

# Healthy Weight in Early Childhood: Why Is This Important?

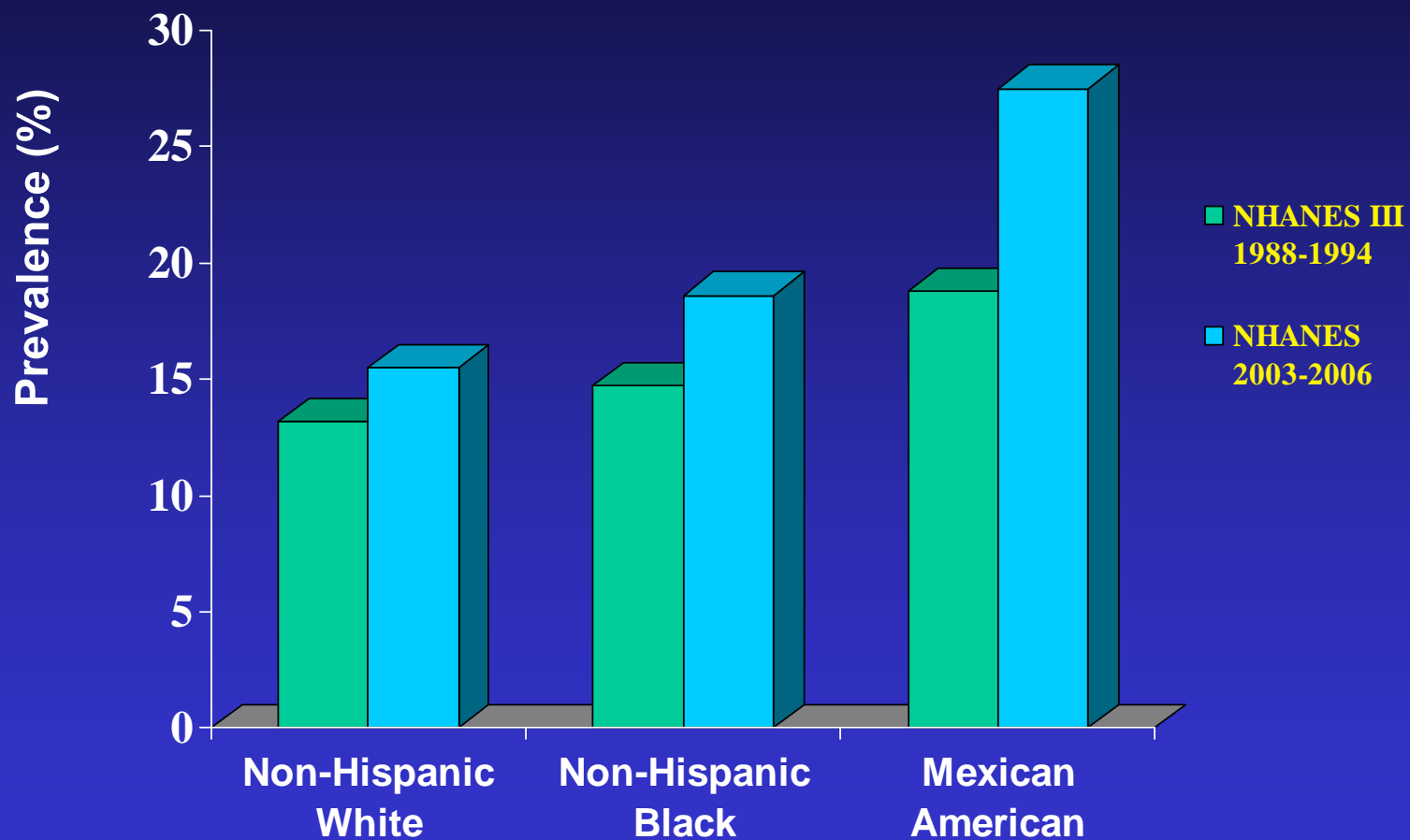
**William H. Dietz, MD, PhD**

**Former Director**

**Division of Nutrition, Physical Activity, and  
Obesity**

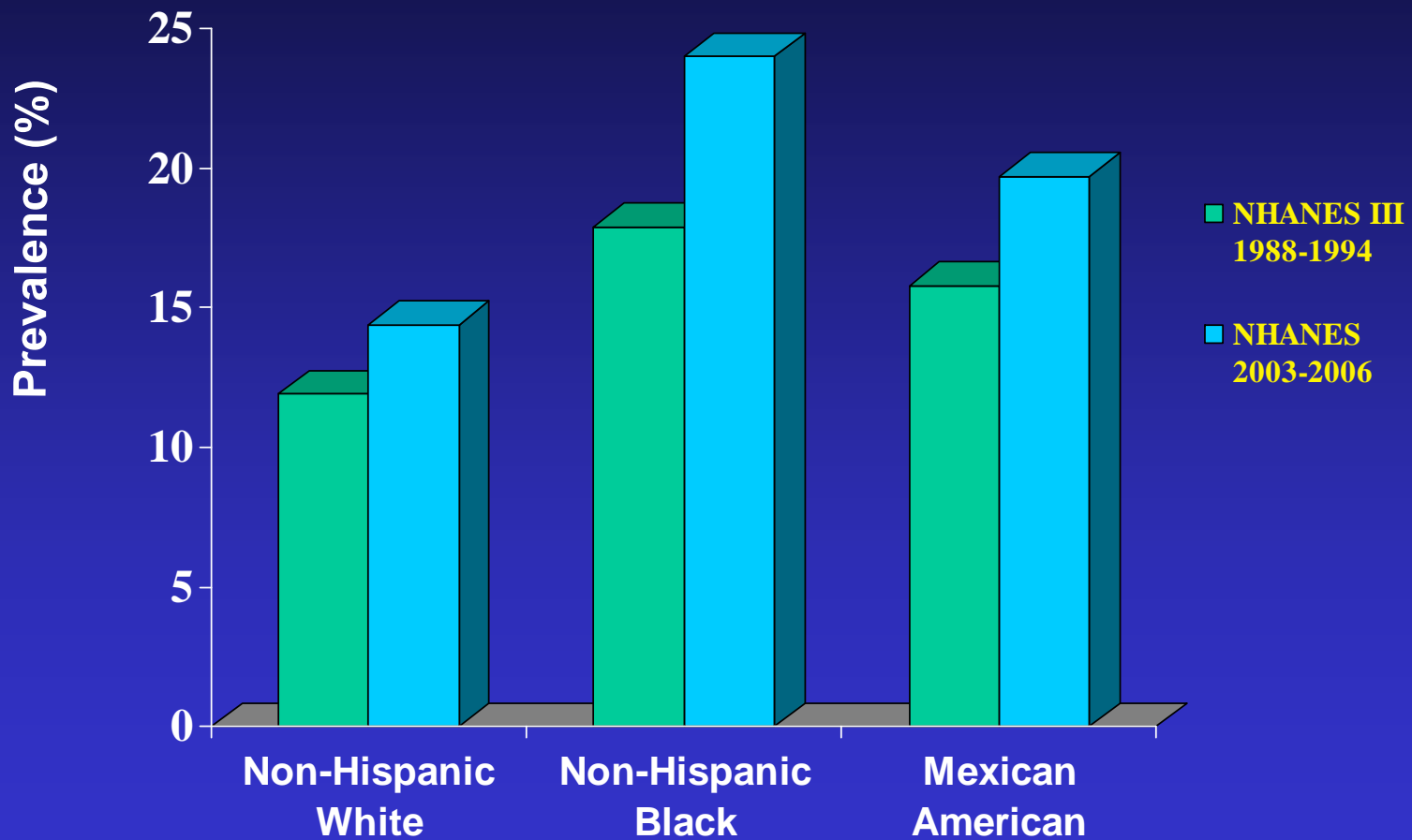
**Centers for Disease Control and Prevention**

# Overweight Prevalence by Race/Ethnicity for Boys Aged 6 - 11 Years



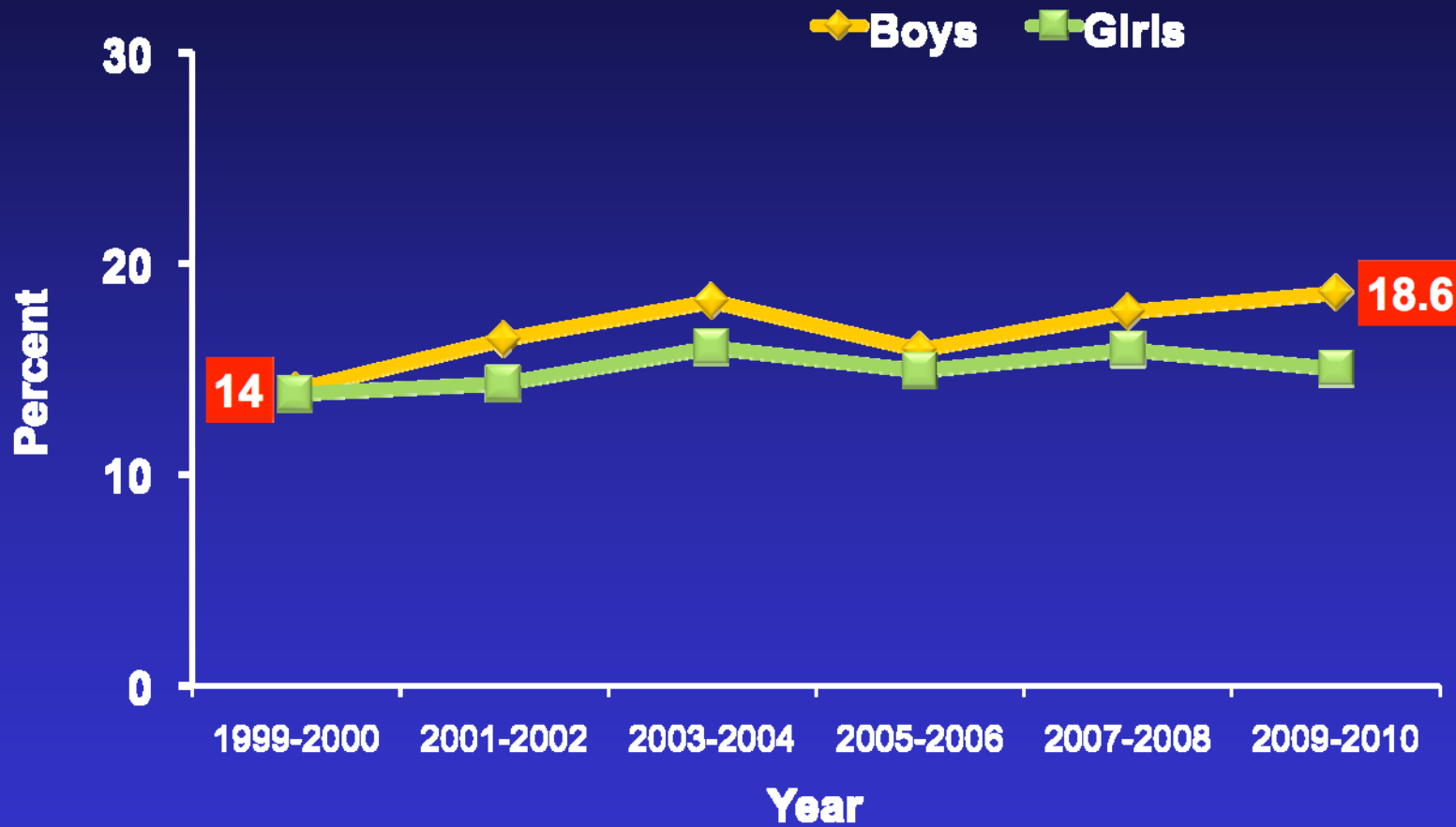
Source: Ogden CL et al. *JAMA*. 2008;299:2401-5; *MMWR* 1997; 46:199-202

# Overweight Prevalence by Race/Ethnicity for Girls Aged 6 - 11 Years



Source: Ogden CL et al. *JAMA*. 2008;299:2401-5; ;*MMWR*. 1997;46:199-202.

# Obesity Trends in Youth over the Past 12 Years



Ogden et al. 2012, NCHS data brief

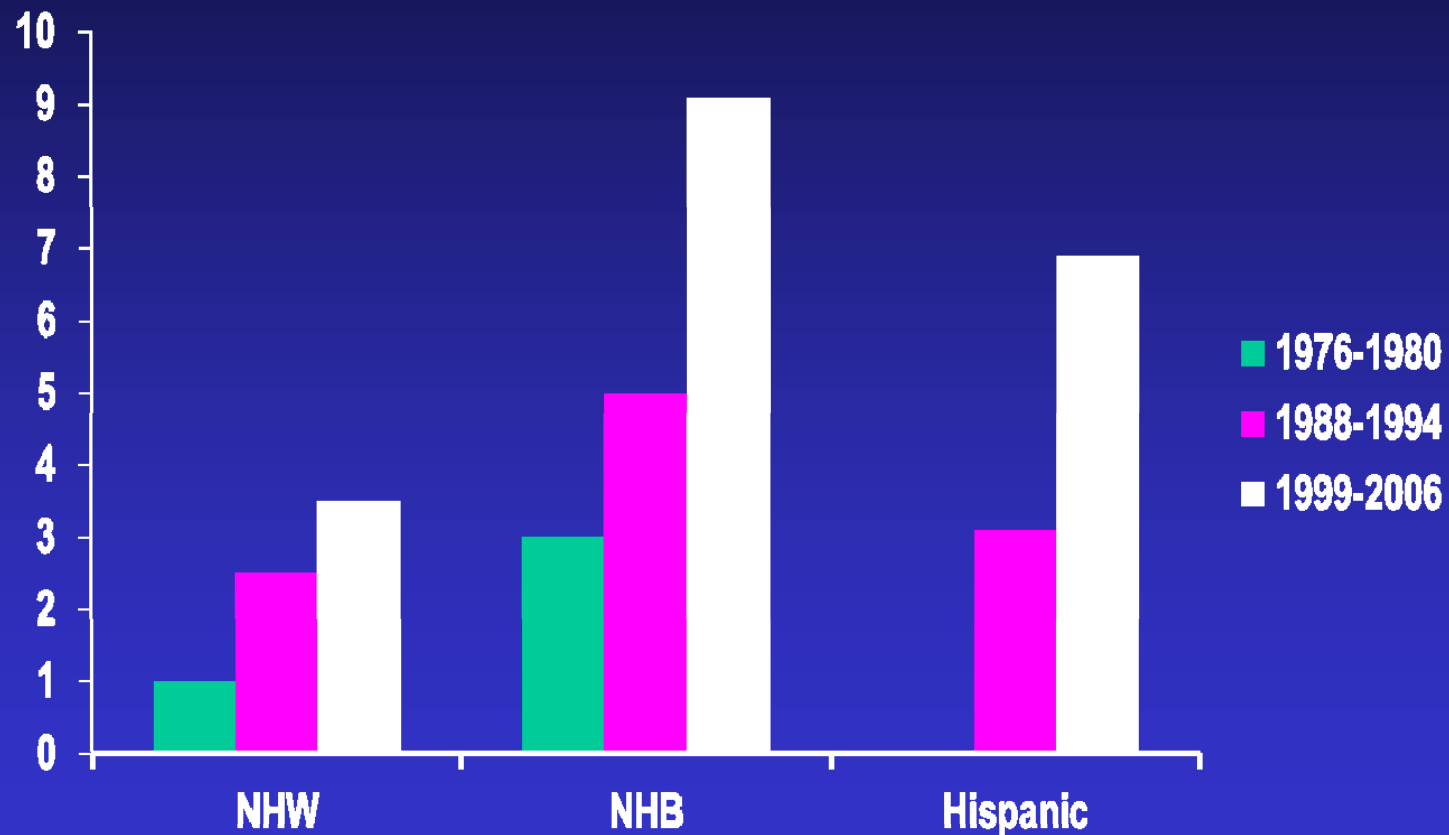
## Declines in Obesity Prevalence

<u>Location</u>	<u>Ages</u>	<u>Baseline</u>	<u>FU</u>	<u>% Change</u>
Philadelphia	K - 12	2006-7	2009-10	- 4.7%
New York City	K - 8	2006-7	2010-11	- 5.5%
Mississippi	K - 5*	2005	2011*	- 13.3%
California	G 5-9	2005**	2010**	- 1.1%

\*Spring; \*\*CA Fitness Test

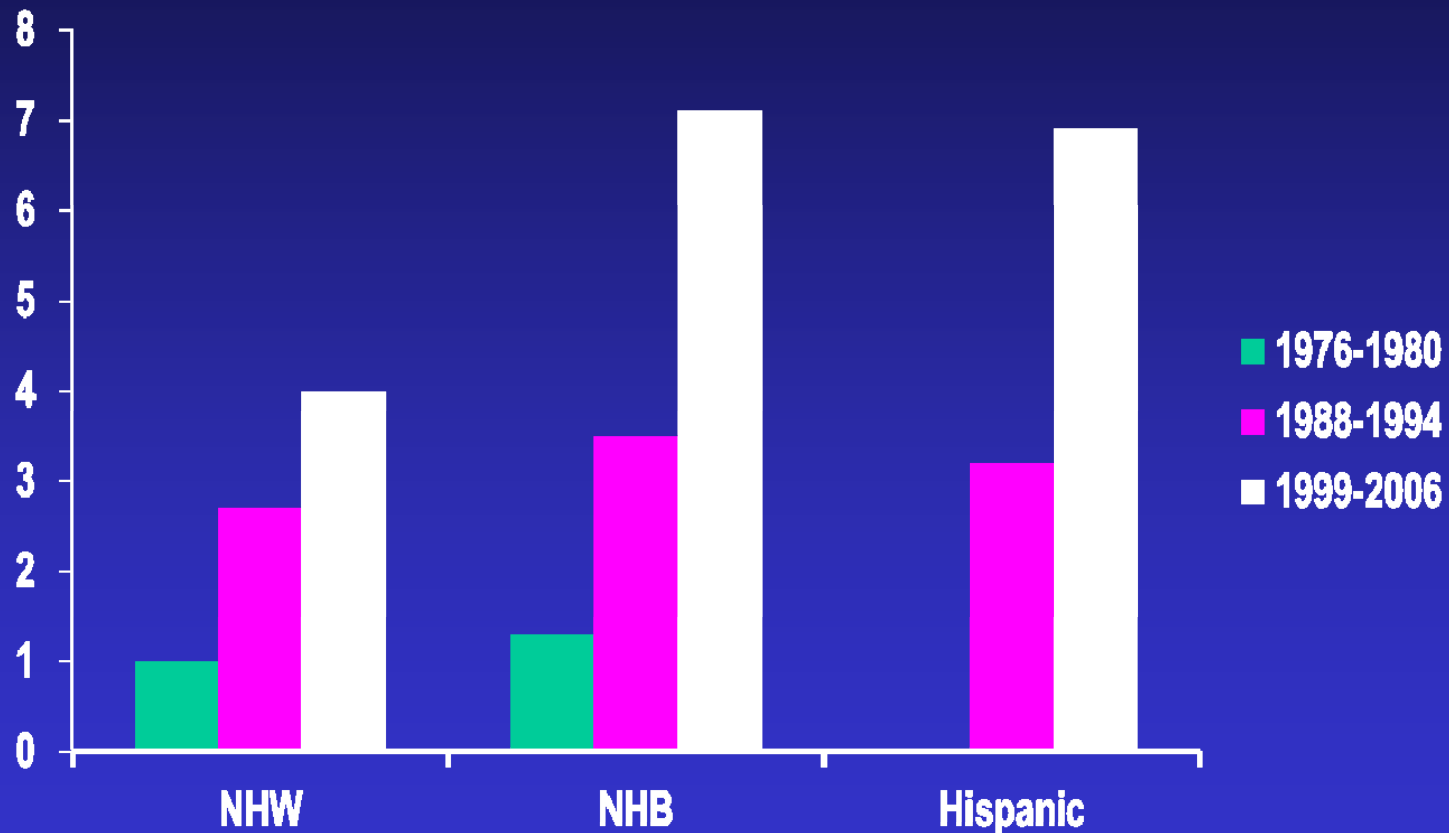
Robert Wood Johnson Issue Brief, September 2012

## Changes in the Prevalence of Severe Obesity (120% of the 95<sup>th</sup> %tile) in Girls 1976-2006



Wang et al. Int J Pediatr Obesity 2010; on line

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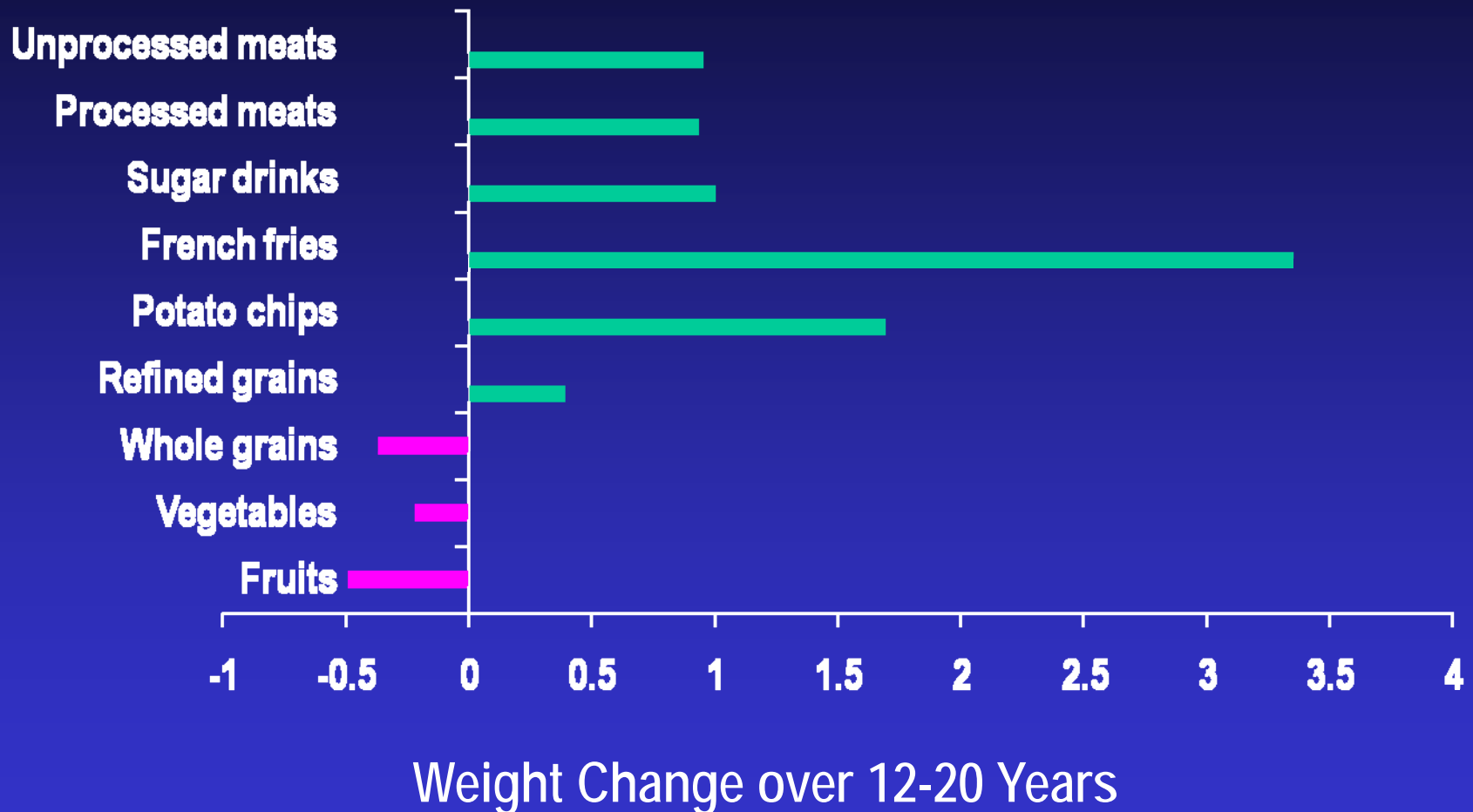
Wang et al. Int J Pediatr Obesity 2010; on line

# Annual Adult per Capita Cigarette Consumption and Major Smoking and Health Events – US 1900-1998





# Changes in Dietary Habits and Weight Change

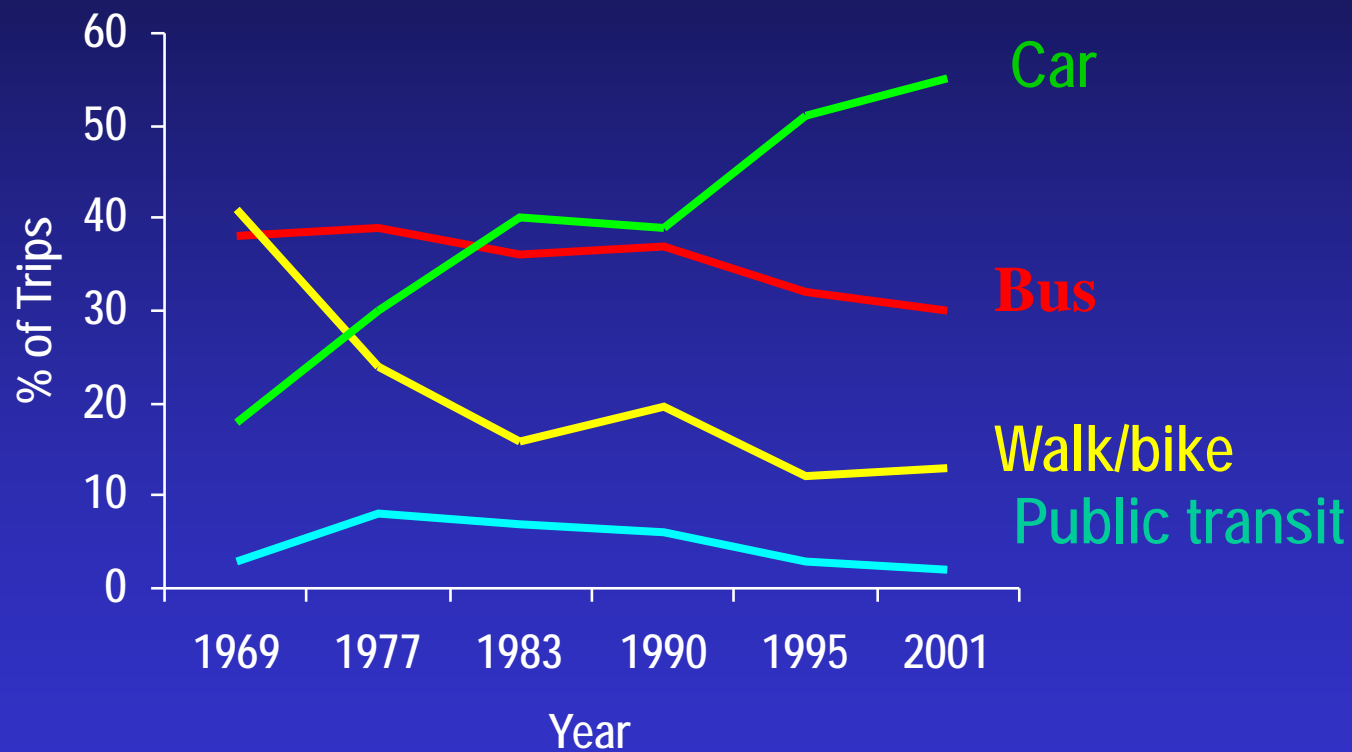


Mozaffarian D et al. NEJM 2011;364:2392

## Concerns Raised by the Feeding Infants and Toddlers Study

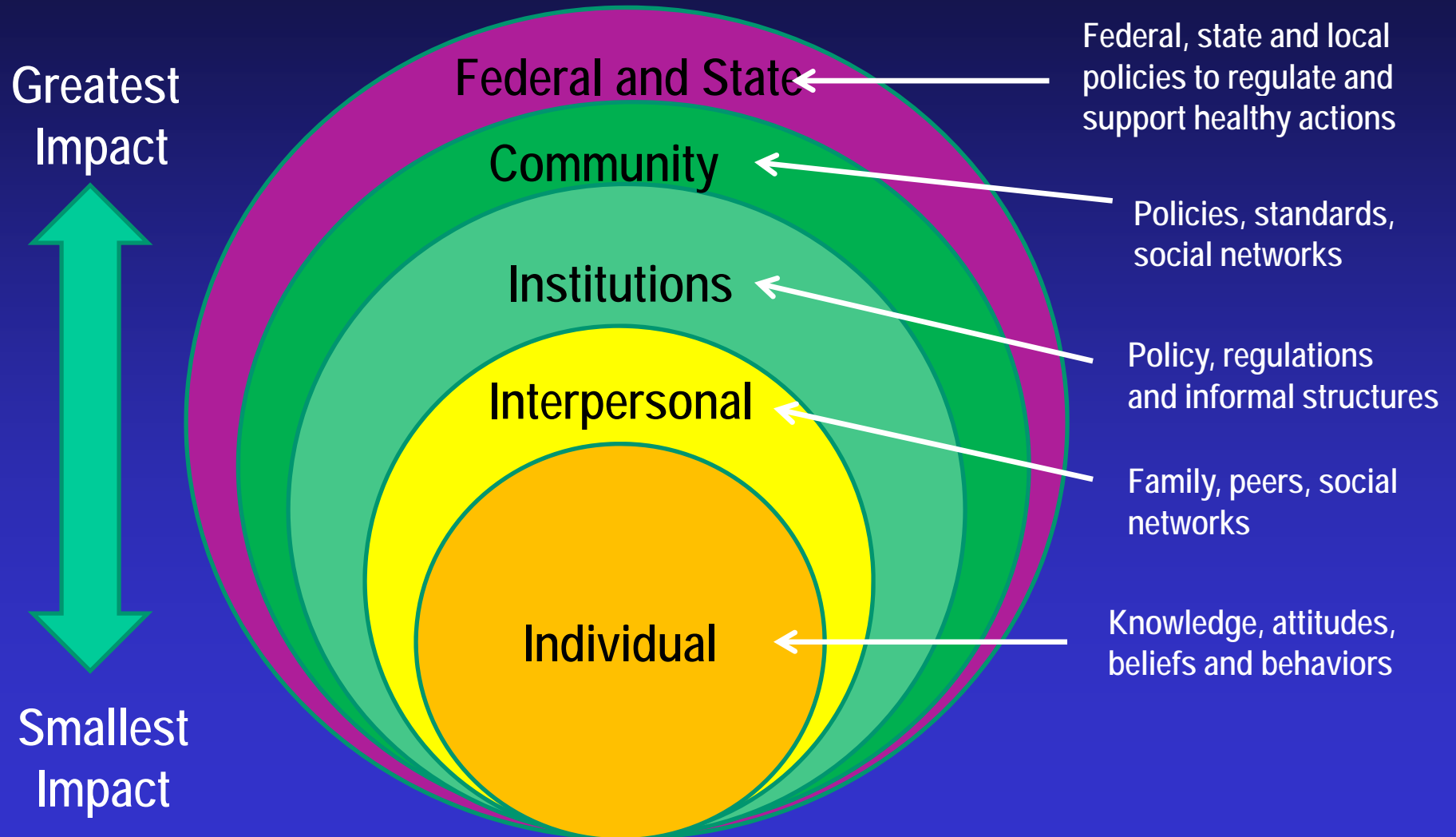
- 45% of 12-23.9 mo children and 78% of 24-47.9 mo children have sodium intakes above the UL
- 75% of children have excessive saturated fat intakes
- Approximately 30% of children consumed no vegetables on the survey day, and 20% - 30% children consumed no fruit
- Approximately 30% of children are consuming pre-sweetened cereals
- High caloric density foods are frequently consumed as snacks
- 27% of 12-23 mo children consumed a sugar drink daily

# Standardized Share of Mode for Trips to School National Personal Transportation Survey



McDonald NC. Am J Prev Med 2007;32:509

# Social Ecological Model



# Premise

The reduction of obesity will require a combination of effective clinical services for the treatment of obesity, and policy, systems, and environmental changes that prevent obesity and sustain weight loss to prevent relapse in patients who have lost weight

# Important Considerations

- Policy provides guidelines for behavior. Not all policy is legislative, regulatory, or a result of litigation
- Evidence – RCTs are not necessarily the gold standard
- Solution - based vs problem - based research
- Stealth interventions
- Assessing the dose of community interventions  
(Reach X Strength = Dose)

# Energy Deficits Necessary to Achieve the HP 2010 (Prevalence = 5%) and HP2020 Goals (10% Decrease) by 2020

<u>Age</u>	<u>HP2010</u>	<u>HP2020</u>
2-5 yo	33 Kcal/d	5 Kcal/d
6-11 yo	149 Kcal/d	40 Kcal/d
12-19 yo	177 Kcal/d	31 Kcal/d

Wang YC et al. Am J Prev Med 2012; 42:437

# How Can We Achieve the Energy Deficit for Prevention?

Sugar drinks (SDs) = 250 Kcal/d

Only 21-50 Kcal/d of calories from SDs consumed in schools

Substitute water for juice in after-school programs - 60 kcal/d

Healthy Weight Commitment – 1.5 trillion Kcal reduction  
12.5 Kcal per capita

Switch sugared for non-sugared breakfast cereal – 8-80 Kcal/d

Quality PE = 35 Kcal/d



# Strategies to Address Principal Targets for Obesity Prevention and Control

Pregnancy weight gain, smoking, gestational diabetes

Limited progress

Decrease high  $E_D$  foods

Procurement policies

Menu labeling

Increase fruit and vegetable intake

Procurement policies

Salad bars in schools

Farmers markets

Farm to institution policies

# Strategies to Address Principal Targets for Obesity Prevention and Control

Reduce sugar drinks

- Procurement policies

- Promotion of water intake

- Restricted access in municipal facilities

- Labeling

- Taxes

Decrease screen time

- Limited progress

- Food marketing to children

# Strategies to Address Principal Targets for Obesity Prevention and Control

## Breastfeeding

CDC funding for 90 Baby Friendly Hospitals in 29 states

Other support for Baby Friendly – 7 states

## Physical activity

Fitness measures in youth

Interim PAG report

Active Schools Acceleration Project (ASAP)

Healthy Kids Out of School Project (HKOS)

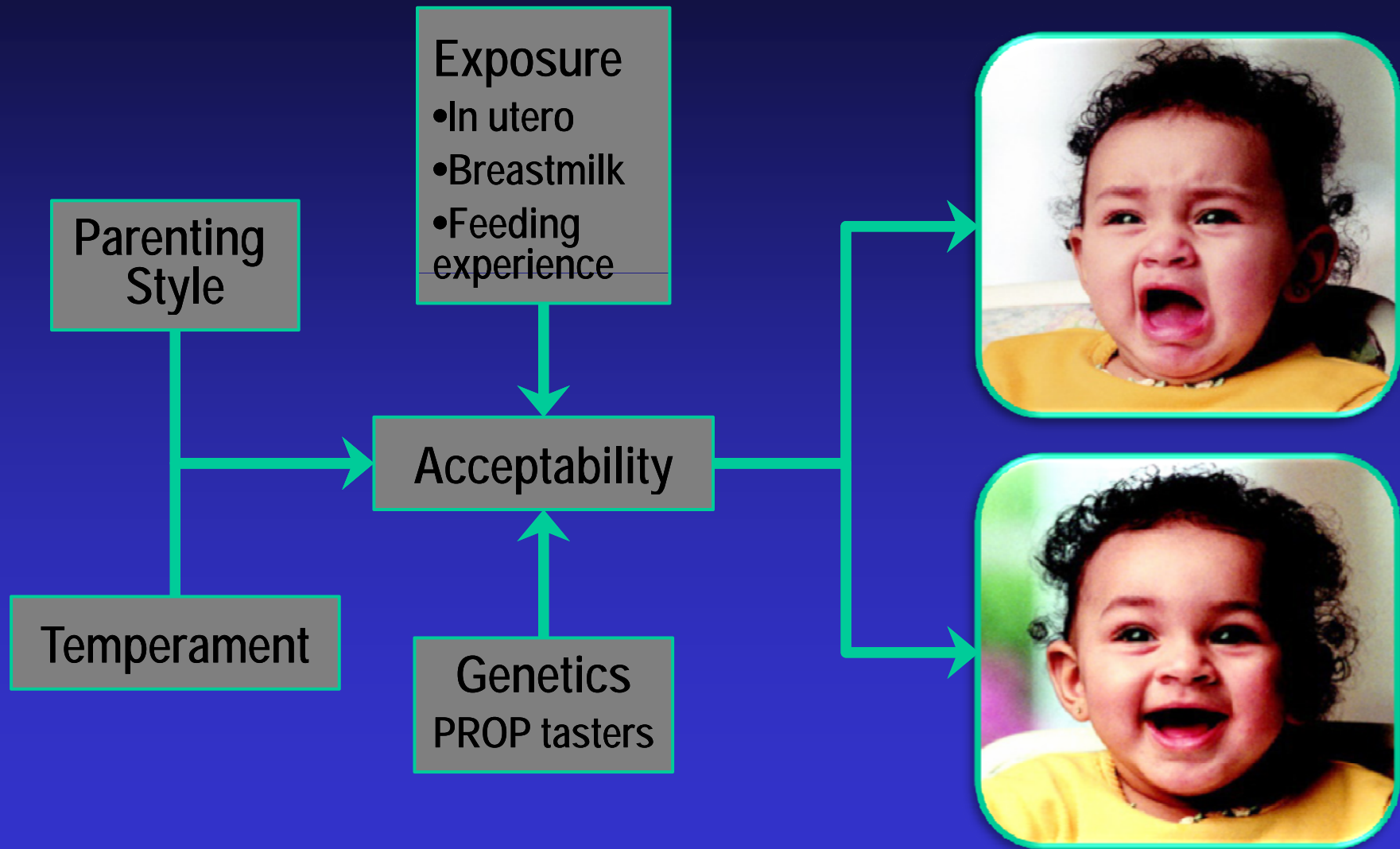
Quality PA Programs

# Settings for the Prevention and Treatment of Obesity

- Home
- Medical Settings
- Child care
- School
- Work Site
- Community



# Factors That Affect Feeding Infants and Toddlers



PROP=6-*n*-propylthiouracil.

# Factors that Influence Food Consumption in Young Children

1. Encouraging food consumption of an item results in lower consumption
2. Restricting access to a food increases its desirability
3. Repeated exposure to a food increases the likelihood of its consumption
4. Larger portion sizes increase consumption in older but not younger children
5. Parental consumption of a food increases the likelihood that a child will consume it

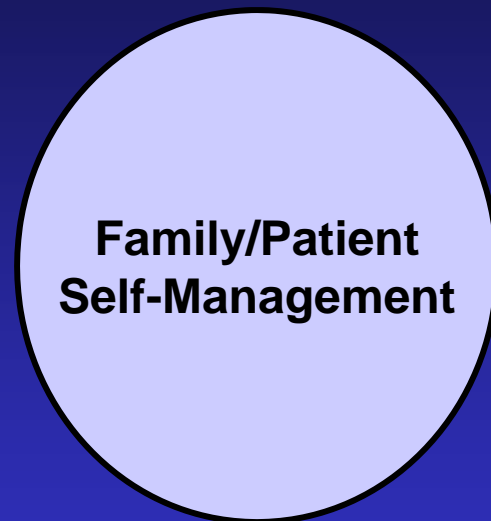
# Parenting Styles

	Expectations for Self-Control	
	High	Low
High Sensitivity	<b>Authoritative</b> Respectful of child's opinions but maintains clear boundaries	<b>Permissive</b> Indulgent, without discipline
Low Sensitivity	<b>Authoritarian</b> Strict disciplinarian	<b>Neglectful</b> Emotionally uninvolved and does not set rules

# Chronic Care Model

## Environment

Family  
School  
Worksite  
Community



## Medical System

Information Systems  
Decision Support  
Delivery System Design  
Self Management Support

Dietz WH et al. Health Affairs 2007;26:430



# Opportunities in Medical Settings

- Survey current curricula and provider practices
- Revise curricula for providers to address obesity
- Address bias
- Define competencies at every level of training
- Re-join public health and clinical medicine
- Make hospitals the healthiest worksites on the planet
- Apply Community Health Needs Assessment (CHNA) and Community Benefit Initiatives (CBI) to develop clinical: community partnerships

## Children in Early Care and Education Programs

In 2001, 73% of preschool children ages 3-5 years old (8.6 million children) participated in at least one weekly non-parental care arrangement

Nearly 60% of children 3-4 years with employed mothers participate in center-based care

41% of preschool children are in child care for 35 or more hours/week

Capizzano J et al. [www.urban.org/url.cfm?ID=309438](http://www.urban.org/url.cfm?ID=309438); [www.urban.org/url.cfm?ID=309439](http://www.urban.org/url.cfm?ID=309439)

## Let's Move Child Care Challenge

Physical activity: 1-2h/d, outside play when possible

Screen time: None for <2yo; 30' /w during child care

Food: Fruits or vegetables at every meal, no fried foods, family style

Beverages: Water access at meals and throughout day; no sugar drinks; for  $\geq$  3yo, LF or NF milk; limit juice to 4-6 oz 100% juice/d

Infant feeding: Support breastfeeding for mothers who want to continue during the child care day

# Community Strategies

- Increase access to healthy and affordable food
- Help people recognize and make healthy food and beverage choices
- Support policies and programs that promote breastfeeding
- Encourage community design that supports physical activity
- Facilitate access to safe and affordable places for physical activity – Parks and Rec

# Opportunities

Find co-benefits of obesity prevention and control

Mobilize parents of children with ADHD to  
preserve recess and restore PE

Identify targets that address the triple bottom line  
(health, economics and the environment)

Invest in data

Focus on solutions

Connect existing efforts

# HBO: The Weight of the Nation

## Four documentaries

Consequences

Choices

Children in Crisis

Challenges

## Short films

Stigma

Nashville Takes action

A Model of Community Action

Workforce Wellness

[www.theweightofthenation.hbo.com](http://www.theweightofthenation.hbo.com)

# Resources

[www.activeschoolsasap.org](http://www.activeschoolsasap.org)

[www.childobesity180.org/ourinitiatives/out-of-school-time/](http://www.childobesity180.org/ourinitiatives/out-of-school-time/)

[www.healthychildren.org/growinghealthy](http://www.healthychildren.org/growinghealthy)

Healthy worksites and hospitals (under quick resources)

[www.cdc.gov/hwi](http://www.cdc.gov/hwi)

Recommended Community Strategies and Measurements to Prevent Obesity – MMWR 2009;58:RR-7

[www.theweightofthenation.hbo.com](http://www.theweightofthenation.hbo.com)

[cche.org/pubs/CCHE-publication-CommunityHealthInitiatives\\_DoseGuide.pdf](http://cche.org/pubs/CCHE-publication-CommunityHealthInitiatives_DoseGuide.pdf)