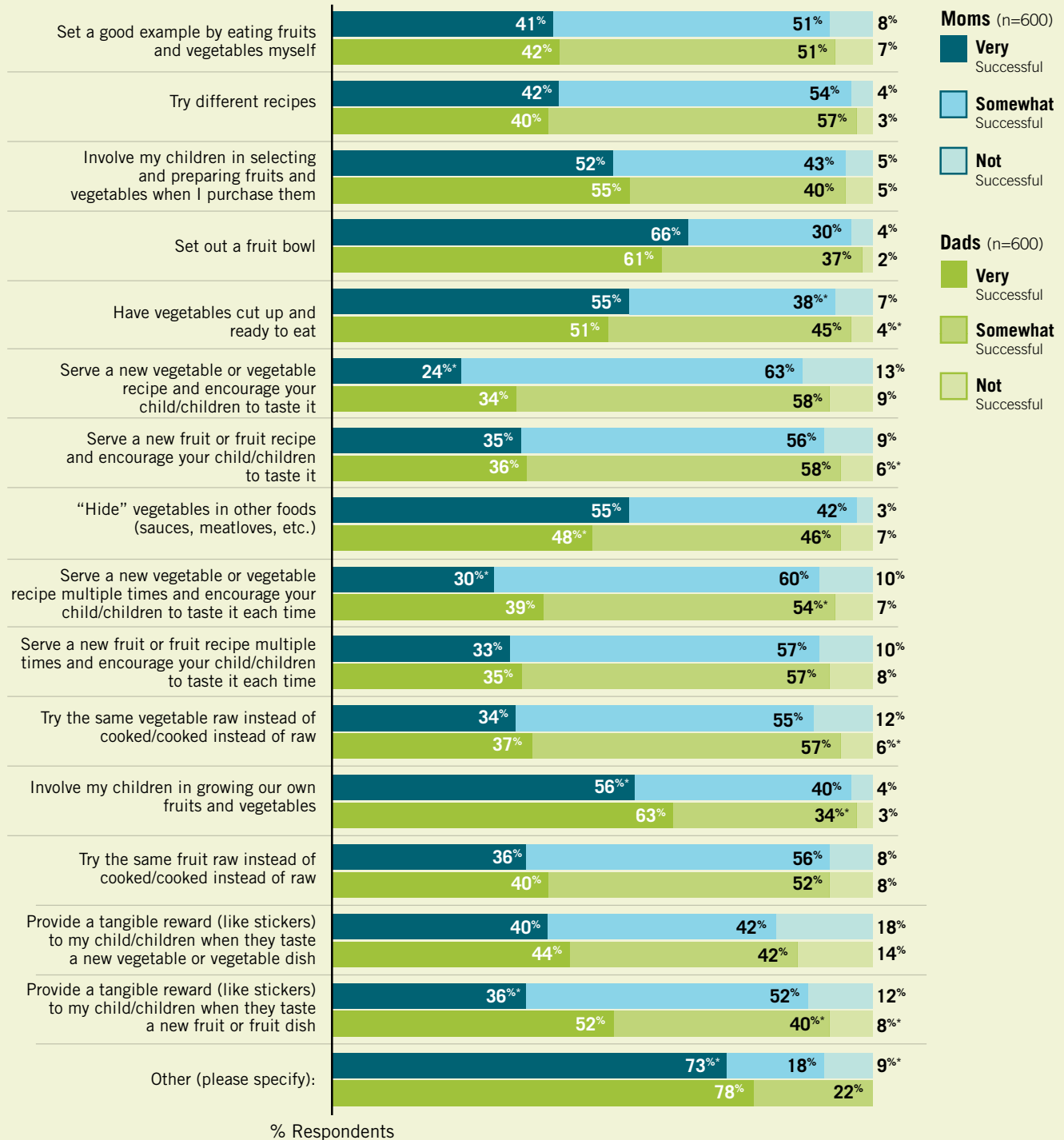
*Which of the following approaches have you tried to encourage your family to eat more fruits and vegetables? (Please select all that apply.)*



\*Represents statistically significant difference between moms and dads.

**Chart 28: Approaches Tried by Moms and Dads to Increase Their Family's Fruits & Vegetable Consumption**

*Success of the approaches that Moms and Dads have tried to encourage their family to eat more fruits and vegetables.*



\*Represents statistically significant difference between moms and dads.

Dads had significantly less success than moms (Chart 28) at hiding vegetables in other foods as an approach to get their family to eat more fruit and vegetables. However, dads found more success than moms by involving children in growing fruits or vegetables (63%), involving children in selecting and preparing fruits and vegetables (55%), and with offering tangible rewards like stickers when their child tasted a new vegetable (52%).

## Favorite Fruits and Vegetables Among Children

Parents reported that their children’s favorite fruits were strawberries, bananas, apples, watermelon, and grapes/raisins when given 13 fruits from which to select (Chart 29). The ‘other’ category included mentions in descending order: mango, raspberries, pomegranate, citrus, blackberries, plums, and a few others. Similarly, parents reported that their children’s favorite vegetables were corn, broccoli, carrot, potatoes, and green beans when given 14 vegetables from which to select (Chart 30). The

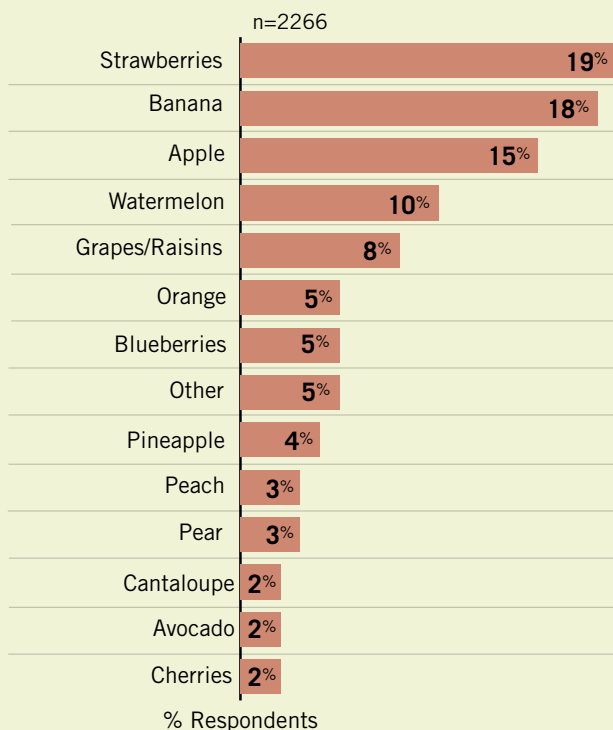
‘other’ category included mentions in descending order: sweet potatoes, ‘none’, cucumbers, asparagus, cauliflower, squash, Brussel sprouts, and a few others.

Favorite fruits and vegetables by gender age group are noted in Charts 31-34, with minor variations among them. Strawberries, apples, and bananas were the most preferred fruit among boys and girls at almost all ages (Charts 31-32). Strawberries are the favorite among girls, and older boys favored bananas more than younger boys. Girls generally prefer apples more than bananas at most ages.

Corn, broccoli, and carrots were a favorite vegetable for both boys and girl ages 10 or younger (Charts 33-34). Interestingly, for girls older than age 10, carrots were no longer among the top 5 preferred vegetables, with potatoes and lettuce filling their spot (Chart 34).

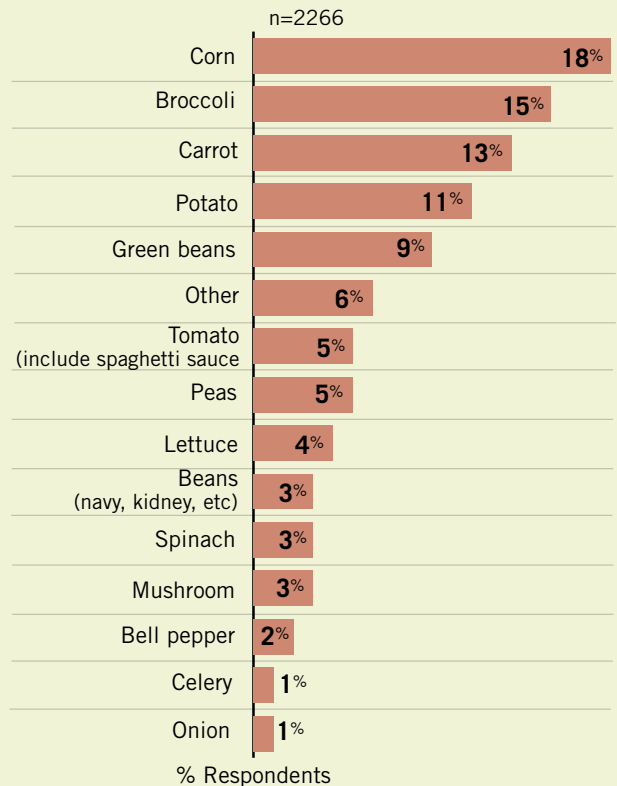
**Chart 29: Childrens’ Favorite Fruit**

*What is [child’s] favorite fruit? (Please select only one)*



**Chart 30: Childrens’ Favorite Vegetables**

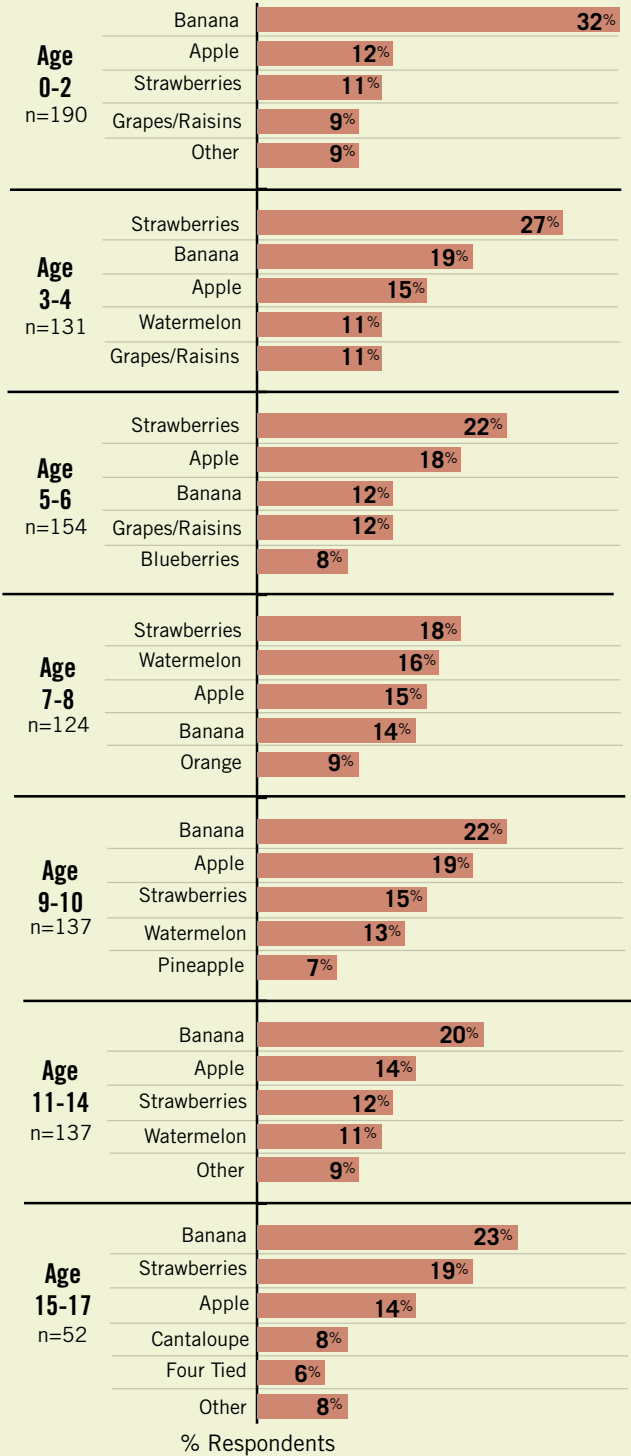
*And favorite vegetable? (Please select only one)*





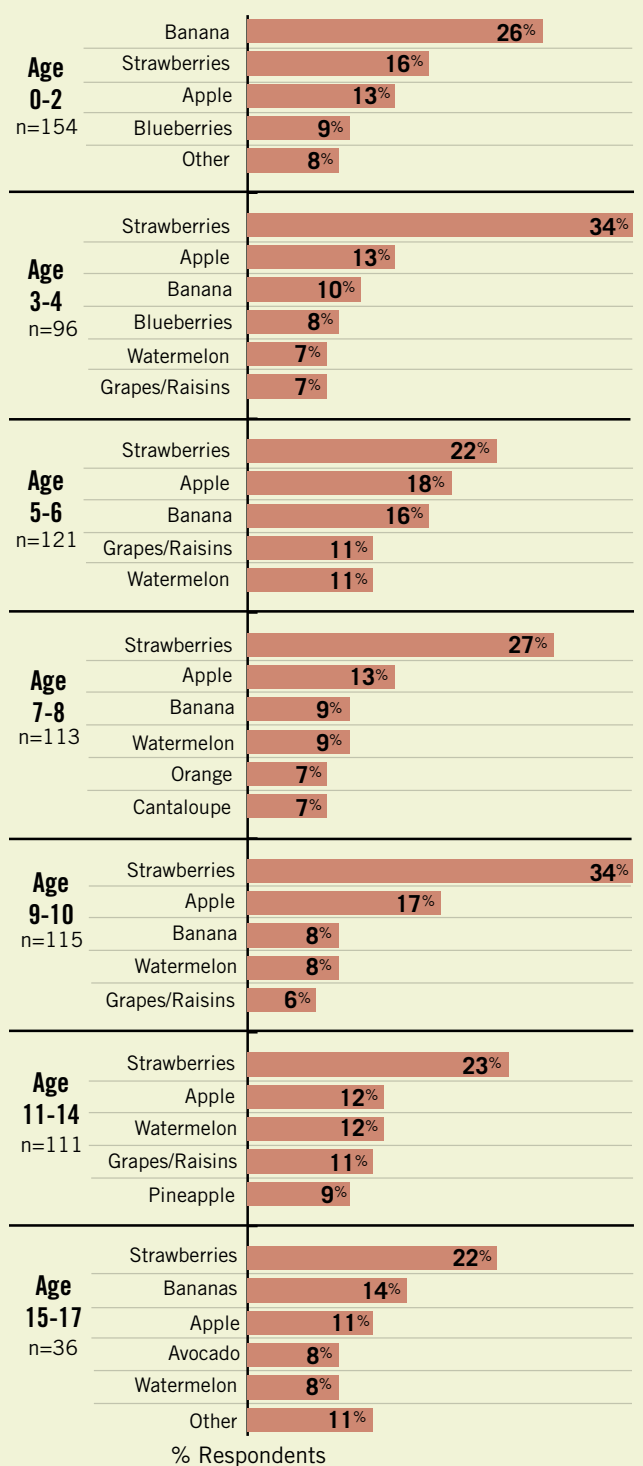
**Chart 31: Boys' Favorite Fruit by Age**

*Top 5 Favorite Fruits*



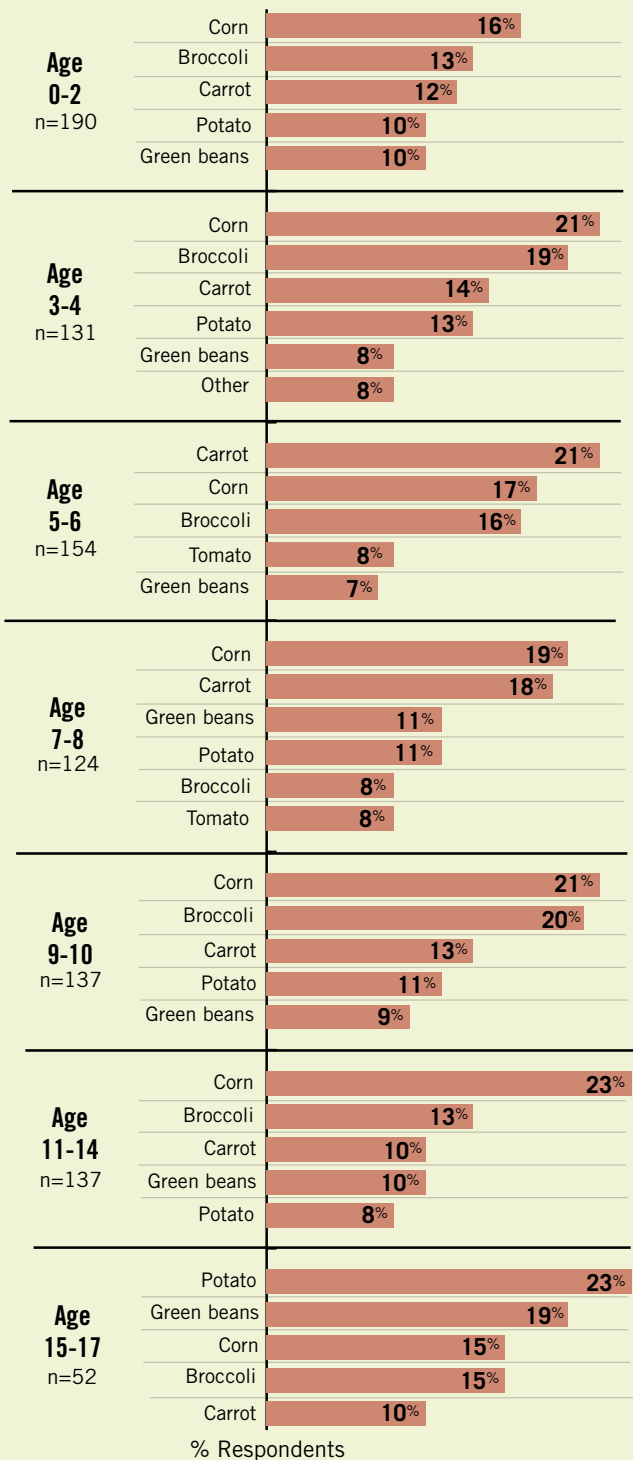
**Chart 32: Girls' Favorite Fruit by Age**

*Top 5 Favorite Fruits*



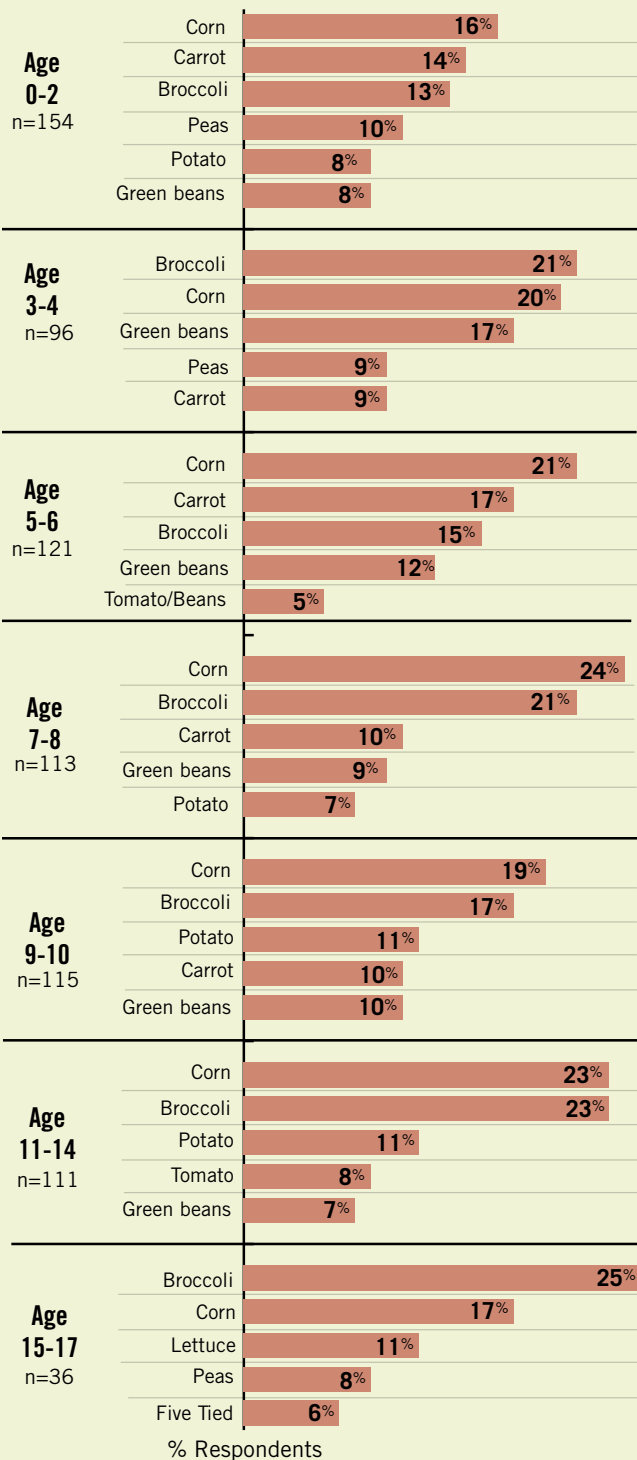
**Chart 33: Boys' Favorite Vegetable by Age**

*Top 5 Favorite Vegetables*



**Chart 34: Girls' Favorite Vegetable by Age**

*Top 5 Favorite Vegetables*



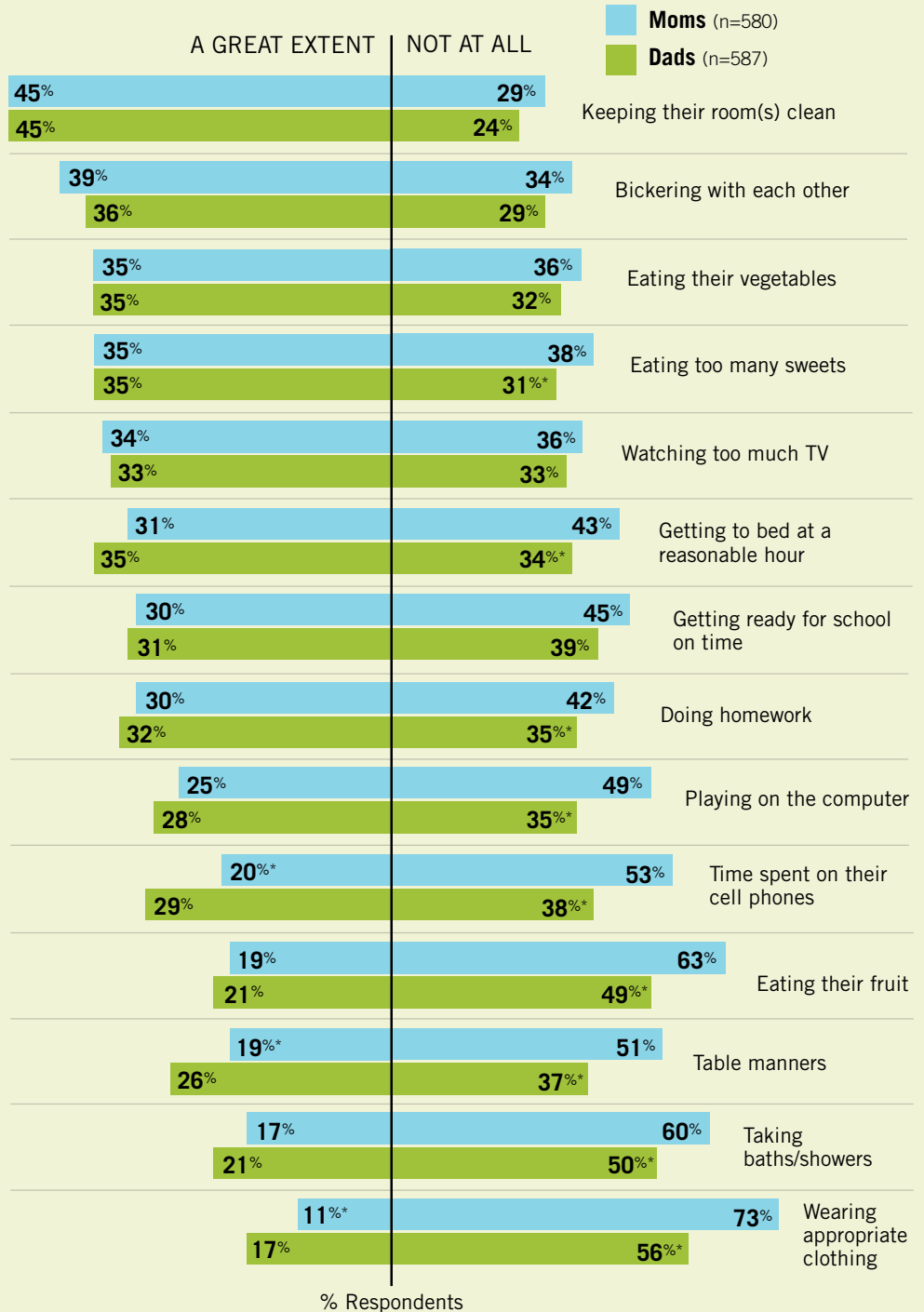
## Picking Your Battles

For both moms and dads, getting their children to eat their vegetables is one of their top battles, after getting them to keep their room clean and to stop bickering (Chart 35). Dads are significantly more likely to have battles with their children over table manners, cell phone usage, and appropriate clothing.



**Chart 35: Parents' "Battles" with their Children**

*As a parent, to what extent are the following situations a "battle" between you and your child(ren)?*



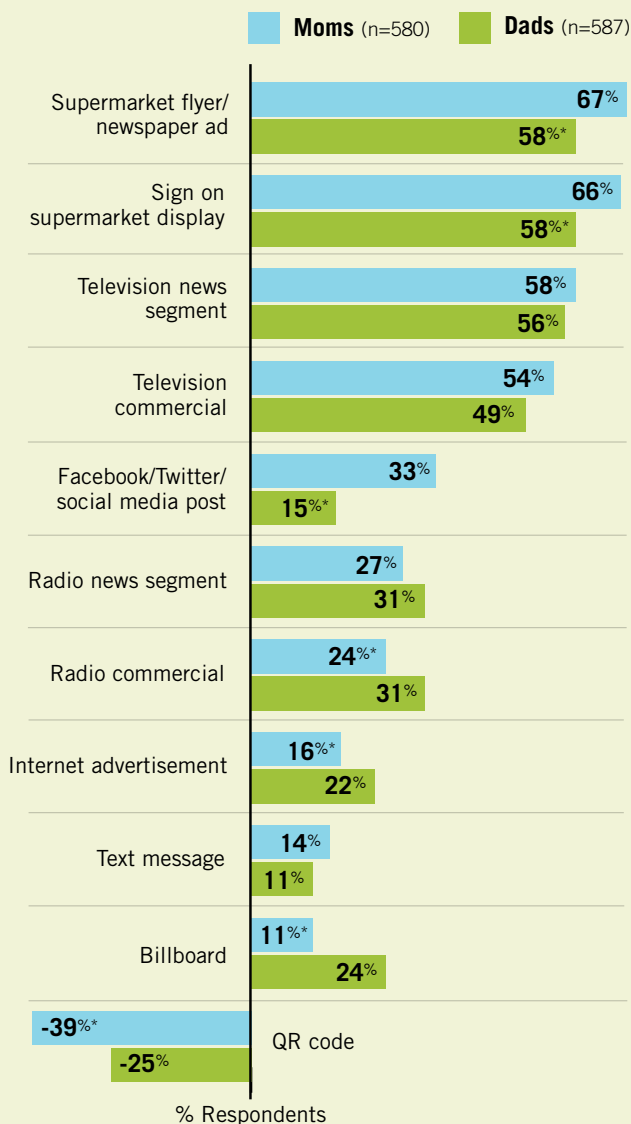
\*Represents statistically significant difference between moms and dads. \*\*Respondents who indicated 'not applicable' were removed from sample. Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

## Communication Methods

Supermarket flyers, ads, and displays and television were the top communication methods for both dads and moms when it comes to making a food decision (Chart 36). However, dads report supermarket flyers, ads, or displays significantly lower than moms. Scores were also statistically lower for dads than

**Chart 36: Parents' Responses to Communication Methods Regarding Food**

*What would be your response to the following communication methods regarding a type of food that you or someone in your household may enjoy?*



\*Represents statistically significant difference between moms and dads. Percentages represent those who would stop, scan, listen, absorb information, do additional research, or purchase the product minus those who would completely ignore the communication.

moms with respect to social media as an effective communication method. Instead, dads were more likely than moms to cite radio commercials, internet advertisements, and billboards as an effective communication method.

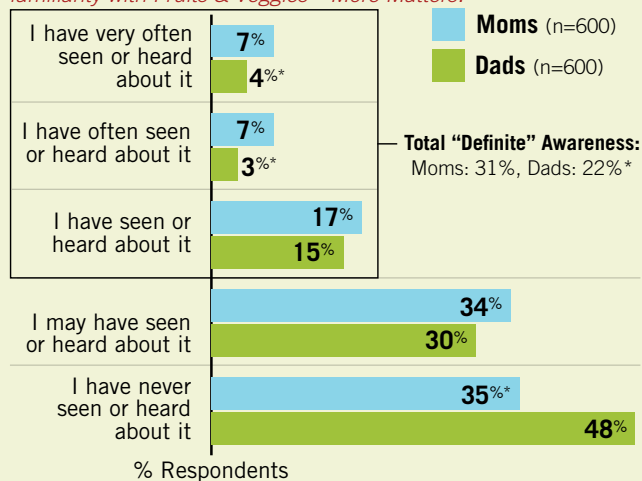
## Fruits & Veggies—More Matters

### Awareness

Awareness of the Fruits & Veggies—More Matters campaign is significantly lower among dads than it is among moms (Chart 37). This isn't surprising given that the campaign has primarily targeted moms through supermarkets and social media, two of their top preferred methods of food communication. Awareness among moms has grown steadily since the Fruits & Veggies—More Matters campaign was launched in 2007.<sup>4</sup>

**Chart 37: Awareness of Fruits & Veggies—More Matters: Moms vs. Dads**

*Which of the following statements best describes your level of familiarity with Fruits & Veggies—More Matters?*



\*Represents statistically significant difference between moms and dads.

### Motivational Impact

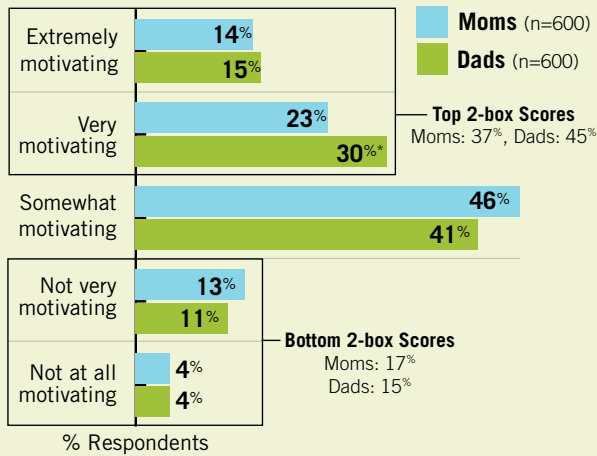
Despite lower awareness, the Fruits & Veggies—More Matters campaign appears to be more motivating to dads than moms (Chart 38).

### Purchasing Impact

While the Top 2-Box scores of dads and moms are equal, moms appear to exhibit stronger inclinations to purchase products that bear the Fruits & Veggies—More Matters logo due to their significantly higher Top-Box score (Chart 39).

**Chart 38: How Well Fruits & Veggies—More Matters Motivates Moms vs. Dads**

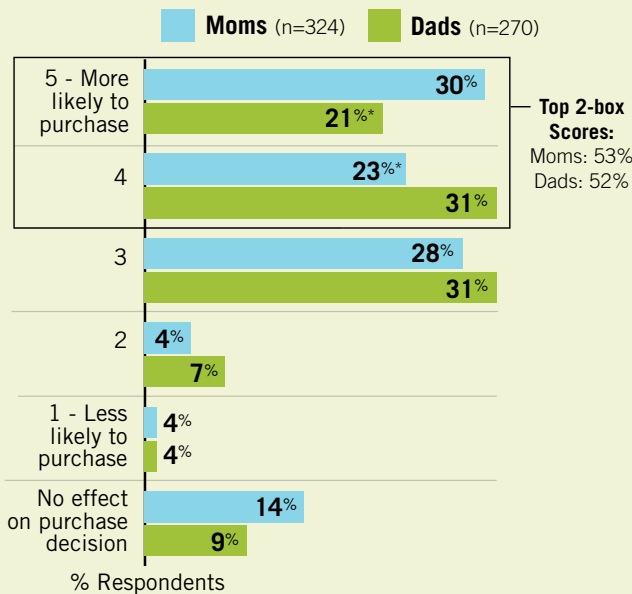
*How well do you believe Fruits & Veggies—More Matters® motivates you to help yourself and/or your family to eat more fruits and vegetables?*



\*Represents statistically significant difference between moms and dads.  
\*\*Only asked of those aware of Fruits & Veggies—More Matters.

**Chart 39: Likelihood of Purchasing Products Carrying the Fruits & Veggies—More Matters Brand Logo: Moms vs. Dads**

*How does seeing the "More Matters" logo affect your decision to purchase the product?*



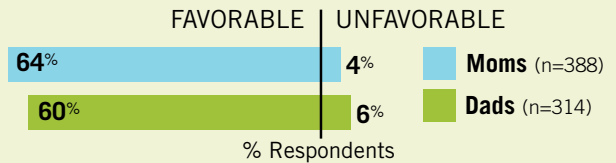
\*Represents statistically significant difference between moms and dads.  
\*\*Only asked of those aware of Fruits & Veggies—More Matters and found it at least somewhat motivating.

**Brand Affinity**

Impressions of Fruits & Veggies—More Matters are predominantly favorable (Chart 40). Dads appear less likely to agree that the campaign is a reminder to eat more fruits and vegetables (Chart 41).

**Chart 40: Fruits & Veggies—More Matters Brand Favorability: Moms vs. Dads**

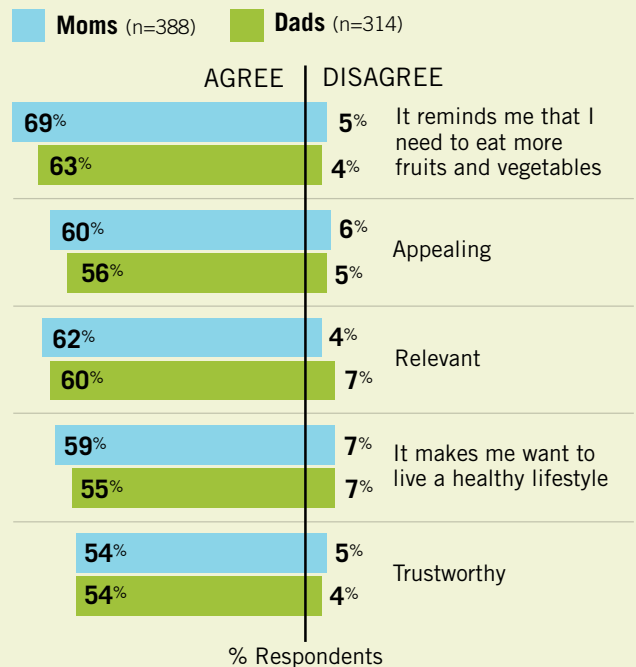
*Taking everything into account from what you may have seen, read, heard or experienced, please rate your overall impression of Fruits & Veggies "More Matters".*



\*Only asked of those aware of Fruits & Veggies—More Matters.  
\*\*Responses do not equal 100% because mid-point in 5-point Likert Scale was omitted.

**Chart 41: Affinity Towards the Fruits & Veggies—More Matters Brand Logo: Moms vs. Dads**

*Please rate your level of agreement or disagreement with the following statements regarding Fruits & Veggies—More Matters*



\*Only asked of those aware of Fruits & Veggies—More Matters.

## Appendix A. Methodology

The 2014 survey was fielded by OnResearch, Inc. (Ontario, Canada) and included 600 men and 600 women. The survey was fielded online December 12, 2013 through November 16, 2014 as part of an ongoing survey with parents responding online each month of the year.

The sample was drawn from membership lists of survey panels for online companies who partner with OnResearch, Inc. Potential respondents who met inclusion criteria were invited via email to participate in the survey. The specifications included parents who had children age 10 or younger in the household, were either solely responsible for their household's grocery shopping or normally participated in their household's grocery shopping either alone or with their spouse or partner. The email invitation did not specify the survey was about fruits and vegetables, and the order of the questions was carefully considered to minimize bias in responses.

A total of nearly 20,000 were asked to participate. Access to the survey was terminated once the planned sample was reached. Survey participants received rewards from the panel company for participating in the survey.

Most questions were answered using a 5 point Likert scale, with several questions that required open-ended responses. The Theory of Planned Behavior was used as a framework to ascertain psychosocial factors (social norms, perceived behavioral control, attitudes and intentions) related to consumption of fruits and vegetables.<sup>49</sup> Other constructs from Social Learning Theory that have been associated with fruit and vegetable intake in the scientific literature including self-efficacy and social support were also included.<sup>50, 51</sup> Finally, other questions assessed perceptions about fruits and vegetables and awareness of recommendations for intake.

Results of each survey were tabulated by OnResearch, Inc.



### Methodology

All respondents were residents of the United States. The online survey was conducted via an online panel.

Year	2014
Fielding Period	December 12, 2013 - November 16, 2014
Sample Size	n=1200
Confidence Level (within year)	2.3% (19/20 times)
Gender	Men=600, Women=600
Age	18 years old and older
Additional Criteria	Parents with children 10 years old and younger. Solely or normally participate in household's grocery shopping.

## Appendix B. Demographics

### Respondent Profile: Primary Shoppers

MARITAL STATUS	Moms with children 10 & under, 2014	Dads with children 10 & under, 2014
Married/living with someone	73%	83%
Single	15%	12%
Separated/divorced	11%	6%
Widowed	1%	0%
SPOUSE'S EDUCATION	%	%
Did not finish high school	4%	2%
High school graduate	18%	14%
Some college	22%	22%
College graduate	29%	34%
Some graduate work	5%	5%
Completed graduate work	19%	22%
Trade/vocational school	3%	1%
WORK OUTSIDE THE HOME	%	%
No	41%	17%
Yes, Part-time	21%	14%
Yes, Full-time	39%	69%
ETHNICITY	%	%
White/Caucasian	68%	66%
Black/African American	10%	8%
Hispanic/Latino	10%	14%
Asian/Pacific Islander	8%	10%
Mixed Race	3%	2%
Other	1%	1%

GENDER	Moms with children 10 & under, 2014	Dads with children 10 & under, 2014
Female	100%	-
Male	-	100%
AGE	%	%
18-24	5%	2%
25-34	50%	43%
35-44	38%	46%
45-54	7%	9%
55+	-	-
HOUSEHOLD INCOME	%	%
Less than \$25,000	35%	20%
\$25,000 - \$49,999	23%	26%
\$50,000 - \$74,999	13%	22%
\$75,000 - \$99,999	9%	10%
\$100,000 or more	19%	22%
OWN EDUCATION	%	%
Did not finish high school	1%	2%
High school graduate	15%	13%
Some college	26%	24%
College graduate	32%	31%
Some graduate work	5%	6%
Completed graduate work	19%	23%
Trade/vocational school	3%	2%

## Appendix C. About Fruits & Veggies—More Matters



Recommendations for fruit and vegetable intake have increased due to research suggesting numerous potential benefits of fruit and vegetable consumption to prevent chronic diseases. The increased importance of fruit and vegetable consumption is illustrated by the inclusion of fruits and vegetables in the *Dietary Guidelines for Americans, 2010* as one of the “food groups to encourage” and in updated recommendations for fruit and vegetable intake that ‘half your plate’ should consist of fruit and vegetables in the new ChooseMyPlate graphic.<sup>2, 52</sup> This change represented an increase for most people from the previous recommendation of 5-9 servings a day.

The 5 A Day for Better Health Program (“5 A Day”) was a state-wide social marketing program begun by the California Department of Health Services in 1988 to promote increased fruit and vegetable consumption. The national 5 A Day program began in 1991 as a public-private partnership between the National Cancer Institute (NCI) and Produce for Better Health Foundation (PBH). As lead health authority, NCI determined health statements and nutrient criteria for products which could carry the brand logo, and PBH coordinated private-sector activities. In 2005, NCI transferred lead health authority to the Centers for Disease Control and Prevention (CDC).

Awareness of recommendations for fruit and vegetable consumption increased over time. In 1991, 8% of individuals reported being aware that fruit and vegetable intake should be at least 5 servings a day.<sup>53</sup> In 2004, that percentage had increased to 40%.<sup>54</sup> However, this heightened awareness had not translated into behavior change. Between 1994 and 2005, the proportion of adults eating 5 or more servings of fruits and vegetables per day

remained virtually unchanged (24.6% vs. 25.0%, respectively) with an estimated decrease of 0.22 servings per day among adults.<sup>14, 55</sup>

In light of new dietary recommendations, PBH, CDC, and other partners recognized the need to establish a new identity for 5 A Day with the ability to sustain itself into the future regardless of changes in recommended servings, generate a brand that would provide an emotional or inspirational connection with consumers, and transfer 5 A Day equity—increased awareness of fruit and vegetable recommendations and the network for promoting consumption—to a new program identity, which is now Fruits & Veggies—More Matters<sup>®</sup>.

The Fruits & Veggies—More Matters<sup>®</sup> brand was developed based on comprehensive formative research with consumers. While specifically developed with moms as the primary target audience, the Fruits & Veggies—More Matters<sup>®</sup> message tested well with men, women and people of different ages, incomes, and ethnicities. Moms preferred a nurturing tone rather than a preaching, frightening, or bullying one. The most effective approach in motivating mothers was to be her ally, sending a message that promotes their responsibility as family caretaker. Fruits & Veggies—More Matters<sup>®</sup> brand appeals to moms’ sense of responsibility to take care of her family in a strong, simple, and positive manner. Mothers feel they can help their families eat more fruits and vegetables when they know that various forms (frozen, canned, dried, 100% juice, fresh) all help meet daily fruit and vegetable requirements.<sup>56</sup> For time-starved mothers, providing simple serving suggestions, tips, and recipes was also identified as important.

Ultimately the Fruits & Veggies—More Matters slogan and graphic are seen as positive reminders to eat more fruits and vegetables by the broader consumer audience. It reminds them of the known health benefits of consuming fruits and vegetables and encourages them to eat more.

Effectively replacing 5 A Day, Fruits & Veggies—More Matters was launched in March 2007 with the support of many stakeholders, including growers, supermarket retailers, state departments of health, CDC, and others.



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