2017 Fruits and Vegetables Survey

Preliminary Findings on Consumer Consumption, Detractors and Drivers, and Message Implications
Session Panelists

Carolyn Takata
Moderator
PBH Research Committee Chair
Director of Marketing, Silgan Containers

Gail Cowling
Panelist
PBH Research Partner
Vice President, OnResearch

Alexandra Lewin-Zwerdling
Panelist
PBH Research Partner
AARP Foundation Consultant

Session Learning Objectives

- Understand American fruit and vegetable consumption patterns
- Identify motivators and barriers to consumption
- Consider consumer messaging implications
RESEARCH OBJECTIVES AND METHODOLOGY
This research sought to further identify:

1. Frequency of fruit and vegetable consumption
2. Motivators and barriers to consuming fruit and vegetables
3. Differences among age groups, income and education
4. Future implications to drive increased consumption of healthful foods, specifically fruits and vegetables
5. Consumer messaging insights
Research Methodology

1. **Approach**
   Online survey administered to a nationwide sample

2. **Data Collection Period**
   Data collected January 23 - 31, 2017

3. **Sample Size**
   n=2025 with quotas by age and income to reflect the American population

4. **Sample Details**
   Sample included men and women 50+ years as well as targeting those with kids under 10 years in the household and primary shoppers in households with older and no kids.

5. **PBH Study Partner**
   AARP Foundation

6. **Research Firm**
   OnResearch
FRUIT AND VEGETABLE CONSUMPTION PATTERNS
More than 3/4 of all Americans believe they should consume at least 2 cups FVs per day

Q14. How many cups of fruit would you say that you eat in a typical day?

Q15. How many cups of vegetables would you say that you eat in a typical day?

Q16. About how many cups of fruits and vegetables do you think you should be eating each day?

Base: All respondents n=2025

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>2.02 cups</th>
<th>2.57 cups</th>
<th>2.19 cups</th>
<th>2.93 cups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived GAP</td>
<td>.55 cups</td>
<td>- .74 cups</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Is there a gender gap when it comes to understanding fruit and vegetable dietary recommendations?

As they age, men think they are doing better than they really are.

Men’s idea of how much they should be eating is closer to the *MyPlate* minimum than Women’s.

Women do well at exceeding the minimum as they age but they do not acknowledge it.

Women are setting their personal bar higher than men.
Perceived vs. Actual Fruit and Vegetables Consumed, **WOMEN**

Q14. How many cups of *fruit* would you say that you eat in a typical day?

Q15. How many cups of *vegetables* would you say that you eat in a typical day?

Q16. About how many cups of fruits and vegetables do you think you *should* be eating each day?

Base: All respondents n=2025

<table>
<thead>
<tr>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
</tr>
<tr>
<td>30-39</td>
</tr>
<tr>
<td>40-49</td>
</tr>
<tr>
<td>50-59</td>
</tr>
<tr>
<td>60-64</td>
</tr>
<tr>
<td>65+</td>
</tr>
</tbody>
</table>

**Perceived Gap**

<table>
<thead>
<tr>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
</tr>
<tr>
<td>30-39</td>
</tr>
<tr>
<td>40-49</td>
</tr>
<tr>
<td>50-59</td>
</tr>
<tr>
<td>60-64</td>
</tr>
<tr>
<td>65+</td>
</tr>
</tbody>
</table>

**Actual Gap**

<table>
<thead>
<tr>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
</tr>
<tr>
<td>30-39</td>
</tr>
<tr>
<td>40-49</td>
</tr>
<tr>
<td>50-59</td>
</tr>
<tr>
<td>60-64</td>
</tr>
<tr>
<td>65+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cups/Day consumed</th>
<th>Cups/day think should consume</th>
<th>MyPlate Cups/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Perceived Gap: -1.3 -1.3 -1.4 -1.2 -1.1 -0.8

Actual Gap*: -0.3 -0.1 0.1 0.7 0.6 0.5
Perceived vs. Actual Fruit and Vegetables Consumed, MEN

Q14. How many cups of fruit would you say that you eat in a typical day?

Q15. How many cups of vegetables would you say that you eat in a typical day?

Q16. About how many cups of fruits and vegetables do you think you should be eating each day?

Base: All respondents n=2025

<table>
<thead>
<tr>
<th>Perceived Gap</th>
<th>-0.4</th>
<th>-0.5</th>
<th>-0.7</th>
<th>-0.6</th>
<th>-1.1</th>
<th>-0.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Gap*</td>
<td>-0.2</td>
<td>0.2</td>
<td>-0.4</td>
<td>-0.6</td>
<td>-1.0</td>
<td>-0.7</td>
</tr>
</tbody>
</table>
Americans Report An Intake Close to Recommendations In Terms of Minimum Frequency and Quantity of Fruit and Vegetable Consumption.

AVERAGE NUMBER OF CUPS CONSUMED WEEKLY

Q13. How many days in a typical week do you eat fruit? And vegetables?

Q14. About how many cups of **fruit** would you day that you eat in a typical day?

Q15. About how many cups of **vegetables** would you say that you eat in a typical day?

Base: All respondents n=2025
Consumption by EDUCATION: Frequency of Consumption Increases with Education. Post-graduates Consume Significantly More/Day

**Q13.** How many days in a typical week do you eat fruit? And vegetables?

**Q14.** About how many cups of fruit would you say that you eat in a typical day?

**Q15.** About how many cups of vegetables would you say that you eat in a typical day?

Base: All respondents n=2025

*Represents statistically a significant difference.
Consumption by WORK STATUS: Retirees Are Eating Fruits and Vegetables More Often Than the Working and Unemployed

Q13. How many days in a typical week do you eat fruit? And vegetables?

Q14. About how many cups of fruit would you say that you eat in a typical day?

Q15. About how many cups of vegetables would you say that you eat in a typical day?

Base: All respondents n=2025
*Represents statistically a significant difference.
Consumption by AGE AND INCOME: As People Age, the Effects of Income Differences Shrink

Q13. How many days in a typical week do you eat fruit? And vegetables?

Q14. About how many cups of fruit would you say that you eat in a typical day?

Q15. About how many cups of vegetables would you say that you eat in a typical day?

Base: All respondents n=2025  
*Represents statistically a significant difference.
More than half of produce consumed at home is fresh.

Q17. Regarding Fruit. Thinking only about the food that you prepare at home, what percentage, on average, of these foods are from canned (including glass jars), frozen, fresh, dried, or 100% juice?

Q18. Regarding Vegetables. Thinking only about the food that you prepare at home, what percentage, on average, of these foods are from canned (including glass jars), frozen, fresh, dried, or 100% juice?

Base: All respondents n=2025
*Represents statistically a significant difference.
DETRACTORS FROM FRUIT AND VEGETABLE CONSUMPTION
Members of my family have different FV likes and dislikes
I need ideas about new ways to prepare fruits and vegetables
They go bad before I can eat them
Fruit is too expensive
I'm enticed by other foods instead
There is not a good range of fruits and vegetables available in restaurants.
Vegetables are too expensive

Please indicate your level of agreement in relation to how difficult each is for you personally, to include fruits and vegetables in meals and snacks.
2017 Overall Detractors From Eating More Cups Per Day

- Fruits and vegetables have many health benefits
- I like fruits and vegetables but sometimes they don’t agree with me

2017 Overall Detractors From Eating More Days/Week

- I do not eat fruits and vegetables
- In general, I do not feel energetic day-to-day
- Physical limitations prevent me from eating fruits and vegetables
- It is hard to find fruits and vegetables that everyone in my household likes
- I don’t know how to prepare fruits or vegetables in different ways
### DETRACTORS IN COMMON
- Like but sometimes they don’t agree with me
- Don’t know how to prepare in different ways
- “Have more energy”

### MEN ONLY
- “Many health benefits”

### WOMEN ONLY
- I don’t feel engaged and interested in my daily activities
- Compared to others my age, I don’t feel healthy
- Hard to find FVs that everyone in household likes
2017 Detractors & Income

DETRACTORS IN COMMON
• Don’t eat FVs
• Don’t know how to prepare fruits or veggies in different ways

LOWER INCOME ONLY
• Sometimes they don’t agree with me
• Finding FVs that everyone in the household likes

UPPER INCOME ONLY
• “Have many health benefits”
### DETRACTORS IN COMMON
- Don’t know how to prepare in different ways
- Like, but sometimes they don’t agree with me

### YOUNGER ONLY
- In general, I do not feel energetic day-to-day

### OLDER ONLY
- Hard to find FVs that everyone in the household likes
## 2017 Detractors and Employment

### DETRACTORS IN COMMON
- Hard to find FVs that everyone in household likes
- Like FVs but sometimes they disagree with me

<table>
<thead>
<tr>
<th>WORKING ONLY</th>
<th>NON- WORKING ONLY</th>
<th>RETIRED ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Do not feel energetic day-to-day</td>
<td>- Fruits and vegetables have many health benefits</td>
<td>- Someone else prepares it for me</td>
</tr>
<tr>
<td></td>
<td>- All things considered, I am healthy</td>
<td>- Don’t know how to prepare in different ways</td>
</tr>
</tbody>
</table>
## 2017 Detractors & Education

### Detractors in Common
- I don’t eat FVs
- Hard to find FVs that everyone in the household likes
- Don’t know how to prepare them in different ways

### Under Post-Grad Only

### Post Grad Only
- “Many health benefits”
- Sometimes they don’t agree with me
MOTIVATORS/DRIVERS OF FRUIT AND VEGETABLE CONSUMPTION
Knowing what's in season
Learning some cost saving tips
Knowing how to store them
Learning new cooking techniques
Knowing what's in season

What would be most useful to help you attain the goal of eating your recommended amount of fruits and vegetables. (Select all that apply)
2017 Overall Drivers For Consuming More, More Often

**DRIVERS IN COMMON**
- I eat fruits and vegetables because I want to stay healthy
- If I don’t eat fruits and vegetables regularly, I don’t feel as well
- Eating fruits and vegetables has helped me avoid taking certain medications

**MORE CUPS/DAY ONLY**
- I am agile and active
- I eat fruits and vegetables for environmental or ethical reasons
- Medications prevent me from eating certain fruits and vegetables

**MORE DAYS/WEEK ONLY**
- I enjoy eating fruits and vegetables
- Eating fruits and vegetables helps me control my weight
- My lifestyle today will help me live a long, healthy and independent life
### 2017 Drivers and Gender

#### Drivers in Common
- Because I want to stay healthy
- If I don’t eat them regularly, I don’t feel well
- Helps me avoid taking certain medications
- Lifestyle today helps me live long, healthy, independent life
- Helps with weight control
- Enjoy eating FVs

#### Men Only
- Physical limitations prevent me from eating FVs

#### Women Only
- Medications prevent me from eating certain FVs
- Not happy with how I look
- Feel unhealthy compared to others my age
### 2017 Drivers and Income

#### DRIVERS IN COMMON
- FVs help with avoiding certain medications
- Physical limitations prevent me from eating FVs
- Medications prevent me from eating certain FVs
- I eat FVs for environmental/ethical reasons
- I enjoy eating FVs
- Eating FVs helps me with control my weight

#### LOWER INCOME ONLY
- FVs help me with bowel regularity

#### UPPER INCOME ONLY
- My lifestyle today helps me live long, healthy, independent life
- If I don’t eat FVs regularly, I don’t feel as well
- I eat FVs to stay healthy
### DRIVERS IN COMMON
- I enjoy eating FVs
- I eat fruits and vegetables because I want to stay healthy
- Eating FVs has helped me avoid taking certain medications
- If I don’t eat FVs regularly, I don’t feel as well
- My lifestyle today will help me live a long, healthy and independent life
- Control my weight
- I eat fruits and vegetables for environmental or ethical reasons
- Eating FVs makes me feel good about myself

### YOUNGER ONLY
**Motives**
- All things considered, I am healthy
- Eating FVs makes me feel confident that I'm getting nutrients I need
- Medications/physical limitations prevent me from eating certain FVs

### OLDER ONLY
**Motives:**
- Satisfied with life
# 2017 Drivers and Employment

## Motives
- My lifestyle today will help me live a long, healthy and independent life
- I enjoy eating FVs
- Eating FVs helps me control my weight
- If I don’t eat FVs regularly, I don’t feel as well
- I eat FVs because I want to stay healthy
- Eating FVs, has helped me avoid taking certain medications

<table>
<thead>
<tr>
<th>WORKING ONLY</th>
<th>NON-WORKING ONLY</th>
<th>RETIRED ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Physical limitations prevent me from eating FVs</td>
<td>• FVs help me with bowel regularity</td>
<td>• Maintaining my health makes me feel good</td>
</tr>
<tr>
<td>• Medications prevent me from eating certain fruits and vegetables.</td>
<td></td>
<td>• I am not happy with how I look</td>
</tr>
</tbody>
</table>

©2017 PRODUCE FOR BETTER HEALTH FOUNDATION
# 2017 Drivers & Education

## Drivers in Common
- Want to stay healthy
- Enjoy eating FVs
- If I don’t eat FVs regularly I don’t feel as well
- Eating FVs has helped me avoid taking certain medications
- Medications prevent me from eating certain FVs
- My lifestyle today will help me live a long, healthy, and independent life
- Eating FVs helps me control my weight

### Under Post Grad Only
- Enviro/ethical reasons
- Someone else prepares for me

### Post Grad Only
- Bowel regularity
- Not happy with how I look
KEY TAKEAWAYS
General Takeaways

**Go Beyond Logic to Emotion.** 83% of Americans eat Fruit & Veggies because they want to stay healthy. 81% because it makes them feel good about themselves.

**On Average,** Americans are nearly there.

**Keeping up with the Joneses.** Join the 87% of Americans who enjoy eating fruits and veggies!

**Feel Better** The path to feeling better is consuming more fruit and veggies.

**Recipes.** Focus on preparing fruit & veggies in different ways and making the “unlikeable” “likable.”
Key Takeaways for Segments

**Older vs. Younger Adults**
- Older adults more motivated by lifestyle benefits.
- Younger adults more motivated by pragmatic issues.

**Higher vs. Lower Income Earners**
- Higher income earners more motivated by lifestyle benefits.
- Lower income earners need more help with overcoming barriers.

**More vs. Less Educated**
- Higher income earners more motivated by lifestyle benefits.
- Lower income earners need more help with overcoming barriers.

**Retired vs. Employed vs. Unemployed**
- Retired people are more concerned with staying healthy.
- Employed people have the barrier of being busy.
- Unemployed people are motivated by bowel regularity.
QUESTIONS AND ANSWERS/DISCUSSION
Next Steps

I. Rolling release schedule:
   • Happiness Correlation June
   • AARP Sept

II. Research committee to discuss need for communication test
III. Determine how we meet new strategic direction.
THANKS
Appendix: Attitude Statements
## In your life, are you...

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neutral</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining my health makes me feel good</td>
<td>3%</td>
<td>8%</td>
<td>15%</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>I have a positive outlook on life</td>
<td>3%</td>
<td>8%</td>
<td>15%</td>
<td>43%</td>
<td>32%</td>
</tr>
<tr>
<td>All things considered, I am healthy</td>
<td>3%</td>
<td>10%</td>
<td>15%</td>
<td>45%</td>
<td>27%</td>
</tr>
<tr>
<td>I have a sharp memory</td>
<td>3%</td>
<td>10%</td>
<td>19%</td>
<td>42%</td>
<td>26%</td>
</tr>
<tr>
<td>My lifestyle today will help me live a long, healthy and independent life</td>
<td>4%</td>
<td>12%</td>
<td>23%</td>
<td>39%</td>
<td>22%</td>
</tr>
<tr>
<td>I am agile and active</td>
<td>6%</td>
<td>13%</td>
<td>21%</td>
<td>39%</td>
<td>21%</td>
</tr>
<tr>
<td>I am not happy with how I look</td>
<td>18%</td>
<td>24%</td>
<td>21%</td>
<td>27%</td>
<td>10%</td>
</tr>
<tr>
<td>In general, I do not feel energetic day-to-day</td>
<td>18%</td>
<td>26%</td>
<td>21%</td>
<td>26%</td>
<td>9%</td>
</tr>
<tr>
<td>I feel unable to make the most of each day</td>
<td>28%</td>
<td>27%</td>
<td>18%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>I don’t feel engaged and interested in my daily activities</td>
<td>28%</td>
<td>30%</td>
<td>18%</td>
<td>18%</td>
<td>7%</td>
</tr>
<tr>
<td>Compared to others my age, I feel unhealthy</td>
<td>30%</td>
<td>28%</td>
<td>17%</td>
<td>17%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Q10. Please tell us how much you agree or disagree with each of the following statements. Base: All respondents n=2025

©2017 PRODUCE FOR BETTER HEALTH FOUNDATION
Attitudes to Fruits and Vegetables

Q11. Please tell us how much you agree or disagree with each of the following statements. Base: All Respondents n=2025

- Fruits and vegetables have many health benefits
  - Strongly agree: 67%
  - Somewhat agree: 30%
  - Neutral: 3%
  - Somewhat disagree: 8%
  - Strongly disagree: 5%

- I enjoy eating fruits and vegetables
  - Strongly agree: 53%
  - Somewhat agree: 34%
  - Neutral: 12%
  - Somewhat disagree: 8%
  - Strongly disagree: 3%

- I eat fruits and vegetables because I want to stay healthy
  - Strongly agree: 44%
  - Somewhat agree: 39%
  - Neutral: 15%
  - Somewhat disagree: 12%
  - Strongly disagree: 3%

- Eating fruits and vegetables makes me feel good about myself
  - Strongly agree: 41%
  - Somewhat agree: 39%
  - Neutral: 15%
  - Somewhat disagree: 12%
  - Strongly disagree: 3%

- I eat fruits and vegetables for environmental or ethical reasons
  - Strongly agree: 28%
  - Somewhat agree: 22%
  - Neutral: 22%
  - Somewhat disagree: 17%
  - Strongly disagree: 10%

- I eat fruits and vegetables because I want to set a good example
  - Strongly agree: 20%
  - Somewhat agree: 22%
  - Neutral: 30%
  - Somewhat disagree: 12%
  - Strongly disagree: 11%

- I eat fruits and vegetables only because someone else advises me to do it.
  - Strongly agree: 17%
  - Somewhat agree: 24%
  - Neutral: 41%
  - Somewhat disagree: 12%
  - Strongly disagree: 5%

- I eat fruits and vegetables because someone else prepares it for me
  - Strongly agree: 11%
  - Somewhat agree: 14%
  - Neutral: 46%
  - Somewhat disagree: 6%
  - Strongly disagree: 4%

- I do not eat fruits and vegetables
  - Strongly disagree: 16%
  - Somewhat disagree: 23%
  - Neutral: 68%
  - Somewhat agree: 7%
  - Strongly agree: 6%
Attitudes to Outcomes of FV Consumption

Q12. Please tell us how much you agree or disagree with each of the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neutral</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating fruits and vegetables makes me feel confident that I’m getting nutrients that I need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits and vegetables help me with bowel regularity</td>
<td>2%</td>
<td>15%</td>
<td>45%</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Eating fruits and vegetables helps me control my weight</td>
<td>3% 5%</td>
<td>25%</td>
<td>41%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>I have more energy when I eat fruits and vegetables</td>
<td>3% 6%</td>
<td>25%</td>
<td>41%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>If I don’t eat fruits and vegetables regularly, I don’t feel as well</td>
<td>8% 13%</td>
<td>30%</td>
<td>33%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Eating fruits and vegetables has helped me avoid taking certain medications</td>
<td>16% 16%</td>
<td>36%</td>
<td>20%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>I like fruits and vegetables but sometimes they don’t agree with me</td>
<td>30%</td>
<td>26%</td>
<td>20%</td>
<td>18% 6%</td>
<td></td>
</tr>
<tr>
<td>It is hard to find fruits and vegetables that everyone in my household likes</td>
<td>37%</td>
<td>22%</td>
<td>18%</td>
<td>16% 6%</td>
<td></td>
</tr>
<tr>
<td>I don’t know how to prepare fruits or vegetables in different ways</td>
<td>41%</td>
<td>25%</td>
<td>16%</td>
<td>13% 4%</td>
<td></td>
</tr>
<tr>
<td>Medications prevent me from eating certain fruits and vegetables</td>
<td>58%</td>
<td>17%</td>
<td>11%</td>
<td>10% 5%</td>
<td></td>
</tr>
<tr>
<td>Physical limitations prevent me from eating fruits and vegetables</td>
<td>61%</td>
<td>17%</td>
<td>10%</td>
<td>8% 4%</td>
<td></td>
</tr>
</tbody>
</table>

Note: The percentages may not add up to 100% due to rounding.
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum ullamcorper eget diam eu volutpat.

Lorem ipsum dolor sit amet, consectetur.

Lorem ipsum dolor sit amet, consectetur.

Lorem ipsum dolor sit amet, consectetur.

Lorem ipsum dolor sit amet, consectetur.
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum ullamcorper eget diam eu volutpat.

1. Lorem ipsum dolor sit amet, consectetur.
2. Lorem ipsum dolor sit.
3. Lorem ipsum dolor sit amet, consectetur.
4. Lorem ipsum dolor sit.
5. Lorem ipsum dolor sit amet, consectetur.