



fruits and vegetables
EAT 5 A DAY
for better health
AND BE ACTIVE
pineapples limes corn
baseball cycling soccer
mandarins carrots



Designing Evaluation Based on the Social-Ecological Model: Practical Considerations from the Field

California Nutrition Network for Healthy, Active Families

Susan Foerster, MPH, RD with Sharon Sugerman, MS, RD and Andrew Fourney, PhD

Priorities and Planning Workshop on Future FSNEP Research and Evaluation Activities

Economic Research Service
Washington, DC January 15, 2003



nectarines onions kiwis

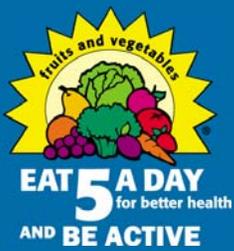


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pumpkins apples brussels





Overview

- Networks are/should be seen as large-scale health promotion enterprises
- Therefore, they must take advantage of a huge amount of contemporary thinking (see bibliography)
- They must use multi-disciplinary approaches for intervention, evaluation
- They are dynamic, breaking new ground for “nutrition education”
- They also break new ground for “social marketing”



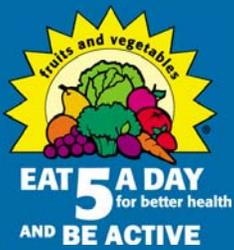
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Guiding Principles for Health Promotion*

- Empowerment of individuals and communities over personal, socioeconomic and environmental factors that affect their health
- Participation of those concerned, at all stages
- Holistic—fostering physical, mental, social and spiritual health
- Intersectoral—agencies from relevant sectors collaborate
- Equity and social justice
- Sustainability beyond initial funding
- Multiple strategies—policy development, organizational change, community development, legislation, advocacy, education and communication—in combination

* World Health Organization, 2001

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Nutrition Education, a Definition *

“Any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviors conducive to health and well-being.”

* USDA, ~1994



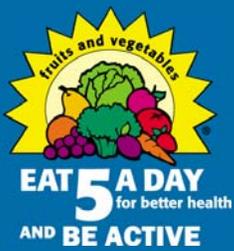
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Social Marketing, a Definition

California Nutrition Network Definition of Social Marketing

“...The use of commercial marketing approaches to achieve a social goal...

includes the traditional mix of advertising, public relations, promotion, and personal sales, and adds

Consumer empowerment, community development, partnership, media advocacy, and

policy-systems-and environmental change...”

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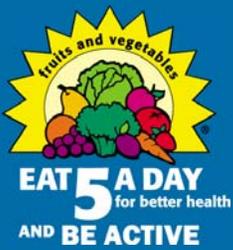
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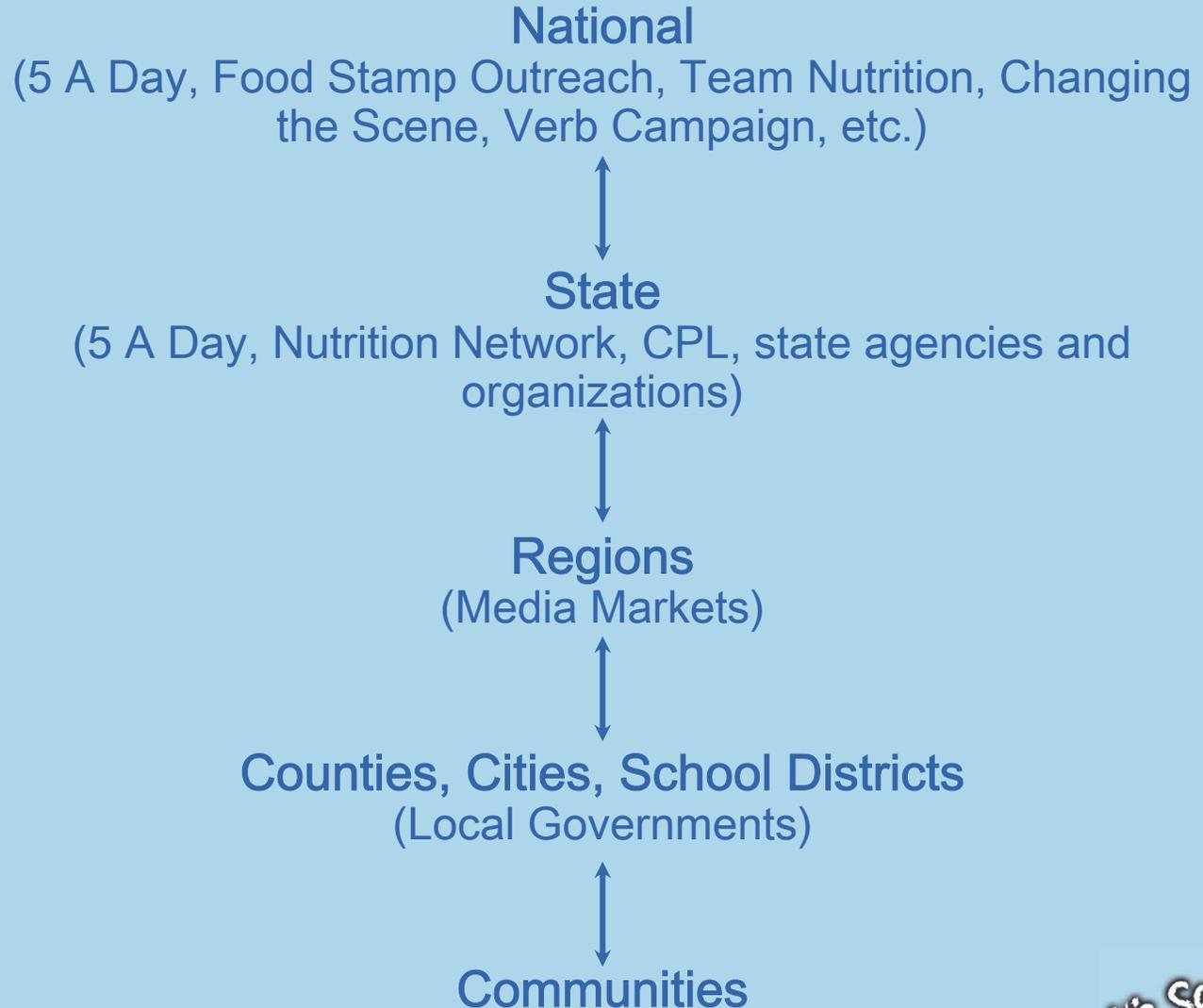
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What Is a Multi-Level Campaign?



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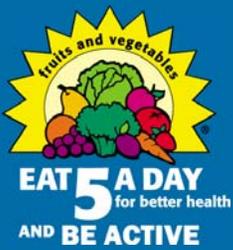
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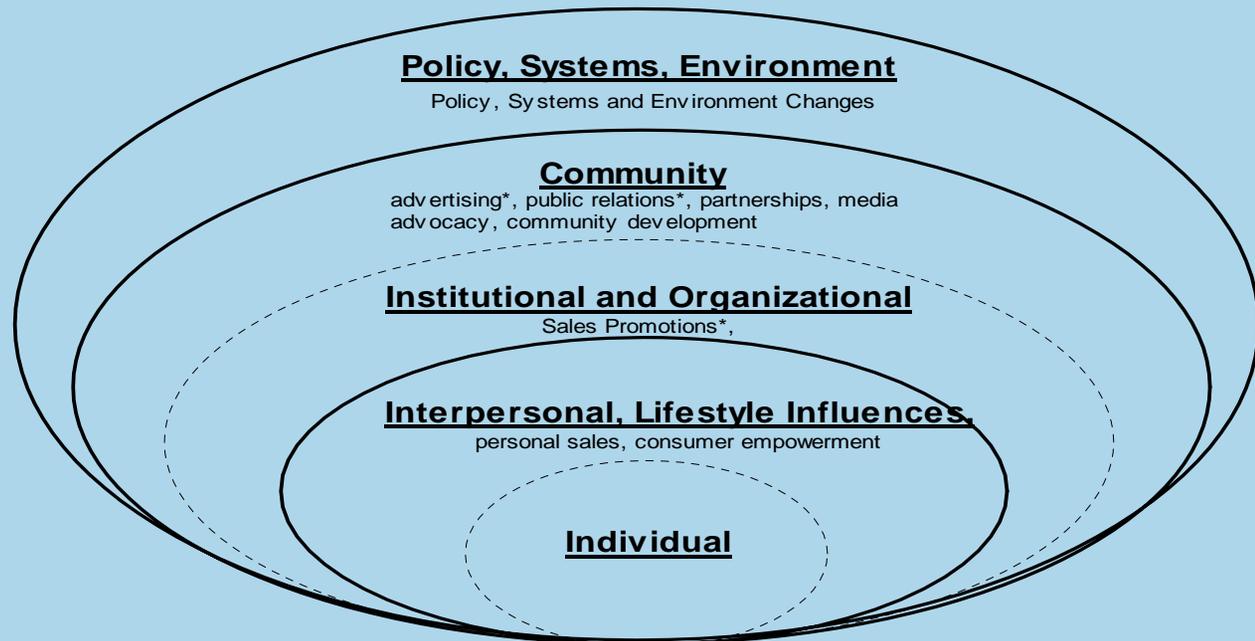


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What Are the Multiple Spheres of Influence and Social Marketing “Tools” in Each Sphere?

Social Marketing Tools by Level of Influence in the Social-Ecological Model



*Categorization in the specific sphere depends on how the construct was operationalized. Often Community and Institutional activities are very similar, and Interpersonal and Individual activities are very similar.

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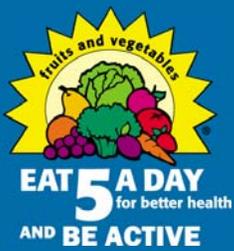


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Why *Not* Use an Experimental Evaluation?

- Many components *are* experimentally based
- Many components *are* evaluated quasi-experimentally
- This is a marketing model, w/ continuous feedback loops
- There's a changing secular environment, not controllable
- Interventions also are dynamic—constant learning, improvement, different stages of “maturity”
- An objective is to stimulate others' activity, not control it at baseline levels
- “Contamination” (*aka* synergy) is an objective, but not predicable
- Cost, complexity, “technology”, even interest

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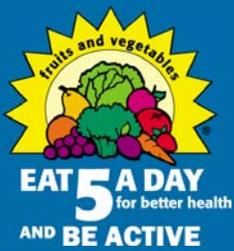
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What Is “Triangulation” in Health Promotion?¹

- Health itself is multi-dimensional, e.g., physical, social, cultural
- So, health promotion is multi-dimensional
- So, evaluation methods must be multi-dimensional
- Qualitative may explain quantitative, and vice versa
- “Triangulation” is also called “mixed methods”

¹ Thorogood & Coombes, 2002, from Steckler (1992)



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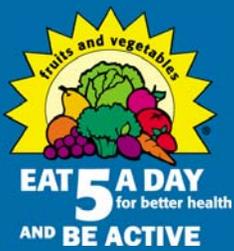


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Types of Triangulation¹

- Data—different times, spaces, sources
- Investigators—different people, organizations
- Theories—use different theories to explain same body of data
- Methods—use different methods within and between interventions

¹ Thorogood & Coombes, 2002, from Denzin (1989)



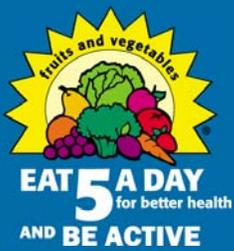
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“Theory of the Problem”¹

- Inadequate knowledge/belief by consumers
- Inadequate promotion, “selling” of the behaviors
- Inadequate access, high environmental barriers
- Inadequate policies, especially state, local, private sectors
- Inadequate attention by intermediaries
- Inadequate resources, understanding of solutions
- Inadequate leadership, infrastructure for change

¹ Thorogood & Coombes, 2000, from McLeroy *et al* (1993)



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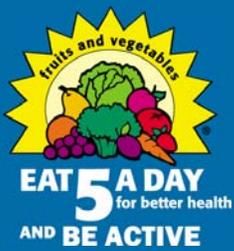


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Reflections on “Triangulation”

- Since health is so complex, there’s no one “truth”
- Rather, greater understanding and interpretation are needed
- Triangulation may lead to contradictions
- Revealing and probing contradictions leads to understanding
- Attribution may be problematic for funders, partners

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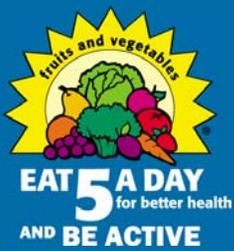


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“Upstream Measures” to Evaluate (A Work in Progress!)

- Consensus on objectives, solutions
- Growth in agency participation, redirections
- Establishment of infrastructure at state, regional, local levels
- Establishment of sustainable fiscal and administrative systems
- More partnerships with state and community influentials
- Leadership to strategize, help mobilize effort, support and empower coalitions



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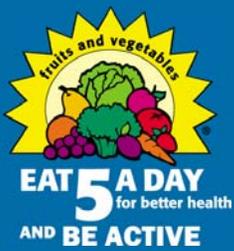
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“Midstream Measures” to Evaluate

- Increase in educational and promotional activity, empowered communities
- Refinement of policy and system change solutions, “getting focused”
- Development of specific end points and their measures
- Belief by consumers in 5-9 servings, 30-60 minutes, Food Stamps as a good resource
- Decrease in consumer perception of barriers; feelings of self-efficacy



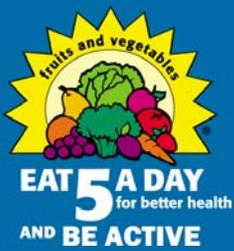
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“Downstream Measures” to Evaluate

- More favorable policies at multiple levels, sectors
- Healthier “environment” at community levels
- Less competition?
- Permanent changes in systems
- Behavior change in targeted consumer segments

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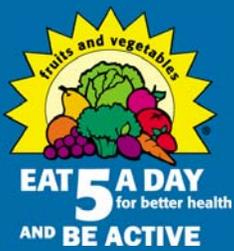
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So, What *Are* the Data?

(Again, a Work in Progress!)

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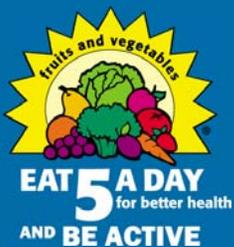


“Upstream Measures” since 1997 Campaign Launch

- Growth in State Agencies—from 1 to 6
- Funding—Federal Financial Participation reflects others’ growth and focus
- Growth in collaboration by funders—foundations, state agencies
- Growth in regions—from 10 to 23
- Growth in partnerships—from ~200 to ~2,000
- Growth in numbers, collaborations and work scopes of leadership organizations
- Development and use of reporting system

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“Midstream Measures”

Table 2. Reach of Local and Statewide Public Relations Activities Conducted in Year 05, Part I.

Reach of Network Public Relations Activities October 1, 2000 – March 31, 2001^{1,2}

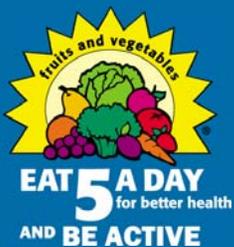
	Activity	Number of Media Outlets	Media Impressions/ Indirect Contacts (Duplicated Count)
Public Relations	STATE		
	Latino-Specific Media Tour, Fall, 2000 (included TV, radio, print)	143	13,670,000
	Drew University Press Release	na	5,000,000
	Press Release “Overweight Obesity Levels Reach Epic Proprtions”, Oct 2000	na	na
	LOCAL, N=127		
	TV PR Events	23	na
	TV Interviews/Stories	16	na
	Food Prep/Cook Demos	7	na
	Radio PR Events	26	600
	Radio Interviews/Stories	25	na
	Radio Remotes	1	600
	Print PR Events	1,200	na
	Feature Articles/Bylines	1,113	na
	Press Releases	78	na
	Press Interviews	9	na
Other PR Events	148	3,234,569	
TOTALS		1,540	21,905,169

¹ Public Relations include outreach activities designed to secure news attention in the print or electronic media.

² Includes CNN’s Project LEAN Regions, *Power Play!* Regions, LIA’s and Special Projects; excludes Healthy Cities and Communities and Cancer Research Projects.
na = not available

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“Midstream Measures” (2)

Table 5. Local and Statewide Sales Promotions October 1, 2000- March 31, 2001

**Reach of Network Sales Promotion Activities
October 1, 2000 – March 31, 2001^{1,2}**

	Activity	Number of Events/Activities	Direct Contacts (Duplicated Count)
Promotions	STATE		
	Safeway “Eat Like a Champion”(Feb)	na	500,000
	5 a Day Across the USA (Mar)	na	na
	Latino Farmers’ Market Promotions	na	26,000
	Latino Festival Promotions	na	75,000
	LOCAL, SAAR N=127		
	Grocery Promotions (% of Activities)	102	6,650
	Taste Tests (15%)	15	na
	Retail Tours (37%)	38	na
	Other: Give Recipes, Posters, etc. (36%)	37	na
	Farmer’s Market Promotions (% of Activities)	147	7,078
	Taste Tests (23%)	34	na
	Food Preparation/Cooking Demos (29%)	42	na
	Retail Tours (6%)	9	na
	Other: Give Recipes, Posters, etc. (100%)	192	na
	Other Sales Promotions (% of Activities)	209	446,228
	Sports Events (9%)	18	2,100
Health Fairs/Festivals (56%)	117	39,913	
School and Youth Organization-Based	na	400,000	
Other (35%)	74	4,215	
TOTALS	458	1,060,956	

¹ Promotions include certain timeframes selected to advance specific messages or themes. They provide paid and voluntary support of special events, materials and incentives; and they work with multiple partners, especially at “point of sale” or “point of choice,” to gain maximum media and consumer attention, so as to stimulate interest, acceptance, trial or repeat “product purchase.”

² Includes CNN’s Project LEAN Regions, *Power Play!* Regions, LIA’s and Special Projects; excludes Healthy Cities and Communities and Cancer Research Projects.

na = not available

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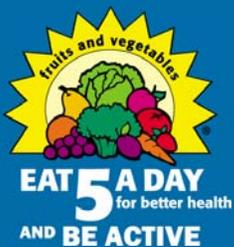


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“Midstream Measures” (3)

Table 6.

Reach of Network Personal Sales Activities October 1, 2000 – March 31, 2001 ^{1,2}				
	Activity	Number of Classes	Audience Reached (Duplicated Count)	
Personal Sales	STATE			
		Latino 5 a Day Materials Distributed	na	168,000
		Internet Hits	na	10,108
		1-888-EAT-FIVE calls	na	150
		LOCAL, N=127		
		Material Distribution³	na	423,541
		English (77%)	na	325,395
		Spanish (23%)	na	98,146
		Personal Sales (% of Classes, % of Audience)	23,514	1,062,697
		Nutrition Education Classes (88%, 94%)	20,674	1,002,064
		Provider Training (1%, 0%)	201	4,177
		Physical Activity Classes (9%, 4%)	2,009	43,756
		Other (3%, 1%)	630	12,700
		Other Interactive Contacts	na	218,313
	TOTALS	23,514	1,882,809	

¹ Personal Sales include traditional one-on-one or small group nutrition education and other personal contacts with consumers.

² Includes CNN’s Project LEAN Regions, *Power Play!* Regions, LIA’s and Special Projects; excludes Healthy Cities and Communities and Cancer Research Projects.

³ *Power Play!* material distribution not included.

0% = less than .5%

na = not available

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“Midstream Measures” (4)

Table 7:

Trends in Reach of Network’s Combined State and Local Social Marketing Activities¹

Activity	Year 03	Year 04		Year 05
	4/1/99-9/30/99	10/1/99-3/31/00	4/1/00-9/30/00	10/1/00-3/31/01
Materials Distributed ²	1,903,583	1,426,806	202,048	591,541
Personal Sales	79,781	69,807	139,520	1,291,268
Grocery Promotions	2,712,210	6,574	53,012	506,650
Festival promotions	na	na	370,341	75,000
Farmer Markets Promotions	18,000	na	na	33,078
Other Sales Promotions	na	na	7,335	446,228
PR Events	14,966,790	45,154,465	40,896,206	21,905,169
TV PSA's	11,301,200	9,607,601	38,922,849	6,050,500
Radio PSA's	2,673,150	1,215,491	63,862,259	21,200
Total Impressions	33,654,714	57,480,744	144,453,570	30,920,634
Impressions Per Capita				
Adults (21.1 million)	1.60, adults	2.72, adults	6.85, adults	1.47, adults
All (34 million)	.99, all	1.69, all	4.25, all	.91, all
Cumulative Impressions				
Adults (21.1 million)	1.60, adults	4.32, adults	11.17, adults	12.64, adults
All (34 million)	.99, all	2.68, all	6.93, all	7.84, all

¹ Includes CNN's Project LEAN Regions, *Power Play!* Regions, LIA's and Special Projects; excludes Healthy Cities and Communities and Cancer Research Projects.

² *Power Play!* material distribution not included.

na = not applicable

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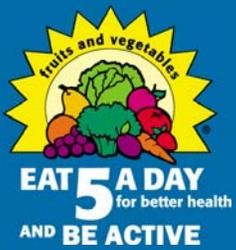


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“Midstream Measures”–Specificity of Message (5)

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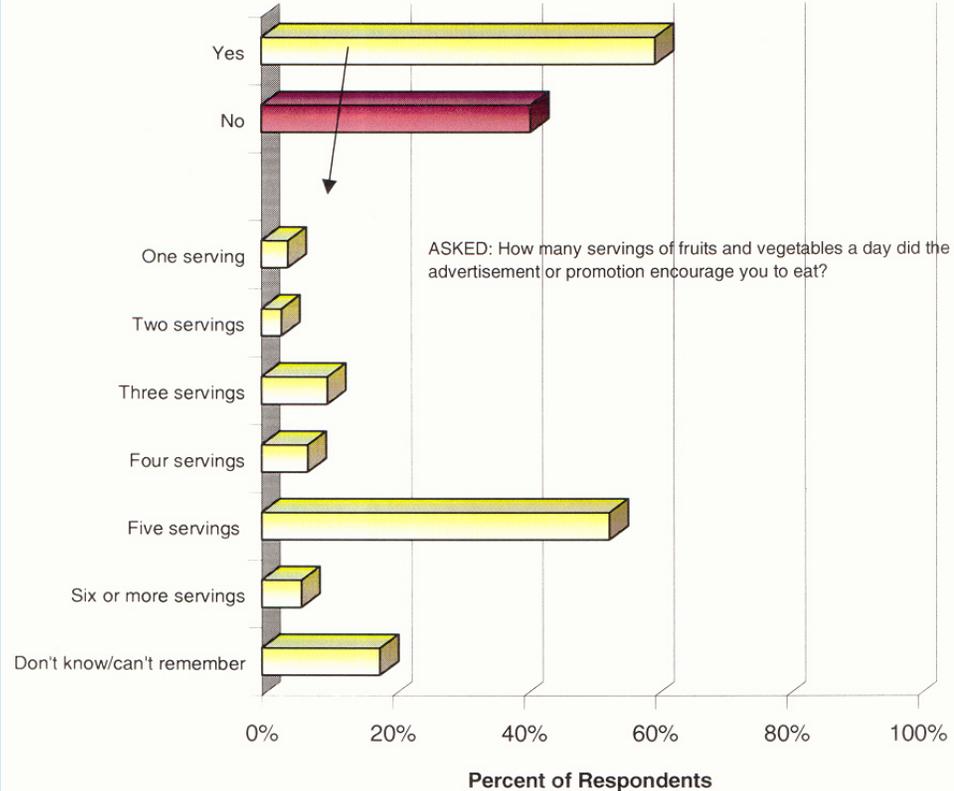


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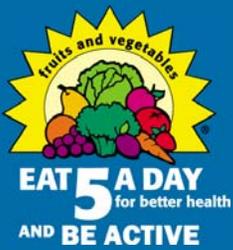


NUMBER OF FRUITS AND VEGETABLES THE ADVERTISEMENT OR PROMOTION ENCOURAGED

ASKED: Did the advertisement or promotion you saw, read or heard mention how many servings of fruits and vegetables you should eat?



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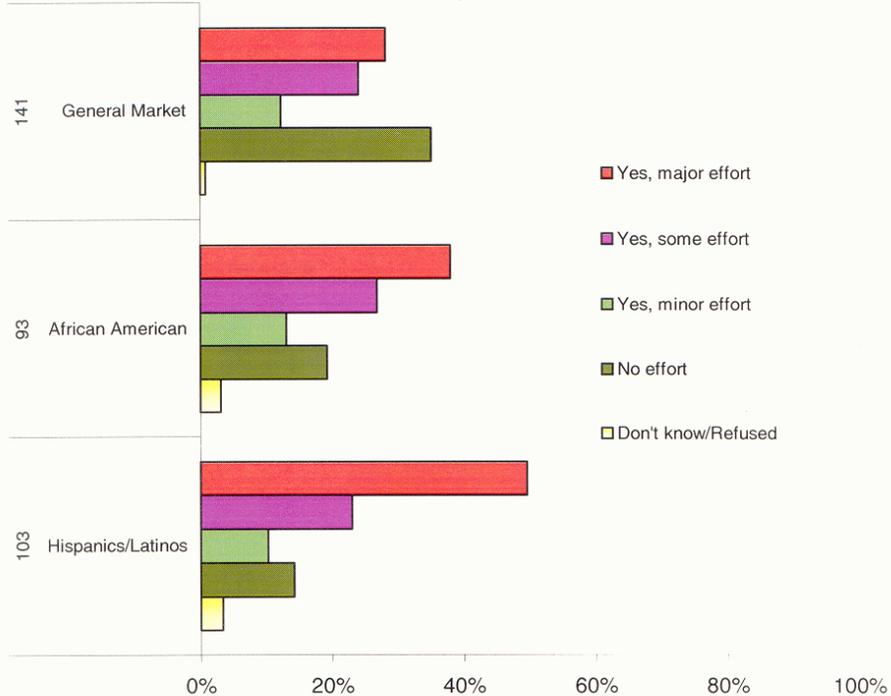
“Midstream Measures”— Self-Reported Impact by Targeted Segments (6) Based on Ads, What Efforts Did You Make to Act?

IMPACT OF THE CALIFORNIA 5 A DAY CAMPAIGN ADVERTISEMENTS AND OTHER PROMOTIONS ON FRUIT AND VEGETABLE CONSUMPTION-SELF

By
Market Segment

ASKED: After seeing, hearing, or reading the advertisements or promotions on eating fruits and vegetables, have you made any additional efforts to eat fruits and vegetables?
n=

Base: Those aware of ads/promotions



Significant Difference
P<.01

Percent of Respondents

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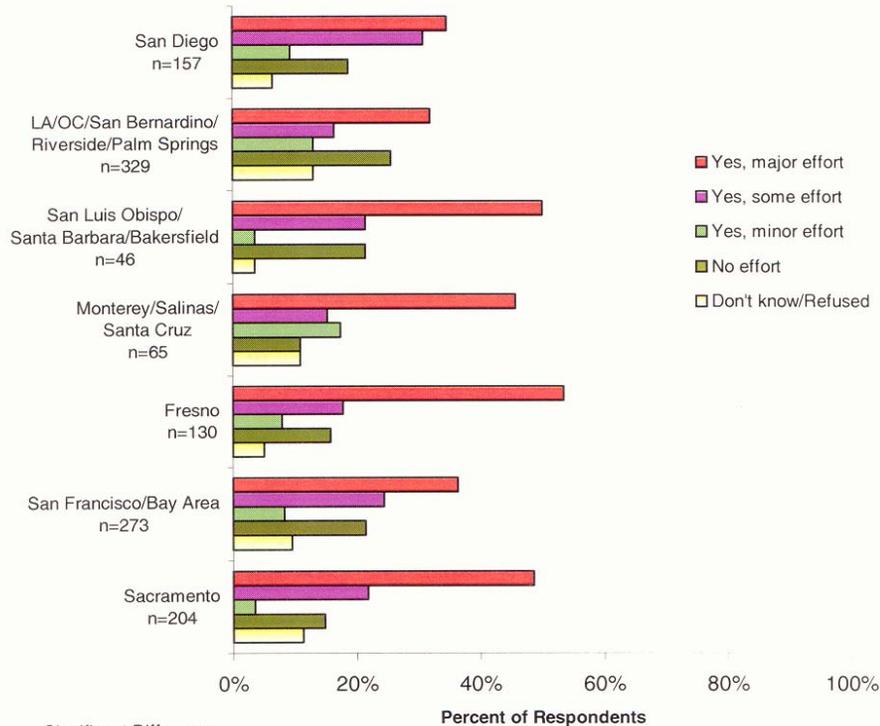




“Midstream Measures”— Self-Reported Impact, by Region (7) Based on Ads, What Efforts Did You Make to Act?

**IMPACT OF THE CALIFORNIA 5 A DAY CAMPAIGN
ADVERTISEMENTS AND OTHER PROMOTIONS ON FRUIT
AND VEGETABLE CONSUMPTION--SELF
By Region**

ASKED: After seeing, hearing or reading the advertisements or promotions on eating fruits and vegetables, have you made any additional efforts to eat fruits and vegetables?
BASE: Those who are aware of promotions or the California 5 a Day Campaign



Significant Difference
P < .05



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“Midstream Measures” (8)

Improved Measures and Measurement

- Relevant questions (3-7) on more State surveys
- Work on new measures is increasing—community assessments, GIS, sentinel supermarkets, environmental scans, healthy community indices
- Policy targets are refined, narrowed, e.g., no-cost, low-cost, revenue-generating; multi-level; and “niched”

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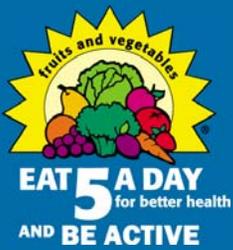


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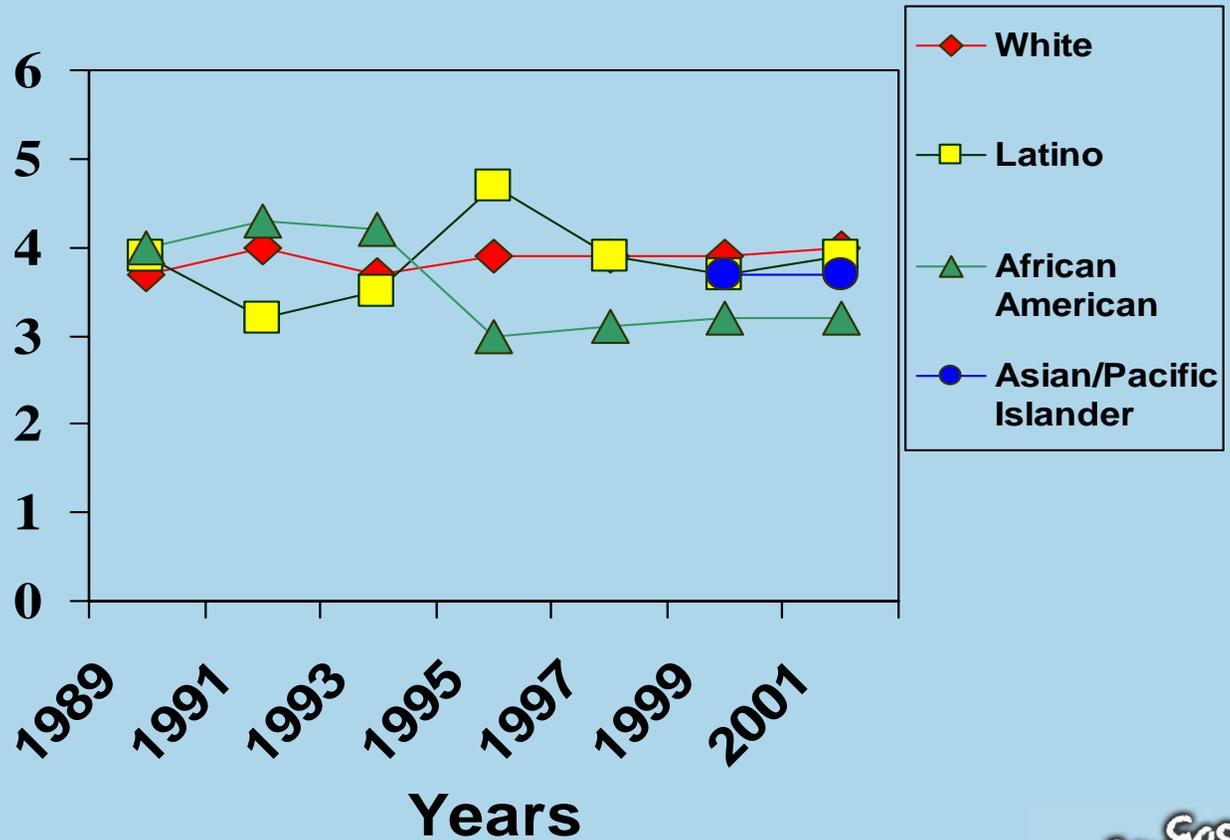




“Downstream Measures” Fruit and Vegetable Trends Look Promising

Californians' Fruit and Vegetable Consumption
by Race/Ethnicity, 1989-2001

Servings of Fruits and
Vegetables



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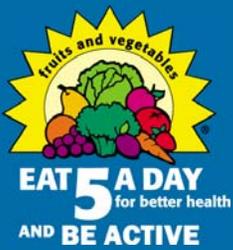
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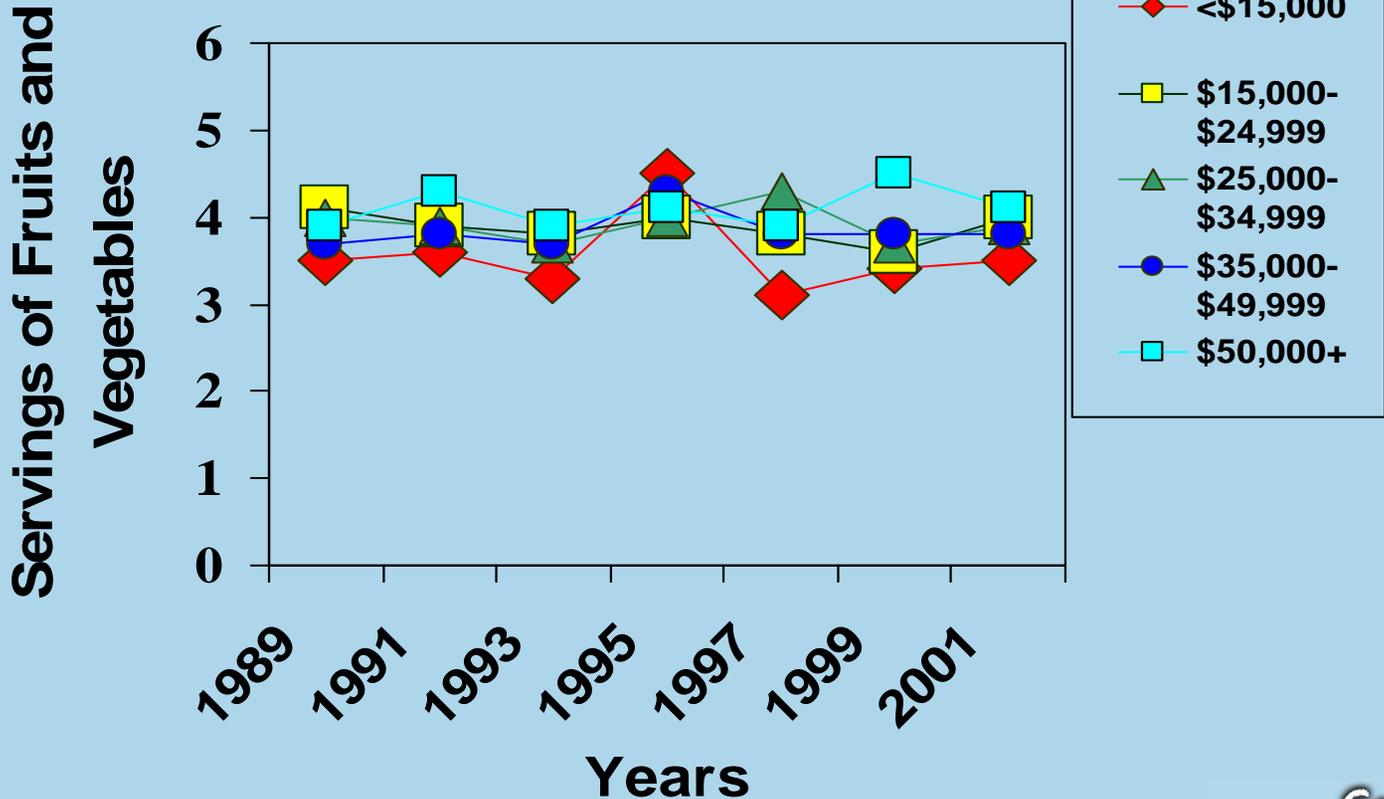


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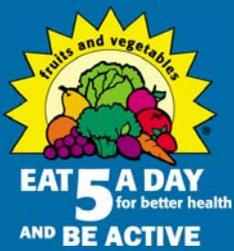
“Downstream Measures” Fruit and Vegetable Trends Look Promising

Californians’ Fruit and Vegetable Consumption
by Income, 1989-2001



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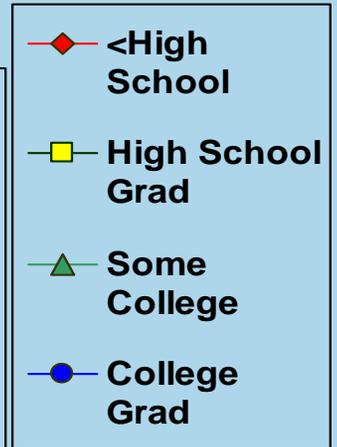
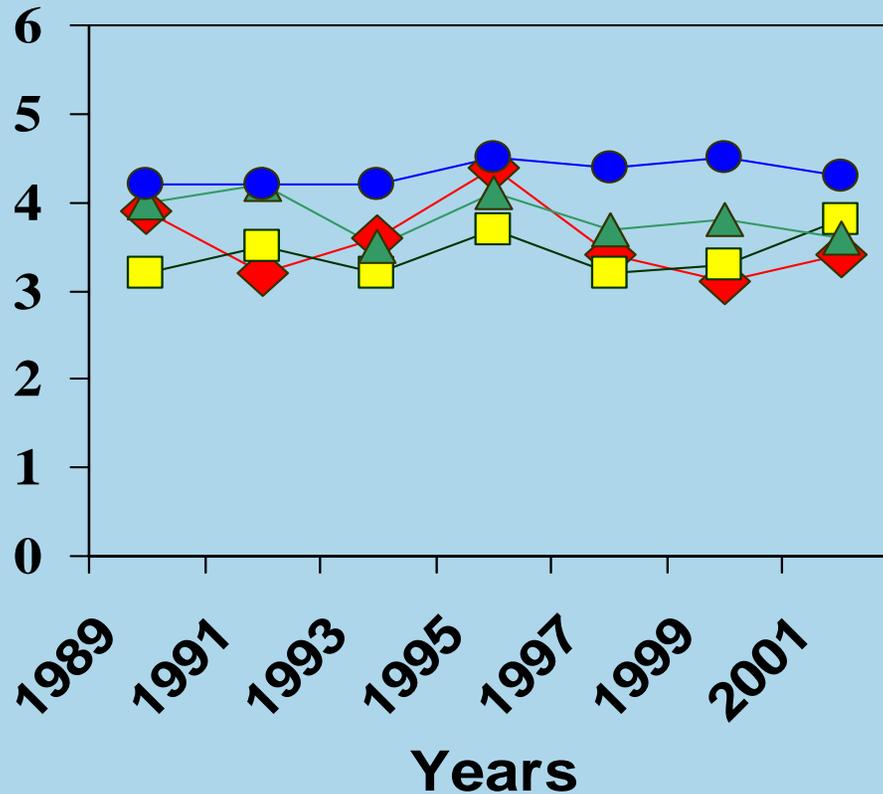




“Downstream Measures” Fruit and Vegetable Trends Look Promising

Californians' Fruit and Vegetable Consumption by Education Level, 1989-2001

Servings of Fruits and
Vegetables



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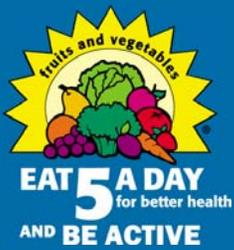
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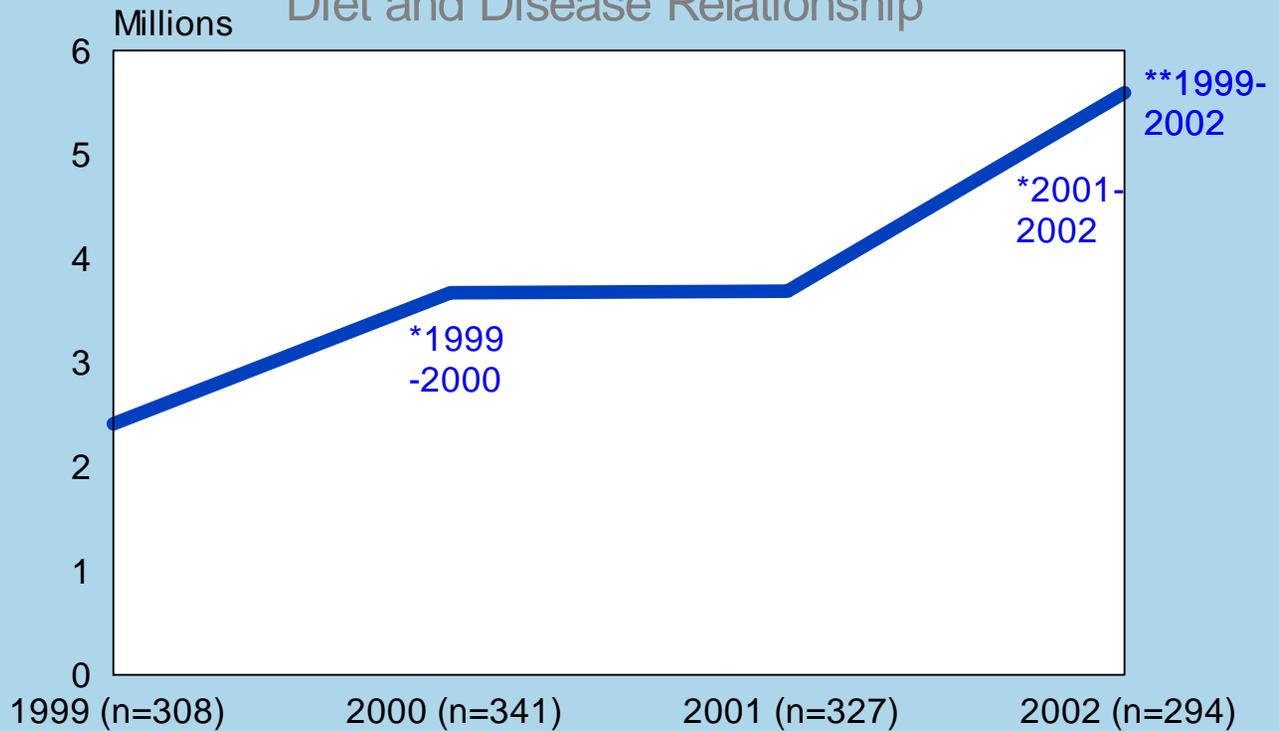


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“Downstream Measures”—News Content Analysis The Community Media Is Changing, 1999-2002

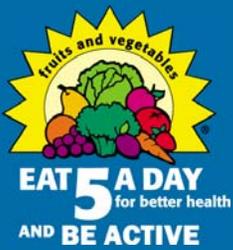
Circulation X Column Inches Covering
Diet and Disease Relationship



^a2002 is complete through July, excluding National 5 a Day Week

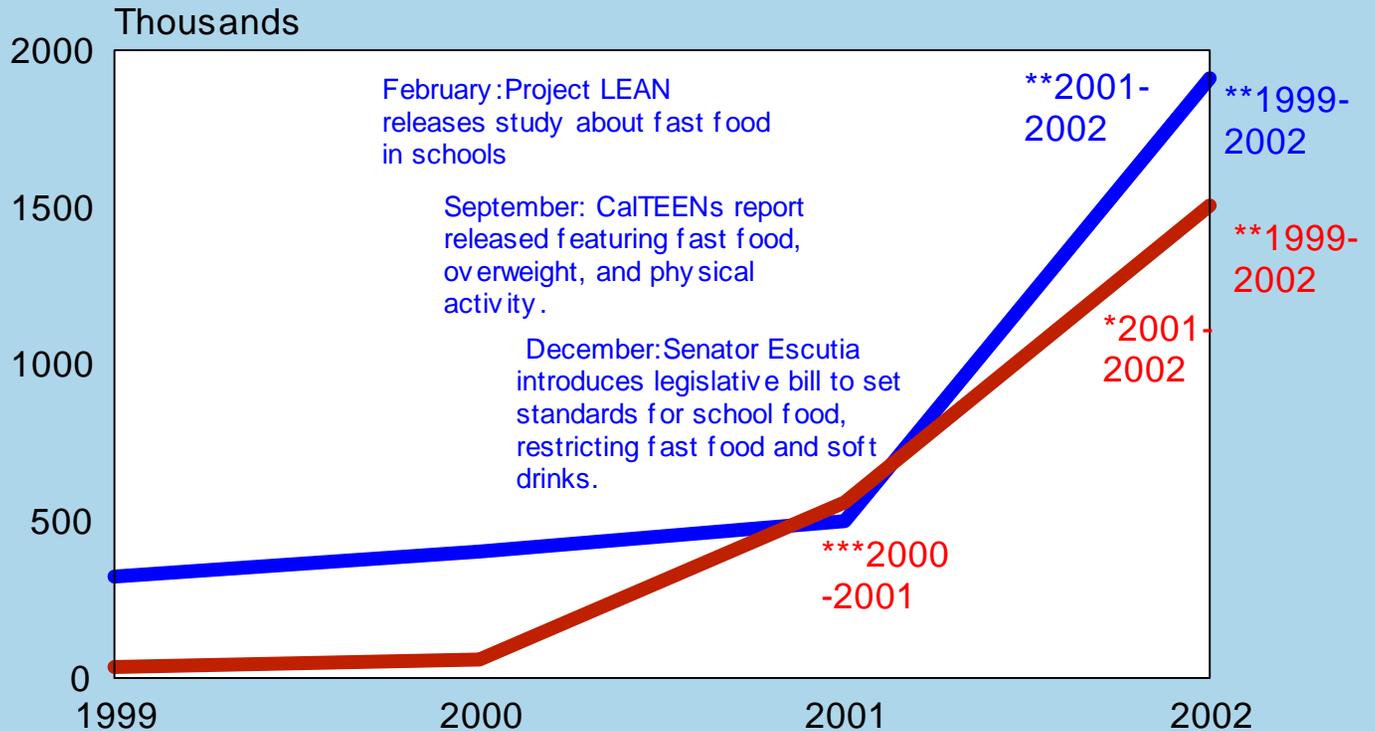
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“Downstream Measures”— News Coverage and Policy Change Junk Food in Schools, 1999-2002

Circulation X Column Inches Covering Fast Food, Soda, and other
Junk Food and Policy/Editorial Topics



^a2002 is complete through July, excluding National 5 a Day Week
Policy N= 6,10,54,61 1999-2002 respectively; Junk Food N=21,31,43,61 1999-2002 respectively



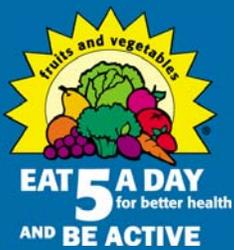
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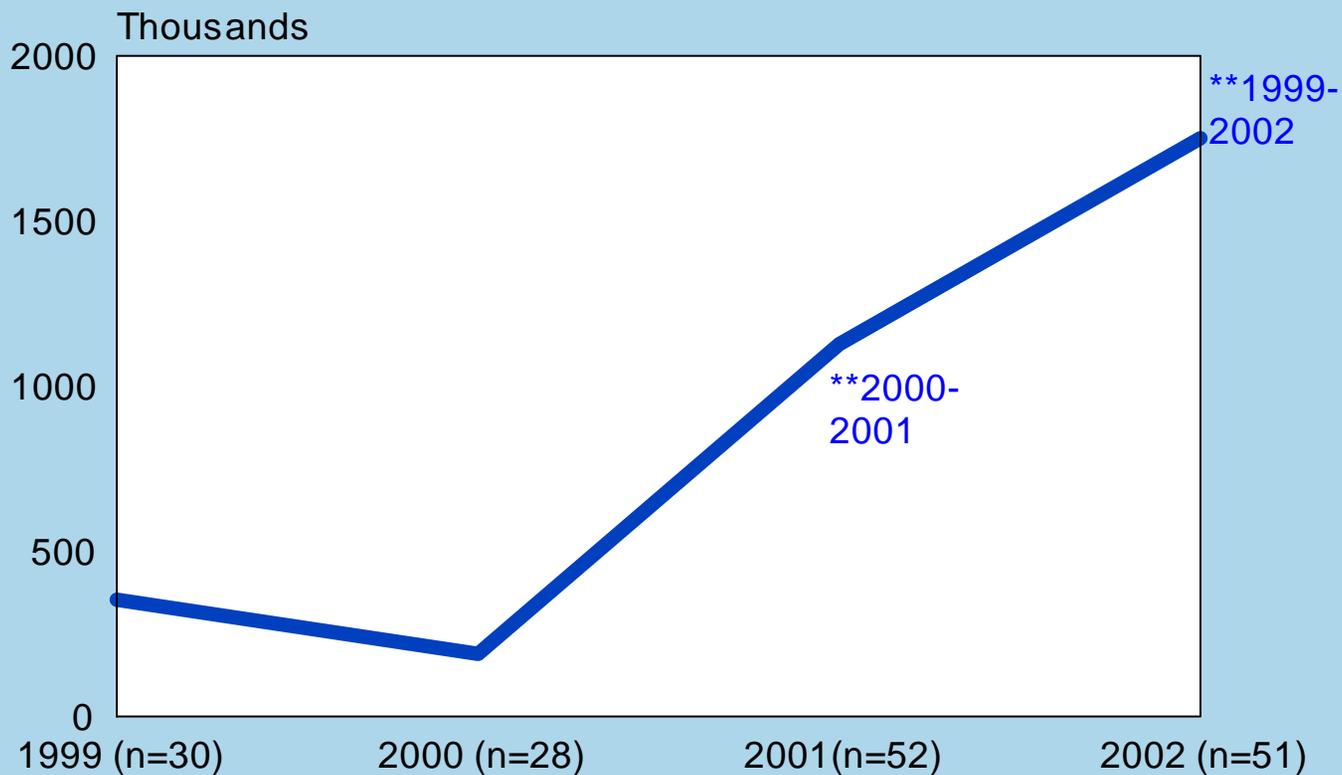
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“Downstream Measures”— Building on a Dynamic Secular Environment Obesity as a Driving Force for Change, 1999-2002

Shaping the Community Media, 1999-2002*

Circulation X Column Inches Covering Obesity



*2002 is complete through July, excluding National 5 a Day Week

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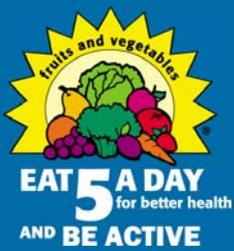


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“Downstream Measures” of Food Security (Food Stamp and Other NAP Programs, Community Food Security) Using the Social-Ecological Model Policy, System and Environmental Changes at the:

- Target population level (possibly, but not necessarily, distinct from other similar market segments)
- Institutional (“channel”) level
- Community level (multiple channels, interacting)
- Regional level (geographical, media market)
- Statewide level
- National level



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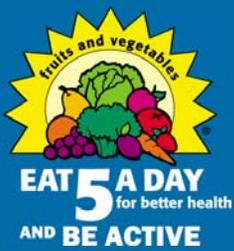


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A Word about Policy

- Definition—written organizational decisions about direction, resources, priorities, values
- Occurs in business, non-profit and government organizations, even households (parents' rules about eating)
- Codifies social norms, values, redirection
- Changing policy is not equivalent to lobbying
- Lobbying is governed by organizational rules, state and federal law
- Advocacy is public health responsibility
- Advocacy is ethical and legal, and often confused with lobbying

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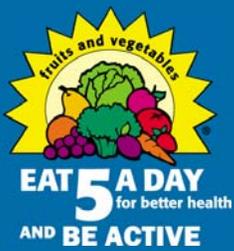
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So, What Are the Challenges Now? (Food Stamp and Other NAP Programs, Community Food Security) Using the Social-Ecological Model

- As a dynamic field, knowing the “sticky” issues/endpoints in the beginning
- Possibly, develop criteria for “stickiness”?
- Assessing the current situation (baseline) for those sticky issues
- Selecting measures for each “sphere of influence”
- Gaining consensus on measures from all stakeholders, not just evaluators
- Collecting, managing and interpreting data
- Monitoring the environment, then attributing results (advanced statistical modeling versus “common sense”?)
- Setting realistic expectations, e.g., may be more (or less) than dose/response



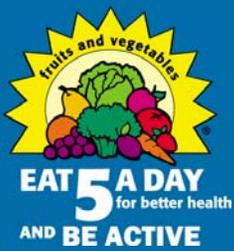
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And a Good Start Would Be:

- Funders, FSNEP's and stakeholders getting on the same page
- Role delineation for each
- Evaluators working with, learning from implementers' experience
- Agreement on where "the field" is, policy-, organization-, intervention- and evaluation-wise
- All that considered, adoption of common mission, purpose
- Agreement where possible, flexibility and feedback loops for the rest
- A plan, with benchmarks and timelines

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With Thanks to Our Funders

- California public agency partners, for in-kind contributions
- USDA Food Stamp Program
- The California Endowment
- CDC Prevention Block Grant
- California Department of Social Services
- California Department of Food and Agriculture



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