Different schools of thought
- Health belief Model
- Social Cognitive theory
- Transtheoretical model
- Theory of reasoned action

With 20 minutes, I’ll touch on a consumer behavior (psychology) and marketing overview
- It provides the most compelling answers
- It points toward the most promising solutions

Bottom-of-page cites contain related references
- Marketing Nutrition (Wansink 2005)

Overview of Questions
1. Determinants of intake?
2. Effective nutrition information?
3. Segmenting messages and markets?
4. Optimal models – Transition to Lifestyle?
5. When does nutrition info fail?
6. Prioritizing nutrition?

Where Do You Find Most of the Published Research on Food and Nutrition Behavior?

- Not on PubMed
- Tip of iceberg – a correlation-based epi-tip
- Most Food Behavior Studies are Not in Journals indexed by Pub Med
  - Journals in psychology, economics, consumer behavior, sensory studies, marketing sociology, food technology, education, communication, mostly aren’t indexed
- Where? → The Web of Science
  (AKA: Social Science Citation Index)
Three Drivers of (Accessible) Food Intake

When (frequency) → What → How Much

• Drivers of “When” We Eat
  • Physiological Factors: hunger, deficiencies
  • Emotional: Maintain mood or regain mood
  • Salience: internally- & externally-generated
    • Internally-generated: scripts & emotions
    • Externally-generated: sensory salience
      • See, smell, hear about food
      • (It’s why a fruit bowl is a good idea and a candy jar isn’t)

• Drivers of “What” We Eat
  • Physiological Factors: hunger, deficiencies
  • Emotional: Maintain mood or regain mood
  • Salience: internally- & externally-generated
    • Internally-generated: scripts & emotions
    • Externally-generated: sensory salience

• Drivers of “How Much” We Eat
  • Physiological Factors: hunger, deficiencies
  • Emotional: Maintain mood or regain mood
  • How closely we monitor how much we eat
  • Habit & what we consider the consumption norm
  • Can be biased by size of packaging, plates, and people
  • A framework . . .

Environmental Influences on Overserving and Overeating

The Unstated Driver . . .
Their immediate personal environment: cupboards, table, pantry, candy dish, and so on (Mindless Eating 2006)
III. Consumer Segments and Markets

Who Pays Attention to Nutrition Information?

• Often cited figure – “70% of consumers report paying attention to nutrition information”
  • Report?
  • Pay attention?
  • How often? (“Every time” vs. “That one time.”)
• Most controlled studies in supermarkets show...
  • Between 12% to 22% read labels
  • May be the ones who need to least

Consider 3 Segments of Consumers

Three Segments

1. The Nutrition Vigilant
   Changed on target
2. The Nutrition-Predisposed
   Would like to change if easy enough
3. The Nutrition-Disinterested
   • They cut across demographics (you segment predicts better than your demographics)
   • Where can you get the biggest change for the smallest cost?

IV. Messaging and Leveraging

1. When is labeling most effective?
2. What are best practices from health claims?
3. What nutrition knowledge is correlated with food intake?
4. What types of messages are most effective with what segments?
1. When is labeling most effective?

- Two Concerns (the two horns of the labeling dilemma)
  - Totally ignored
  - Unmerited “health halos” (holistically processed)

- Front and Back Label Claims – Use both sides
  - Short blurb on front → “Take-away” (80%)
  - Full claim on back → detail for 15-20%


2. What are best practices from effective health claims?

The Most Effective FDA Health Claims:

- Targeted a specific segment
- Received significant media coverage
- Introduced with aggressive “partnered” marketing campaigns
- Highlighted quantitative benefits
- Helped prevent a vivid, personally relevant health problem


3. What kinds of messages are most effective with what segments?

Positive (“Eat This”) Messages

- Targeted a specific segment
- Received significant media coverage
- Introduced with aggressive “partnered” marketing campaigns
- Highlighted quantitative benefits
- Helped prevent a vivid, personally relevant health problem

The Research says . . .

Message effectiveness depends upon...

- Promotion vs. Prevention oriented (Mans, Sherman, Updegraff, 2003; Lee and Aaker, 2004; Rothman et al., 1999)
- Heuristic Processing vs. Piece-meal processing (Mans, Sherman, Updegraff, 2003; Rothman et al., 1999)
- Behavior is perceived as prevention vs. Behavior is perceived as detection (Mans, Sherman, Updegraff, 2003; Rothman et al., 1999)
- Choice vs. Duty (Rothman et al., 1999; Rothman et al., 2006)
- Certainty of outcome (Lee and Aaker, 2004)
- Level of involvement with issue (Lee and Aaker, 2004)
- Desirability of endstate (Lee and Aaker, 2004)
- Prevention behavior vs. Detection behavior (Mans, Sherman, Updegraff, 2003; Rothman et al., 1999; Rothman et al., 2006)
- Familiar situation vs. Unfamiliar situation (Mans, Sherman, Updegraff, 2003; Rothman et al., 1999; Rothman et al., 2006)
- Self-efficacy (Lee and Aaker, 2004)
- Perceived Risk of Behavior (Lee and Aaker, 2004)
- Perceived Risk of Behavior (Lee and Aaker, 2004)

My take on the literature . . .

1. Varies across different situations

3. What nutrition knowledge is correlated with food intake?

(Attributes+Consequences “What & Why” Knowledge)

Positive ("Eat This") Messages vs. Negative ("Don’t Eat That") Messages

- If it is a Positive Message, it will work best with...
  - Optimistic people
  - People who eat because it tastes good
  - People who don’t think too hard about eating
  - People who eat healthy to feel good
  - People who see eating as a choice
  - People who value food as a way to stay healthy

- If it is a Negative Message, it will work best with...
  - Pessimistic people
  - People who think logically about each decision
  - People who eat healthy because they are afraid of getting sick
  - People who see eating as an obligation
  - People who value food as a way to not get sick

Positive messages work best with most people, in most mind-sets, in most nutrition situations

V. Intervention & Change

What is the Role of Social Marketing in Nutrition Education and Motivation?

- Tremendous potential for good & bad
  - Danger: Food and Nutrition misinformation
  - Magic berries & “What your mother told you”

- What “circumstances” have the most promise?
  - Movements, lifestyle choices (veganism, etc.)
  - Cool causes (”identity bandwagons”)
  - Can we make the DGs cool or movement-inspiring?
    - Doesn’t hurt to try the “bottom-up” approach with the young ones
    - We can also use a “top-down” family strategy


What are Effective Intervention Strategies for the Non-vigilant?

- 200+ food decisions
  - Not in front of MyPyramid.gov or holding a brochure
  - Made wherever people work & play & purchase & prepare food
  - Nutrition info is not there when we need it
  - “Think twice” – we only need to nudge 3-4 decisions a day

- A personal dietician?
  - 24/7 & 360 nutri info
  - Impractical?

- One solution
  - Partner with MyPyramid
  - 100+ companies promoting DGs in 100 ways in many places

Target the Nutritional Gatekeeper

- Nutritional Gatekeeper = Person who usually shops & cooks
- 1943: Nutrition Ed on the WWII homefront
- 2004: One finding of 1004 Gatekeepers -- They believe they influence 72% of the eating decisions of their family
  - Either for the better, or for the worse
  - Either directly (in-house), or in-directly (out-of-house)

- Target the person who makes the decisions
  - AND build awareness with their kids

V. Intervention and Change

Bringing it Home to the Nutrition-Predisposed Consumer Segment

- Three Segments
  1. The Nutrition Vigilant
  2. The Nutrition-Predisposed
  3. The Nutrition-Disinterested

- Two Strategies
  1. “No person left behind” -> An impossible starting point
  2. Start where we can make a difference right away
    - Focus on the Nutrition-Predisposed Segment
    - Focus on Nutritional Gatekeepers
V. Intervention & Change

Transitioning from Recommendation to Lifestyle Change

• 1. Nutrition-Vigilants
   • Changed or struggling to change
   • Provide Information and reminders

• 2. Nutrition-Predisposed
   • Would like to change if easy enough
   • Provide Tools (web-based, icons, etc.) & product-solutions

• 3. Nutrition Disinterested (or resigned)
   • Passive environmental & product-related changes: reformulations, portion-control packaging, stealth health
   • Partner with MyPyramid - 100+ companies and 100+ ideas of how, when, & where to make it Mindless Eating

Before We Move to Questions . . .

Special USDA CNPP Stand-out Recognition:

Policy & DGAC
- Dr. Robert Post
- Carole Davis
- Colette Rihane
- Kellie O’Connell

Promoting the DGs
- Jackie Haven
- John Webster
- Dr. Patricia Brittan
- Jannie Fleming

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- Dr. Patricia Brittan
- Jannie Fleming

Special USDA CNPP Stand-out Recognition:
Behavior Change Theories

- Health belief Model (Janz et al. 2002)
- Social Cognitive theory (Baranowski et al. 2002)
- Trans-theoretical model (Prochaska, 2002)
- Theory of reasoned action/integrated model of behavior change (Fishbein et al. 2002)

Additional Literature

**Message effectiveness depends upon...**

- Promotion vs. Prevention oriented (Mumme, Sherman, Spigglekamp, 2001; Lee and Sabes, 2002; Elke, Huh et al. 2007)
- Heuristic Processing vs. Piece-meal processing (Rothman et al., 1999; Rothman et al., 2006)
- Behavior is perceived as prevention vs. Behavior is perceived as detection (Rothman et al., 1999; Rothman et al., 2006)
- Choice vs. Duty (Anderson et al., 1999; Rothman et al., 2006)
- Certainty of outcome (Rothman et al., 1999; Rothman et al., 2006)
- Level of involvement with issue (Rothman et al., 1999)
- Desirability of endstate (Rothman et al., 1999, Rothman et al., 2006)
- Risk adverse behavior vs. Risk seeking behavior (Rothman et al., 1999; Rothman et al., 2006)
- Familiar situation vs. Unfamiliar situation (Rothman et al., 1999; Rothman et al., 2006; San, Self-efficacy (Sanchez, 2006)
- Perceived Risk of Behavior (Tull et al., 2008; Rothman and Freeman, Boren, 2003; Lee and Sabes, 2002)

Four Additional References


Wansink, Brian (2005), Marketing Nutrition - Soy, Functional Foods, Biotechnology, and Obesity, Champaign, IL: University of Illinois Press.


Thank You

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Back-up Slide for Messaging

- A positive approach to eating is more effective
- Health and enjoyment are both important
- Focus on getting consumers to make better choices—don’t make eating a duty
- Focus on how a situation is perceived by individuals for more effective messages (what context and mind-set will they be in when looking for nutrient information).
- Helping consumers to be more passionate about food will make positive messages work even better!