Bold Actions To Reduce Childhood Obesity

Kelly D. Brownell
Yale University
Fair Game?
Agenda

A Guiding Conceptual Scheme
Strategic Science
Food Marketing and Labeling
Beverages & Taxes
Food & Addiction
Who Are the Change Agents?
A Global Crisis?
Females
1980-1984

© International Obesity TaskForce 2005
Females
1990-1994

% Obesity
< 5 %
5-9.9%
10-14.9%
15-19.9%
20-24.9%
≥ 25%

Self Reported data
Projected % Increase in Diabetes, 2000 - 2030

Yach, Stuckler, Brownell
Nature Medicine, 2006
% Increase in Diabetes, 2000 - 2030

Yach, Stuckler, Brownell
Nature Medicine, 2006
What Has Gone So Horribly Wrong?

Is There The Courage to Change?
A Conceptual Scheme
How Best to Make Change?

Educate → Knowledge

Medicate

Operate

Implore → Motivation

The Individual

Less Obesity?
<table>
<thead>
<tr>
<th>Year</th>
<th>% of US Population</th>
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<td>1986</td>
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<td>2000</td>
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</tbody>
</table>

CDC, BRFSS
% of US Children Getting Recommended Fruit & Vegetable Servings

Youth Risk Behav Survey
What Are We Doing Now?

Educate ➔ Knowledge

The Individual

Implore ➔ Motivation

Less Obesity?
How Best to Make Change?

Educate → Knowledge
Medicate
Operate
Implore → Motivation

The Individual

Less Obesity?
Optimal Defaults

Legislation

Economics

Regulation

Environment

The Individual

Less Obesity?
One Example – Pension Plans

Employee must enroll  
< 50%

Automatic enrollment  
Near 100%

Choi, Laibson et al, 2002  
In Poterba (Ed). *Tax Policy and the Economy*
Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Johnson & Goldstein, Science, 2003
“Do defaults save lives?”
Disastrous Defaults
(examples)

- Portions
- The economics of food
- Too much access
- Too little access
- Food marketing
PIGS IN THE MUD!

“It's CHOCOLATE-COVERED BACON!”

FRESH ORANGEADE SHAKE UPS

New! PIGS IN THE MUD!

“It's CHOCOLATE COVERED BACON!”
DEEP FRIED BUTTER
MINI-DONUTS
DEEP FRIED BROWNIES
SUPER CORN DOGS
FRESH SQUEEZED ORANGEADE SHAKE-UPS
PEPSI
Strategic Science
Is Science Making Itself Irrelevant?

- Slow ✓
- Poorly communicated ✓
- Unresponsive ✓
- Programmatic only ✓
- Conflicted ✓
<table>
<thead>
<tr>
<th></th>
<th>Programmatic Science</th>
<th>Strategic Science</th>
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<tr>
<td><strong>Gap</strong></td>
<td>Science/Theory</td>
<td>Policy/Opinion</td>
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<tr>
<td><strong>Pace</strong></td>
<td>Very slow</td>
<td>Rapid</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Publication</td>
<td>Impact</td>
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<td><strong>Why Publish?</strong></td>
<td>Accepted standard</td>
<td>Credibility</td>
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<tr>
<td><strong>Audience</strong></td>
<td>Scientists</td>
<td>Policy Makers</td>
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</table>
Food Marketing
Food Marketing

- Powerful
- Relentless
- Exploitative
Future WHOPPER Eater
THE CHILDREN’S HOSPITAL
OF PHILADELPHIA
TROUBLE SLEEPING?
TAKE A COUPLE OF THESE BEFORE BEDTIME.

Wendy's Late Night
Classic Single, Classic Double, Classic Triple. Eat Great, Even Late.
Traditional Marketing

+

Guerilla Marketing
Viral Marketing
Stealth Marketing
The Cereal Example
# Overall Rankings of Children’s Cereals

<table>
<thead>
<tr>
<th>Nutrition Score*</th>
<th>Cereal</th>
<th>Company</th>
<th>Heavy Child Marketing</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Television Advertising</td>
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<tr>
<td>34</td>
<td>Reese’s Puffs</td>
<td>General Mills</td>
<td>x</td>
</tr>
<tr>
<td>36</td>
<td>Corn Pops</td>
<td>Kellogg</td>
<td>x</td>
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<tr>
<td>36</td>
<td>Lucky Charms</td>
<td>General Mills</td>
<td>x</td>
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<tr>
<td>36</td>
<td>Golden Grahams</td>
<td>General Mills</td>
<td>x</td>
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<tr>
<td>37</td>
<td>Cinnamon Toast Crunch</td>
<td>General Mills</td>
<td>x</td>
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<tr>
<td>37</td>
<td>Cap’n Crunch</td>
<td>Quaker</td>
<td>x</td>
</tr>
<tr>
<td>38</td>
<td>Count Chocula</td>
<td>General Mills</td>
<td>x</td>
</tr>
<tr>
<td>38</td>
<td>Trix</td>
<td>General Mills</td>
<td>x</td>
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<td>39</td>
<td>Froot Loops</td>
<td>Kellogg</td>
<td>x</td>
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<td>38</td>
<td>Smorz</td>
<td>Kellogg</td>
<td>x</td>
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<tr>
<td>38</td>
<td>Fruity or Cocoa Pebbles</td>
<td>Post</td>
<td>x</td>
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<tr>
<td>39</td>
<td>Cocoa Puffs</td>
<td>General Mills</td>
<td>x</td>
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<tr>
<td>40</td>
<td>Cookie Crisp</td>
<td>General Mills</td>
<td>x</td>
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<tr>
<td>40</td>
<td>Apple Jacks</td>
<td>Kellogg</td>
<td>x</td>
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<tr>
<td>40</td>
<td>Cookie Crunch</td>
<td>Kellogg</td>
<td>x</td>
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<tr>
<td>43</td>
<td>Frosted Flakes</td>
<td>Kellogg</td>
<td>x</td>
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<td>44</td>
<td>Disney High School Musical</td>
<td>Kellogg</td>
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<td>Rice or Cocoa Krispies</td>
<td>Kellogg</td>
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<td>Mini-Swirlz</td>
<td>Kellogg</td>
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<td>Honey Nut O's</td>
<td>Cascadian Farm</td>
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<td>44</td>
<td>Honey Nut Cheerios</td>
<td>General Mills</td>
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<td>44</td>
<td>Waffle Crisp</td>
<td>Post</td>
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<tr>
<td>44</td>
<td>Cheerios</td>
<td>General Mills</td>
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<tr>
<td>44</td>
<td>Chex</td>
<td>General Mills</td>
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<td>46</td>
<td>Purely O’s</td>
<td>Cascadian Farm</td>
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<td>46</td>
<td>Alpha Bits</td>
<td>Post</td>
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<td>46</td>
<td>Golden Crisp</td>
<td>Post</td>
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<td>46</td>
<td>Honeycomb</td>
<td>Post</td>
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<td>46</td>
<td>Raisin Bran</td>
<td>Post</td>
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<td>50</td>
<td>Dora the Explorer</td>
<td>General Mills</td>
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<tr>
<td>50</td>
<td>Cinnamon Crunch</td>
<td>Cascadian Farm</td>
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<tr>
<td>51</td>
<td>Bunnies</td>
<td>Annie’s</td>
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<td>51</td>
<td>EnviroKids Organic</td>
<td>Nature’s Path</td>
<td></td>
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<tr>
<td>51</td>
<td>Puffins</td>
<td>Barbara’s Bakery</td>
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<tr>
<td>52</td>
<td>Cheerios (except Honey Nut)</td>
<td>General Mills</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Kix</td>
<td>General Mills</td>
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<tr>
<td>53</td>
<td>Life</td>
<td>Quaker</td>
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<td>54</td>
<td>Hannah Montana</td>
<td>Kellogg</td>
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<td>54</td>
<td>Clifford Crunch</td>
<td>Cascadian Farm</td>
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<tr>
<td>56</td>
<td>Mighty Blits</td>
<td>Kashi</td>
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<td>56</td>
<td>Honey Sunshine</td>
<td>Kashi</td>
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<tr>
<td>58</td>
<td>Organic Wild Puffs</td>
<td>Barbara’s Bakery</td>
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<tr>
<td>72</td>
<td>Mini-Wheats</td>
<td>Kellogg</td>
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</tbody>
</table>
“Food does not become nutrition until it is eaten.”

“Children like the taste of ready-to-eat cereals and are therefore more likely to eat breakfast.”
Nutrition and Marketing Ratings of Children’s Cereals

Jennifer L. Harris, Ph.D., M.B.A.
Marlene B. Schwartz, Ph.D.
Kelly D. Brownell, Ph.D.
RWJF $100 million/yr vs. Child Marketing

January 4!
Front of Package Labeling
Which Current System Has the Most Support?

Multiple Traffic Light

- Better ratings of healthfulness
- Better choices of two products
Public Health Action Amid Scientific Uncertainty
The Case of Restaurant Calorie Labeling Regulations

David S. Ludwig, MD, PhD
Kelly D. Brownell, PhD

posed, chief among them calorie labeling. Labeling requirements now exist or are being considered in a number of states and cities, and several federal bills on the issue have been introduced. However, many of these legislative acts have en-
Involve Industry?

- Clear conflicts of interest
- Protect business as usual
- Seek weak or confusing standards
The Industry Script

• Will fight mandates
• Will stall unless action is imminent
• Will fund their own studies
• Will preempt
FOR IMMEDIATE RELEASE

Food and Beverage Industry Announces Front-of-Pack Nutrition Labeling Initiative to Inform Consumers and Combat Obesity

Contact:
Scott Openshaw, Director, Communications, 202-295-3957
Brian Kennedy, Director, Communications, 202-639-5994

October 27, 2010

WASHINGTON, D.C. - America’s leading food and beverage manufacturers and retailers joined forces today in the fight against obesity and announced their commitment to develop a new front-of-package nutrition labeling system. The unprecedented consumer initiative will make it easier for busy consumers to make informed choices when they shop.

This program will add important nutrition information on calories and other nutrients to the front of the packages of many of the country’s most popular food and beverage products. To appeal to busy consumers, the information will be presented in a fact-based, simple and easy-to-use format. In the coming months, the Grocery Manufacturers Association (GMA) and the Food Marketing Institute (FMI) will finalize the details of the initiative, including the technical and design elements. In addition, details will be finalized on how to provide consumers with information on nutrients needed to build a “nutrient-dense” diet and on “shortfall nutrients” that are under-consumed in the diets of most Americans. GMA and FMI will continue to consult stakeholders on these and other details in the coming weeks.
Undermining FOP With Health Claims
EU Lobbing Against Traffic Lights

1 Billion Euros
The Special Case of Sugar-Sweetened Beverages
The World’s Most Valuable Brand?
% Calories Per Day From 2 Beverages

% Increase in Costs from 1985-2000

- Soft Drinks: 125%
- Sugar & Sweets: 117%
- Fruits & Vegetables: 46%

Putnam et al.  
*Food Rev, 2002*
Vitamin Water
A Few Vitamin Water Versions

Revive
Power
Energy
Focus
Defense
XXX
In the Vitamin Water Lawsuit

Coca Cola Attorneys asked for dismissal:

"no consumer could reasonably be misled into thinking Vitaminwater was a healthy beverage."
Why Soda?

- Single greatest source of added sugar
- Completely empty calories
- Poor calorie compensation
- Sugar may be addictive
- Gratuitous addition of caffeine
- Targeting of vulnerable populations
- Rock solid proof of harm
SSBs: How Much?

Average intake = 50 gallons/yr

Average child = 175 calories/day
Ounces of Prevention — The Public Policy Case for Taxes on Sugared Beverages

Kelly D. Brownell, Ph.D., and Thomas R. Frieden, M.D., M.P.H.

Sugar, rum, and tobacco are commodities which are nowhere necessaries of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.

Adam Smith, *The Wealth of Nations*, 1776
The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages

Kelly D. Brownell, Ph.D., Thomas Farley, M.D., M.P.H., Walter C. Willett, M.D., Dr.P.H., Barry M. Popkin, Ph.D., Frank J. Chaloupka, Ph.D., Joseph W. Thompson, M.D., M.P.H., and David S. Ludwig, M.D., Ph.D.
A National Penny Per Ounce Tax

1) Decrease consumption by 23%

2) Reduce health care costs by $50 billion over 10 years

3) Generate $150 billion in revenue over 10 years
Probable Tax Relationship

Consumption

Existing Taxes

Proposed Taxes

Tax Rate
Examples of Calls For Reducing Added Sugars & SSBs

Centers for Disease Control
US Department of Agriculture
Institute of Medicine
American Academy of Pediatrics
American Medical Association
American Heart Association
World Health Organization
Centers for Disease Control

A Primary Obesity/Diabetes Strategy

“Reduce intake of sugar-sweetened beverages”
How Worried is Industry?
Millions Spent Lobbying
Coke & Pepsi + ABA

Los Angeles Times
Feb 7, 2010
Soft Drink Tax Legislation
Filed 2009-2010

17 states, Baltimore, and Philadelphia
Rudd Center Resources

Tax Revenue Calculator

www.yaleruddcenter.org/sodatx.aspx
## North Carolina Revenue

<table>
<thead>
<tr>
<th>Drink Type</th>
<th>Gallons</th>
<th>Tax Revenues</th>
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<tbody>
<tr>
<td>Regular Soft Drinks</td>
<td>183,288,951</td>
<td>$234,609,857</td>
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<tr>
<td>Fruit Beverages</td>
<td>100,349,579</td>
<td>$128,447,461</td>
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<tr>
<td>Sports Drinks</td>
<td>31,986,124</td>
<td>$40,942,239</td>
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<tr>
<td>Ready-to-Drink Tea - Nondiet</td>
<td>12,888,689</td>
<td>$16,497,522</td>
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<tr>
<td>Flavored Water</td>
<td>13,270,052</td>
<td>$16,985,667</td>
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<tr>
<td>Energy Drinks</td>
<td>8,753,771</td>
<td>$11,204,827</td>
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<tr>
<td>Ready-to-Drink Coffee</td>
<td>1,316,682</td>
<td>$1,685,353</td>
</tr>
<tr>
<td><strong>Total sugar-sweetened beverages</strong></td>
<td><strong>351,853,848</strong></td>
<td><strong>$450,372,926</strong></td>
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Who Are The Change Agents?
Legislators
  federal, state, local

Legal Authorities
e.g., state attorney’s general

The Press

Litigators
Game Changing Developments

NYC trans fat ban in restaurants
Menu labeling
Conn. Attorney General – Smart Choices
White House Announcements
Soda tax proposals
Smart Choices
Case Study
How Smart Are Smart Choices?

Rated Smart Choices products on Nutrient Profile Model

Scored 100 Smart Choices products
Results

64% did *not* meet NPM criteria
Key Dates

Critical *NY Times* article  
Sept 4, 2009

Conn. Atty General Investigation  
Oct 14, 2009

FDA Call  
Oct 20, 2009

Smart Choices Closed Down  
Oct 23, 2009

Release of Rudd Center Report  
Oct 23, 2009

General Mills Announcement  
Dec 9, 2009
Public Policy Priorities

• Protect children
  schools
  marketing

• Change food economics
  subsidies
  taxes

• Use legislation, regulation, litigation