The Art and Science of Becoming Food Knowledgeable

Learning Outcomes

- Explain why focusing on flavor, portions and food safety are effective strategies that help people choose delicious and nutritious foods
- Identify collaborative opportunities to work with other food, food science and culinary disciplines
- Create a plan to enhance individual food and culinary knowledge and understanding
Elements of a good story

• Interesting characters
• Beginning, middle and ending
• Tension or challenge

A Good Food and Nutrition Story embraces

• Characters and plot
• Tension, conflict
• Audience connection

<table>
<thead>
<tr>
<th>ART</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Plan</td>
<td>• Plan</td>
</tr>
<tr>
<td>• Research</td>
<td>• Research</td>
</tr>
<tr>
<td>• Benefit</td>
<td>• Benefit</td>
</tr>
</tbody>
</table>

Strategies for Engagement
Portion Control

Trend in Portions

Measurement strategies
Eating strategies
Purchasing strategies

Portion Control Practices

Portioned meals – an effective weight loss strategy

Spence M. et al, Appetite 2015
Cook C et al. Frontiers in Nutrition Nov 2017
### Average American Meal: NHANES 13-14 Lunch and Dinner Average, Age 40-49 yr., Males & Females


### Which meal has fewer calories?

- **Average meal - men**: 756 calories
- **Average meal - women**: 544 calories
- **Average portion control meal**: 300 calories

### Which meal has fewer calories?

- **Average meal - men**: 756 calories
- **Average meal - women**: 544 calories
- **Average portion control meal**: 300 calories

### Portion-control meals promote long-term weight loss

- **Single Serve Meal (3x/d)**
- **Usual Care**

### Advice for achieving and maintaining a healthy weight

<table>
<thead>
<tr>
<th>Publication</th>
<th>Source</th>
<th>Is Portion Control Discussed and Recommended?</th>
<th>Are Portion Controlled Meals Suggested as an Option?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim for a Healthy Weight</td>
<td>DHHS</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Just Enough for You – about food portions</td>
<td>NIH Weight Control Information Network</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Healthy Weight – it's not a diet, it’s a lifestyle</td>
<td>CDC</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

### Energy Density ALSO Counts

#### A Portion Sizes

<table>
<thead>
<tr>
<th>Year</th>
<th>Foods</th>
<th>Beverages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977-78</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>1989-91</td>
<td>250</td>
<td>50</td>
</tr>
<tr>
<td>1994-96</td>
<td>250</td>
<td>25</td>
</tr>
<tr>
<td>2003-06</td>
<td>210</td>
<td>20</td>
</tr>
</tbody>
</table>

#### B Energy Density

<table>
<thead>
<tr>
<th>Year</th>
<th>Foods</th>
<th>Beverages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977-78</td>
<td>2.02</td>
<td>0.20</td>
</tr>
<tr>
<td>1989-91</td>
<td>2.02</td>
<td>0.20</td>
</tr>
<tr>
<td>1994-96</td>
<td>2.02</td>
<td>0.20</td>
</tr>
<tr>
<td>2003-06</td>
<td>2.02</td>
<td>0.20</td>
</tr>
</tbody>
</table>
Flavor: Where does taste come from?

Specific taste zone do not exist
Tastes are perceived equally well everywhere on tongue

Perceived Flavor
- Taste
- Smell
- Visual appeal
- Description
- Memory

What are your favorite foods?
Seductive Nutrition

EAT HEALTHY  TREAT MYSELF

Creating delicious, slightly healthier meals with more appealing menu descriptions

Seductive Nutrition’s Global Reach

Seductive Nutrition

- Make dishes slightly healthier
- Appealing descriptions and presentations
- Right-sized portions

Roasted Vegetables
Taste Memories

Food Safety
Annually, 1 in 6 US residents suffers a foodborne illness

Top 5 Food-Germ Pairs Causing Illness

Half-Cooked Recipes?

Recipe Directions?
Recipes and Food Safety Messages

| Hand washing facilities available: 7-73% |
| Animals allowed: 38-86% |
| Proper refrigeration practices: 40-90% |
| Food thermometer available: 0-29% |
| Protection against cross-contamination: 43-100% |

SUMMARY: Science of becoming food knowledgeable

- People remember good stories.
- Portions, flavor and food safety themes are effective strategies to share science as stories with clients.
- Science in these areas provides opportunities for RDNs to become food knowledgeable.
Soul Food

Technology as food disruptor

New high-tech farming

Collaborations with farmers, chefs, food scientists
SUMMARY: Art of becoming food knowledgeable

No one knows it all.

Collaboration takes courage.

Food knowledgeable RDNs are positioned to identify opportunities and build collaborations across the food supply chain.
Creating Connections

• Farmers
• Chefs
• Food Scientists

Ask the Right Questions
Listen to Understand
Food Scientists’ Resources

Create Your Plan

Meet
• Make an effort to meet farmers, chefs and food scientists

Speak
• Learn the language of farmers, chefs and food scientists

Seek
• Find ways to collaborate with other food and agriculture disciplines

SUMMARY:
Art and Science of Becoming Food Knowledgeable

• Themes of flavor, portion control and food safety are ideal for story telling to encourage dietary change.

• Anchor stories in science

• Reach outside your comfort zone

Questions?