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Talk Plan

- Food policy: motivation for intervention and setting optimal defaults
- Policies to promote healthy decision making
  - Pricing incentives
  - Improving information
  - Access to healthy food
  - Changes in nutrition standards

What is Policy?

- A set of rules, laws, regulations adopted or proposed by governments, businesses, institutions or individuals

Why Intervene? Market Failures

- ✓ Externalities
- ✓ Information asymmetry
- Public goods
- Monopoly
- ✓ Time-inconsistent preferences

Economic Motivations

Additional Motivation

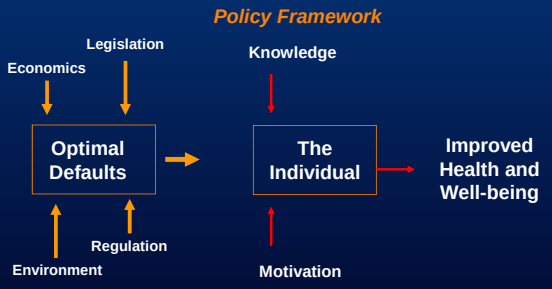
- Food choices of children
  - o Children are NOT rational consumers
  - o Stronger motivation to regulate food for children
- Equity and economic justice concerns
  - o Disparities in health and health behaviors

Causes of Obesity Increase

Caloric imbalance

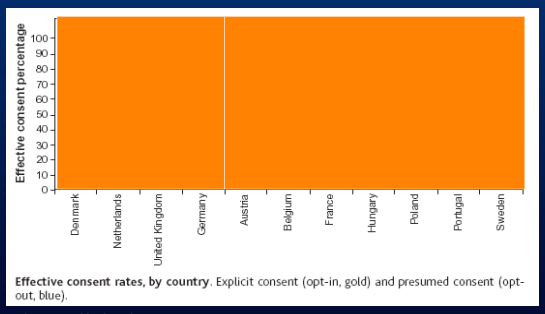
- Poor diet
  - o Too many calories
  - o Overconsumption of sugars, fats
  - o Lack of fiber, fruit and vegetables
- Inactivity or insufficient activity
- Food industry
  - o Increased portion size, widespread processed foods, low relative prices of high-energy poor-nutrient foods, food marketing
- Community environment
  - o Food access
  - o Transportation

Optimal Defaults



Source: Brownell

Example of Optimal Defaults: Organ Donation



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Johnson & Goldstein, *Science*, 2003
"Do defaults save lives?", Brownell

Policies to Promote Healthy Decisions

1. Pricing Incentives

- **Taxation**: make unhealthy foods more expensive
- **Subsidies**: make healthy foods more affordable

Taxation of Sugary Drinks

Sugary Drinks: Background

History

- Fast growth in consumption
- Causal links to weight gain, metabolic effects
- Low sales tax on soda in 34 states for revenue

Now

- 42 gallons consumed per capita/year
- Large geographic variation
- Socio-demographic disparities

Trends

- Shift away from soda to new categories
- Reduction in some populations, still high intake

What is a Sugary Drink Tax?

- New excise tax on sweetened non-alcoholic refreshment beverages (+/- diet):
  - Per volume
  - Per sugar content
  - Graduated or tiered tax
- Primary purpose
  - Generate revenue for specific programs
  - Public health goals

How Does it Get Passed?

- **On the ballot for voters:**
  - Shall the City collect a tax of one cent per ounce from the distributors of sugary drinks?
    - e.g., San Francisco's Proposition V
- **State and/or local legislature:**
  - Voting by state, municipal legislators, city health councils

Arguments in Favor of Proposition V

- San Francisco pays over $87MM for direct and indirect costs of diabetes
- 46% of the population has diabetes or is on the path to getting it. For Latinos and African Americans, the rate is even higher
- 1/3 of children born after 2000 will develop diabetes during their lifetime
- $15M in annual revenue could be used to support public health

Arguments Against Proposition V

- "The City could use the proceeds of the tax for any governmental purpose"
- "Now a few politicians want to make San Francisco even more expensive with a grocery tax — even though voters rejected a similar tax in 2014"
- "A regressive grocery tax that would disproportionately affect low-income and middle-class Americans"

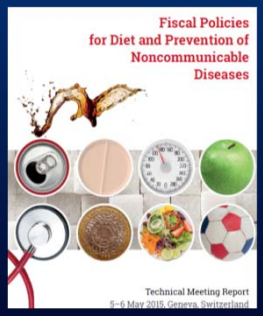
Sugary Drink Tax in 2017

Source: Healthy Food America (HFA)

Sugary Drink Tax Effects

WHO Report on Fiscal Policies

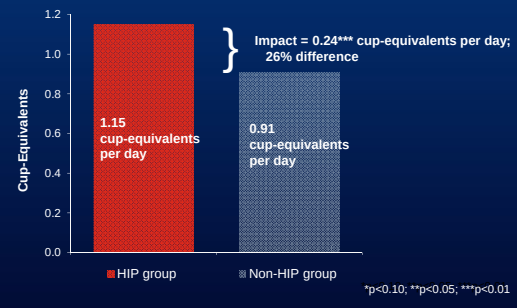
- Recommend a tax on sugary drinks of >=20%
- Subsidies for fresh FVs reducing prices by 10-30% are effective in increasing consumption
- Greater effects on net energy intake and weight when subsidies combined with taxation policies



Healthy Incentives Pilot (HIP)

- 30% incentive for purchasing eligible fruit and vegetables
  - Incentive as an added SNAP benefit
  - Essentially a price subsidy
- Only for SNAP participants when using SNAP benefits
  - Authorized by Farm Bill 2008
  - Pilot in Hampton county in MA
  - Randomized control trial (RCT)

Healthy Incentives Pilot: Results



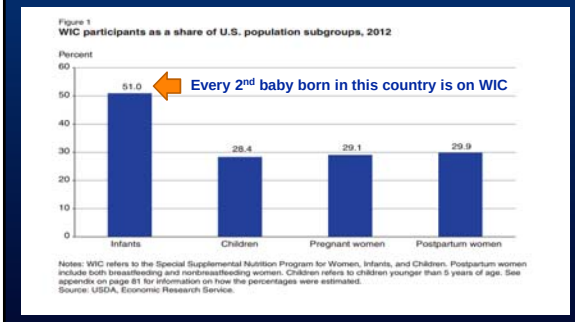
Source: Abt Associates

Healthy Incentives Pilot: Results

- Healthy Eating Index increase from 57 to 62
  - Increased FV intake
  - Reduced refined grains
  - No change in SSBs, SoFAAS
  - No change in total calories
  - Did not look at BMI, health

- $3.65 monthly in incentives per participant
  - $1.87 billion annually (FY2017)
  - Limited understanding of HIP in the study

Woman, Infants and Children (WIC) Program



2009 WIC Food Package Revisions

- Combined with restrictions / reductions for cost neutrality and DGA
  - Less milk
  - Less juice
  - Less cheese, eggs
  - No whole milk
    - Women, kids 2-5yr
- New subsidies
  - Whole grains
  - Targeted FVs

2009 WIC Revisions: Effects

- Improved dietary intake
  - Less sat fat
  - Less juice
  - More FVs
  - More whole grains

The Impact of the 2009 Special Supplemental Nutrition Program for Women, Infants, and Children Food Package Revisions on Participants: A Systematic Review.

The healthfulness of food and beverage purchases after the federal food package revisions: The case of two New England states.

Incentivizing fruit and vegetable purchases among participants in the Special Supplemental Nutrition Program for Women, Infants, and Children

Farmers Markets Incentive Programs

- Double up food bucks: Incentivizing FV purchases at farmers markets:
  - (often) SNAP participants
  - (often) One-on-one $ match
  - Health Bucks (NYC, Philly)
- Food Insecurity Nutrition Incentive (FINI) grant program
  - Increase FV purchases
    - Grocery stores and farmers markets
  - Authorized by Farm Bill 2014
  - $100M, required co-share
  - Evaluation

Incentive Programs: Effects

- Increased FV purchases and consumption
- Reduced food insecurity

Reducing Food Insecurity and Improving Fruit and Vegetable Intake Among Farmers' Market Incentive Program Participants.

- Increased farmers markets attendance and revenue
- Increased awareness and access
- No evidence yet on dietary and health outcomes

Incentives vs. Restrictions for SNAP

JAMA Intern Med. 2016 Nov 1;176(11):1610-1618. doi: 10.1001/jamainternmed.2016.5633.

Effects of Subsidies and Prohibitions on Nutrition in a Food Benefit Program: A Randomized Clinical Trial.

Harnack L[1], Oakes JM[1], Elbel B[2], Beatty T[3], Rydell S[1], French S[1].

- Experiment with 4 conditions for non-SNAP low-income people (n=279)
  - o Incentive (30% for FVs)
  - o Restriction (no SSBs, sweet bakery, candy)
  - o Restriction + Incentive - Best improvements (HEI increase =4.1)
  - o Control

Do Corn Subsidies Really Make Us Fat?

Rows upon rows of corn, as far as the eye can see, in Crumpton, Maryland.

Paying farmers to grow commodity crops makes food cheap, but the issues of why we eat too much, and how to fix that, are complex

Source: National Geographic 2016

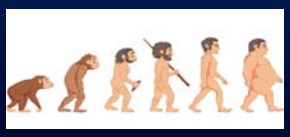
Food Dollar: Marketing Bill

What is the cost of marketing the farm commodities in a typical $1 food purchase?

Source: USDA, Economic Research Service

Subsidies Have Little Effect on Obesity

1) The subsidies inputs account for only small share of overall retail cost of food
2) Agricultural policies are mixed and some of the policies push prices up rather than down
3) Agricultural policies do not correlate well with differences in food prices and obesity rates over time



Policies to Promote Healthy Decisions

2. Improving Information

- Labeling
  - o What can be done?
  - o Menu labeling
  - o Nutrition facts labeling
  - o Front of package labeling
- Marketing
- Targeted campaigns

Labeling: What Can Be Done?

1. Voluntary company policies
   Industry self-regulation
2. Legislation and government regulation
   - Federal
   - State
   - Local
3. Litigation

Source: Brownell

Voluntary Policy

- One company (Panera Bread) initiates added sugar labeling on fountain drinks
  - First chain restaurant to do it

Industry-wide Voluntary Policies

- Cows are injected with rBST (also known as rBGH) to increase milk production
- It contains high levels of Insulin Growth Factor-1 (IGF-1), considered a potent tumor promoter
- FDA approved rBST in 1993
- rBST is banned in Canada, Europe, and Japan

SUPPLEMENTARY INFORMATION: On November 5, 1993, FDA approved a new animal drug application providing for the subcutaneous use of sterile sometribove zinc suspension (recombinant bovine somatotropin (rbST) or a recombinant bovine growth hormone (rbGH)) in lactating dairy cows to increase the production of marketable milk (58 FR 59946, November 12, 1993). FDA approved the product because the agency had determined after a thorough review that rbST is safe and effective for dairy cows, that milk from rbST-treated cows is safe for human consumption, and that production and use of the product do not have a significant impact on the environment. In addition, the agency found that there was no significant difference between milk from treated and untreated cows and, therefore, concluded that under the Federal Food, Drug, and Cosmetic Act (the act), the agency did not have the authority in this situation to require special labeling for milk from rbST-treated cows. FDA stated, however, that food companies that do not use milk from cows supplemented with rbST may voluntarily inform consumers of this fact in their product labels or labeling, provided that any statements made are truthful and not misleading. Several States and industry and consumer representatives have asked FDA to provide guidance on the labeling of milk and milk products from cows that have not been treated with rbST.

Labeling Regulations

- Federal level
  - o Nutrition Facts panel
  - o Restaurant menu labeling
  - o rBST labeling
  - o USDA Organic

- State/local level
  - o Restaurant menu labeling
  - o San Francisco sugary drink warning label

WARNING: Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay. This is a message from the City and County of San Francisco (appealed)

Litigation

FTC Investigation of Ad Claims that Rice Krispies Benefits Children's Immunity Leads to Stronger Order Against Kellogg

FOR RELEASE

June 3, 2010

TAGS: Advertising and Marketing | Children

Leading cereal maker Kellogg Company has agreed to new advertising restrictions to resolve a Federal Trade Commission investigation into questionable immunity-related claims for Rice Krispies cereal. This is the second time in the last year that the FTC has taken action against the company.

"We expect more from a great American company than making dubious claims – not once, but twice – that its cereals improve children's health," said FTC Chairman Jon Leibowitz. "Next time, Kellogg needs to stop and think twice about the claims it's making before rolling out a new ad campaign, so parents can make the best choices for their children."

Kellogg has agreed to expand a settlement order that was reached last year after the FTC alleged that the company made false claims that its Frosted Mini-Wheats cereal was "clinically shown to improve kids' attentiveness by nearly 20%."

- Payments to consumers ($5-15,up to $2.5M), withdraw the claim, donate 500,000 products, destroy boxes

Menu Labeling

- State and municipal menu labeling laws
- Voluntary labeling
- Federal menu labeling law
  - o Part of the Affordable Care Act (ACA) 2010
  - o Chain restaurants (n=20+)
  - o Calories next to item name
  - o Other nutritional info on request
  - o Effective on May 5, 2018
  - o Preemption

Motivation for Menu Labeling

- **Impossible for consumers to assess calories in each meal**
- **Double cheeseburger, large-size fries and soda provide 1240 calories**
- **Recommendation for most people 1800-2200 calories/day**
- **Women need 600 calories less than men of the same age and activity level**

Preemption

- A doctrine in law according to which federal law supersedes state or municipal law when federal law is in conflict with a state law

- Could also be used by states to prevent local laws
- Businesses want it to simplify operations and have one rule
- Public health & local implications vary

Does Menu Labeling Work?

- (Some) consumers change their orders
  - Most evaluations show small reduction
    - Literature review: **8-18** calorie reduction per meal
    - By 6% in NYC Starbucks: from 247 to 232 calories
- Restaurants reformulate their foods
  - New ingredients
  - Reduction in portion size
- Framing is important
  - Visibility (font size, location), other items

Industry Position on Menu Labeling

- Too much time and money already invested in the ACA mandate
- Prefer new FDA rules with easier compliance rules
- Prevent state and local legislation that could be harder to implement
  - Restaurants lobbied Congress to include menu labeling in the ACA
  - "We believe it should stay," Cicely Simpson, executive vice president of government affairs and policy at the National Restaurant Association

Source: Politico

Nutrition Facts Panel

Nutrition Facts Labeling

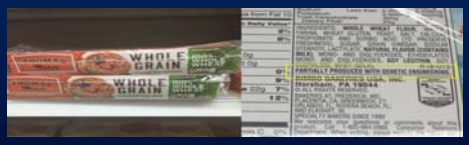
- **Intention**:
  - Help consumers choose more healthy foods
  - Educate consumers
  - Incentivize food companies to offer more nutritious products
- **Effect**:
  - Better informed consumers
    - Yet, used mostly by educated consumers
  - Some reformulation
  - Health effects hard to quantify
  - Cost of compliance
  - Total benefits exceed total costs

New Nutrition Facts Panel

- Major revision in 2016, compliance by 2018, small businesses by 2019

GMO Labeling

- 9 GMO crops (mostly corn, soy), but 70% processed foods include GMO products
- State bill in VT requiring GMO labeling ("produced with genetic engineering")



GMO Labeling

- "Safe and Accurate Food Labeling Bill" vs. "Deny Americans the Right-to-Know" (DARK act)
- State law in VT overturned by federal bill in July 2016
  - Preemption clause
- Voluntary labeling and organic foods

Front-of-Package Labeling

- Industry voluntary initiatives

- Many systems
- Frequent changes
- Confusion among consumers

Food Marketing to Children

Current practices are "out of balance with healthful diets and contribute to an environment that puts their health at risk" (2005)

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

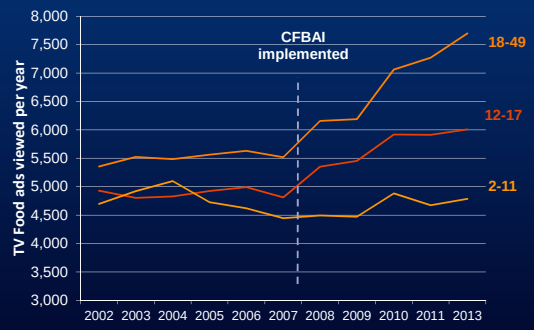
Food Industry Response

Children's Food & Beverage Advertising Initiative (CFBAI)

- Fully implemented in 2008
- 17 participating companies
- *"Shift the mix of foods advertised to children under 12 to encourage healthier dietary choices"*

Source: Harris J

Results of Self-Regulation



Source: Nielsen (2014), Harris J (Rudd Center).

Targeted Marketing

Marketing designed to appeal specifically to a group of consumers a company has identified as a business opportunity

Campbell Introduces New Latin-Inspired Condensed Soups

Source: Harris J

Implications

- Targeted marketing doesn't have to be harmful
- Current practices likely contribute to health disparities
  - High levels of junk food advertising
  - Even less likely to promote healthier products

Source: Harris J

Exposure to Food Marketing

- **Huge**
  - **15 food TV commercials per child/day**
- **Unhealthy foods and beverages**
  - **Fast food, high-sugar cereal, soda**
- **Has negative health effects**
  - **Food consumption, body weight**
- **Poorly regulated**
  - **Industry self-regulation pledges**

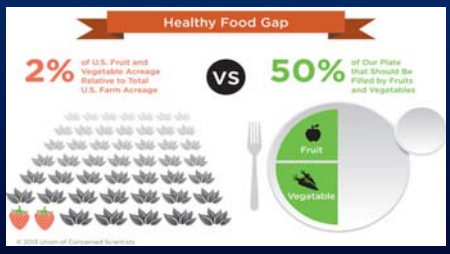
Dietary Guidelines for Americans 2015-2020

Eat more of these foods **Eat less of these foods**

22 tsp of added sugar; recommended daily maximum 10-12 tsp

The Farm Bill: Safety Net for Farmers

- Why support commodity crops?



Community Campaigns

- Howard County Unsweetened
  - TV and outdoor advertising
  - Social media campaigns
  - Work with pediatricians to improve messages about excessive sugar intake
  - Advocating for local laws to ban sugary drinks on government property
- Sales of sugary drinks drop significantly

Policies to Promote Healthy Decisions

3. Access to Healthy Foods

- Food deserts
- Food swamps

Why Food Access Matters?

People who do not have automobiles must rely on local markets where:

- **Most foods are processed**
- **Few fruits & vegetables (and poor quality)**
- **Price is high**

Poor dietary and health outcomes

Equity concerns

Recent Trends in Food Retail

- Increased purchases in non-traditional grocery stores
  - Supercenters
    - Wal-Mart's expansion
  - Warehouse club stores
    - Costco, BJ's, Sam's Club
  - Dollar stores
- Increased consolidation and vertical integration
  - Store own wholesale operations
  - Store own brands

Food Retailers

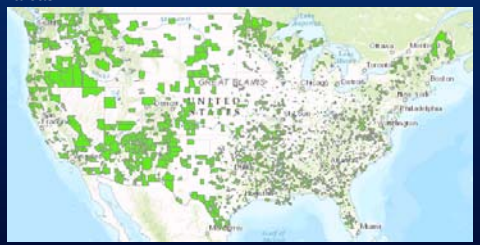
Food Deserts

"Areas of relative exclusion where people experience physical and economic barriers to accessing healthy food"

-- Low Income Project Team, 1996 (England)

Food Access Research Atlas

Low-income areas where many residents don't have a supermarket within a mile in urban areas or 10 miles in rural areas



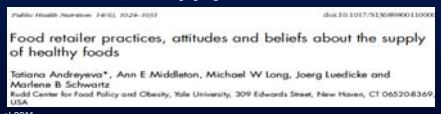
Source: https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/

Approaches to Improving Food Access

- **Changes to food assistance programs**
  - **Revisions to WIC food packages**
  - **Minimum inventory requirements for SNAP stores**
    A greater variety of healthy foods in all SNAP stores
- **Incentives for new grocery stores**
  - **Tax breaks, subsidized credit**
  - **Zoning policies**
- **Improvements in existing stores**
  - **Healthy Corner store interventions**

Effects of WIC Food Package Revisions

- **Significant increase in the supply of healthy foods in WIC stores**
  - **Some improvement also in non-WIC stores**
  - **Greater improvements in low-income communities**
- **Stores adapted quickly to new requirements**
- **Demand determines supply**


Food retailer practices, attitudes and beliefs about the supply of healthy foods

Tatiana Andreyeva*, Ann E Middleton, Michael W Long, Joerg Luedicke and Marlene B Schwartz
Rudd Center for Food Policy and Obesity, Yale University, 309 Edwards Street, New Haven, CT 06520-8369, USA

Source: Andreyeva et al 2011.

Food Swamps

- Areas with overabundance of high-energy, low nutrient foods compared to healthy food options
  - o Fast food outlets
  - o Convenience stores
  - o Carry-out restaurants
- Unhealthy foods are more readily available than healthy foods

Food Swamps and Food Deserts Often Overlap

Source: http://mdfoodsystemmap.org/wp-content/uploads/2013/01/Atlas_CLF-Food-Swamp_final.pdf

Policy to Limit Food Swamps

Zoning is a function of local government and typically used for planning; it defines use or development

- Local zoning ordinances
  - o Restrictions (bans) on opening new fast food outlets (moratorium)
  - o Bans on drive-through outlets
  - o Restrictions on fast food outlets near schools
  - o Quotas on fast food outlets
  - o Incentives to open farmers markets
  - o Effort to bring grocery stores/supermarkets

The South Los Angeles Fast Food Ban

- 2008 law banned construction of stand-alone fast food restaurants in South LA (32-square mile area)
  - o This type of restaurants was rare in the area
  - o Many fast-food outlets are in strip malls and food courts, which **were not affected** by the ban
    - o 17 new outlets opened between 2008-2012
  - o Almost half of new food permits were for convenience stores that sell soda and unhealthy food
- Research showed no effect on obesity or diet quality in this neighborhood

Policies to Promote Healthy Decisions

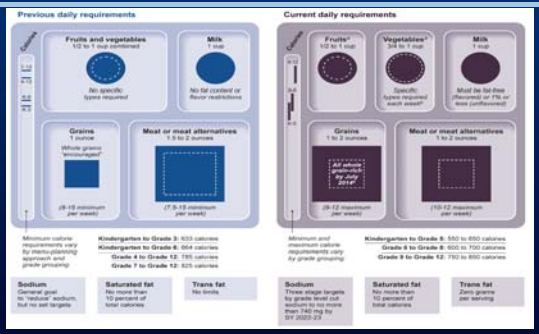
4. Nutrition Standards

- School meals
- Childcare
- Portion size

Nutrition Standards for School Meals

- Enacted by 2010 Healthy, Hungry-Free Kids Act (HHFKA)
  - Implementation starting 2012
  - Certain provisions implemented later
- Aimed at aligning school meals with Dietary Guidelines for Americans

Nutrition Standards for School Meals



Source: Wilde

Implications of New NSLP Standards

- Improved nutritional quality of school meals
- Reduced disparities

Prev Med. 2015 Sep;78:52-8. doi: 10.1016/j.ypmed.2015.07.010. Epub 2015 Jul 17.

Foods and beverages offered in US public secondary schools through the National School Lunch Program from 2011-2013: Early evidence of improved nutrition and reduced disparities.

Terry-McElrath YM[1], O'Malley PM[2], Johnston LD[2].

Upcoming Changes in Childcare

- Updated meal patterns for the Child and Adult Care Food Program (CACFP)
  - Tighter nutrition standards starting 10/1/17
- Licensing laws in many states make this update relevant to non-CACFP settings
  - Supposed to follow CACFP standards

Implications of CACFP Updates

A health impact assessment of the CACFP's updates

Changes will improve children's diets, even many not served by CACFP

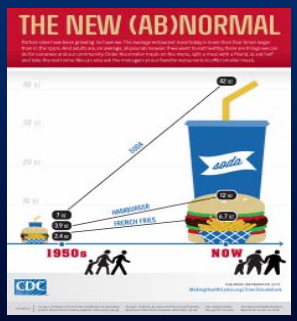
The assessment concluded that some of the new standards, such as updated requirements for whole grains, fruits, and vegetables, will translate into health benef for children. For example:

- The nutritional quality of CACFP-funded meals and snacks should improve unde the new standards, increasing enrolled children's intake of whole grains and vegetables, decreasing their consumption of grain-based desserts, and having a positive overall impact on their health. The changes are especially important because young children in the United States typically do not eat enough whole grains, fruit, or vegetables and consume too much fat, salt, and added sugar.

Source: Pew Report. Healthier Nutrition Standards Benefit Kids: A Health Impact Assessment of the Child and Adult Care Food Program's updated rules for meals and snacks

Portion Size

- Dramatic increase in portion size in full-service and fast food restaurants
- Most restaurant entrees exceed recommended calories
- "The more you are served, the more you eat"



Portion Size: Regulation?

- NYC proposed a ban on sale of super-size sugary beverages
- Motivated by public health goals
- Defeated in courts

Industry Position on Portion Size

National Restaurant Association

"*Smaller portions, big benefits*"

- Help create a solution
  - Offer more-healthful meals
  - Provide smaller portions (<700 calories/meal)
  - Offer ultra-light portions (<400 calories/meal)
  - Alter perception healthy food doesn't taste good
  - Use smaller plates and taller glasses
  - Add fruit and vegetables to improve plate attractiveness

Highlights

Key Points to Remember

1) System-wide lack of optimal defaults for healthy food choice
2) Considerable evidence that pricing incentives affect food choice
3) Limited evidence that information improvements affect food choice for all, yet the right to know matters to many

Key Points to Remember

4) Food access interventions matter for equity concerns perhaps more than for food choice
5) Changes in nutrition standards for schools and childcare settings have great potential for establishing healthy choices early on
6) Cost-effectiveness rarely assessed, but should be part of decision-making