

The Obesity Epidemic in African American Women and Girls: How Should Psychology Respond?



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Presentation Overview

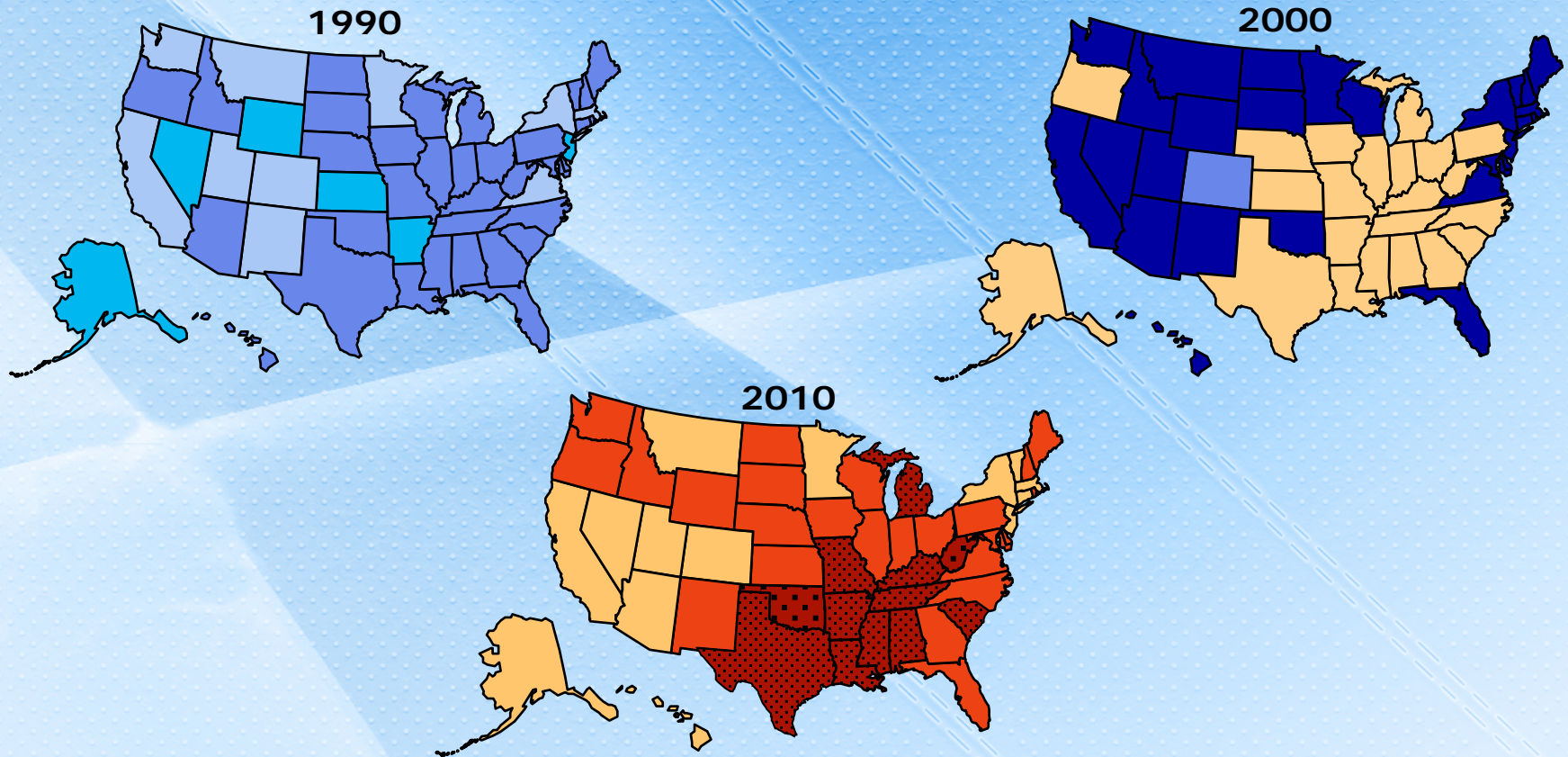
- ◎ Consequences of obesity
- ◎ Intergenerational escalation of obesity
- ◎ Factors underlying the obesity epidemic
- ◎ How should psychology respond



Obesity Trends* Among U.S. Adults

BRFSS, 1990, 2000, 2010

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)



■ No Data ■ <10% ■ 10%-14% ■ 15%-19% ■ 20%-24% ■ 25%-29% ■ $\geq 30\%$

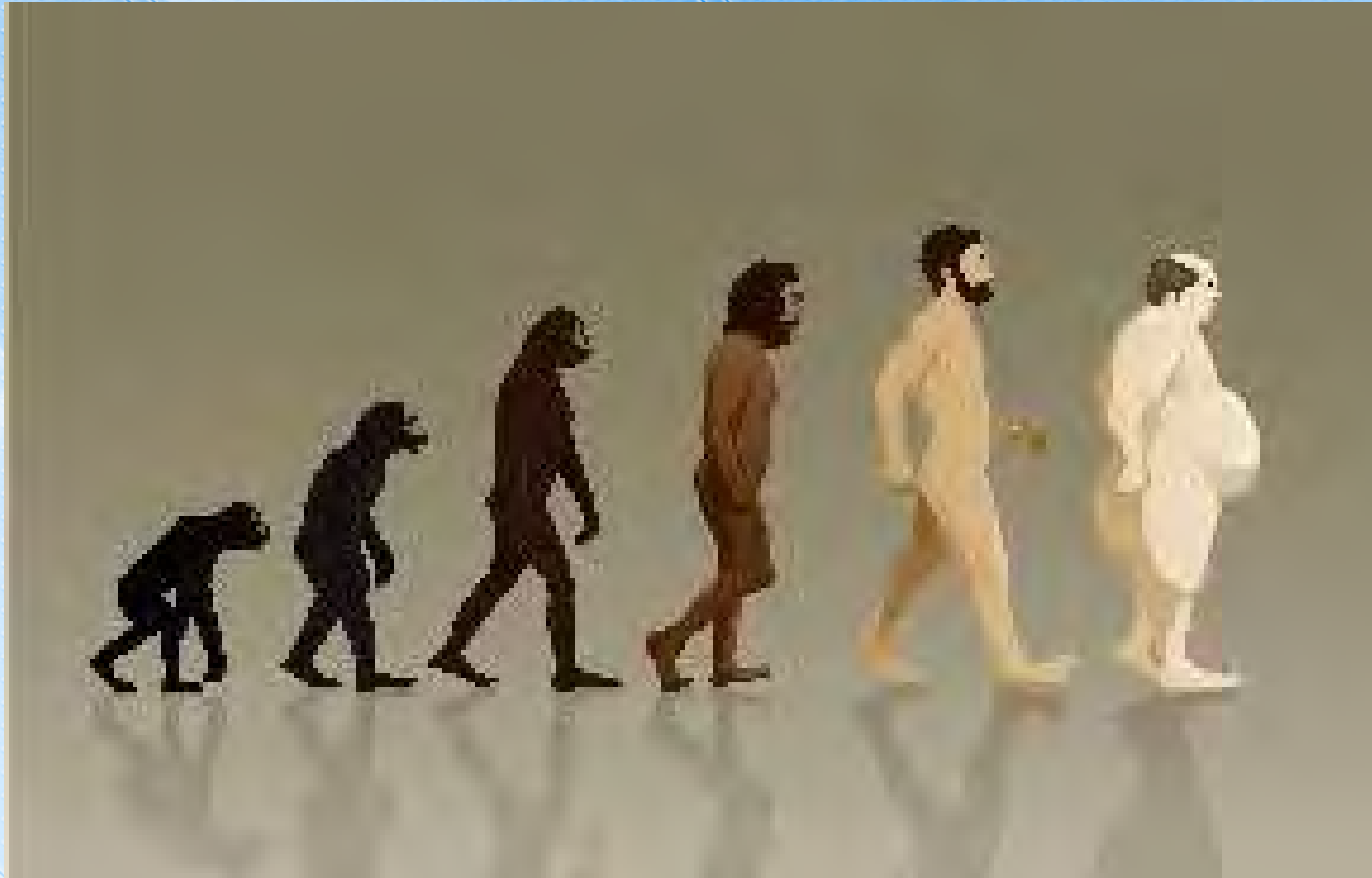
Source: CDC:

<http://www.cdc.gov/obesity/data/trends.html>



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The US Obesity Epidemic : Biologic Evolution or Environmental Revolution?



Categories of Weight

Normal	Overweight	Obese	Severely Obese	Morbidly Obese
BMI 18.5 – 24.9	BMI 25 – 29.9	BMI 30 – 34.9	BMI 35 – 39.9	BMI ≥ 40

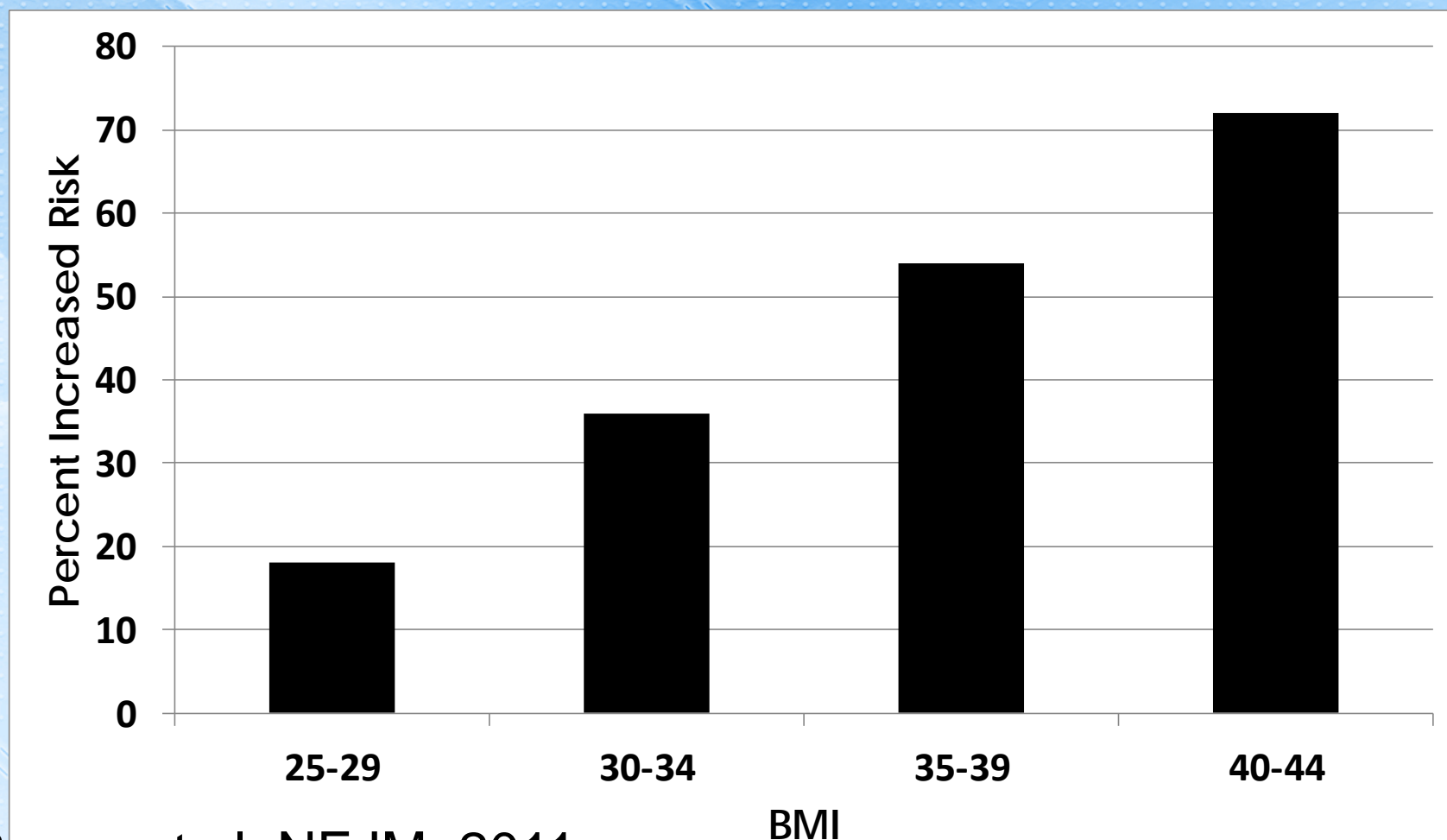




$$\text{BMI} = \left\{ \frac{\text{WEIGHT (pounds)}}{\text{HEIGHT (inches)}^2} \right\} \times 703$$

		Weight in Pounds													
		120	130	140	150	160	170	180	190	200	210	220	230	240	250
Height in Feet and Inches	4'6	29	31	34	36	39	41	43	46	48	51	53	56	58	60
	4'8	27	29	31	34	36	38	40	43	45	47	49	52	54	56
	4'10	25	27	29	31	34	36	38	40	42	44	46	48	50	52
	5'0	23	25	27	29	31	33	35	37	39	41	43	45	47	49
	5'2	22	24	26	27	29	31	33	35	37	38	40	42	44	46
	5'4	21	22	24	26	28	29	31	33	34	36	38	40	41	43
	5'6	19	21	23	24	26	27	29	31	32	34	36	37	39	40
	5'8	18	20	21	23	24	26	27	29	30	32	34	35	37	38
	5'10	17	19	20	22	23	24	26	27	29	30	32	33	35	36
	6'0	16	18	19	20	22	23	24	26	27	28	30	31	33	34
	6'2	15	17	18	19	21	22	23	24	26	27	28	30	31	32
	6'4	15	16	17	18	20	21	22	23	24	26	27	28	29	30
	6'6	14	15	16	17	19	20	21	22	23	24	25	27	28	29
	6'8	13	14	15	17	18	19	20	21	22	23	24	25	26	28
		Healthy Weight				Overweight				Obese					

Health Consequences of Obesity: % Increased Risk of Death by Weight Status for African American Women



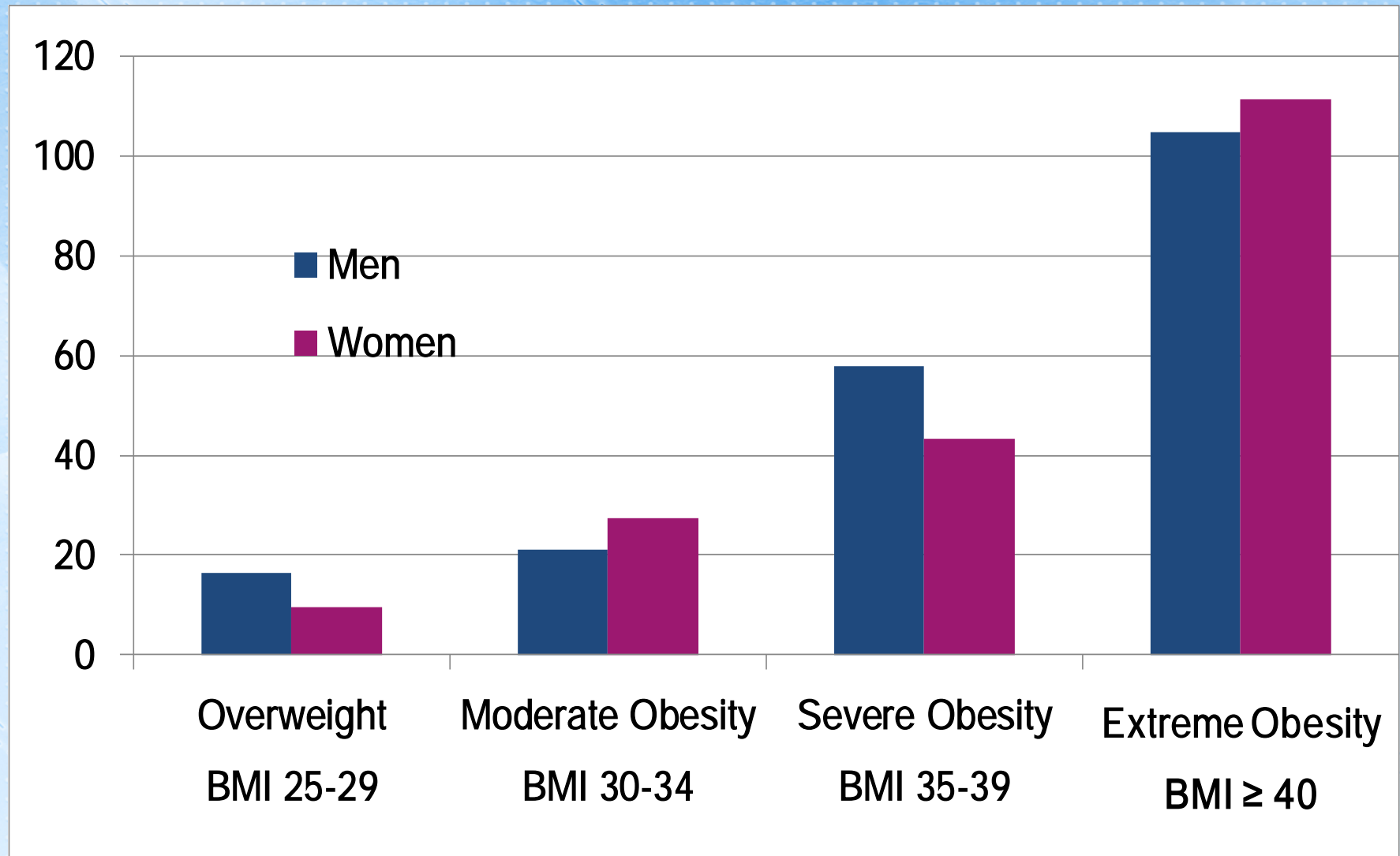
Boggs et al, NEJM, 2011



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Percent Above Normal Weight Individuals' Annual Health Care Costs by Obesity Status and Gender

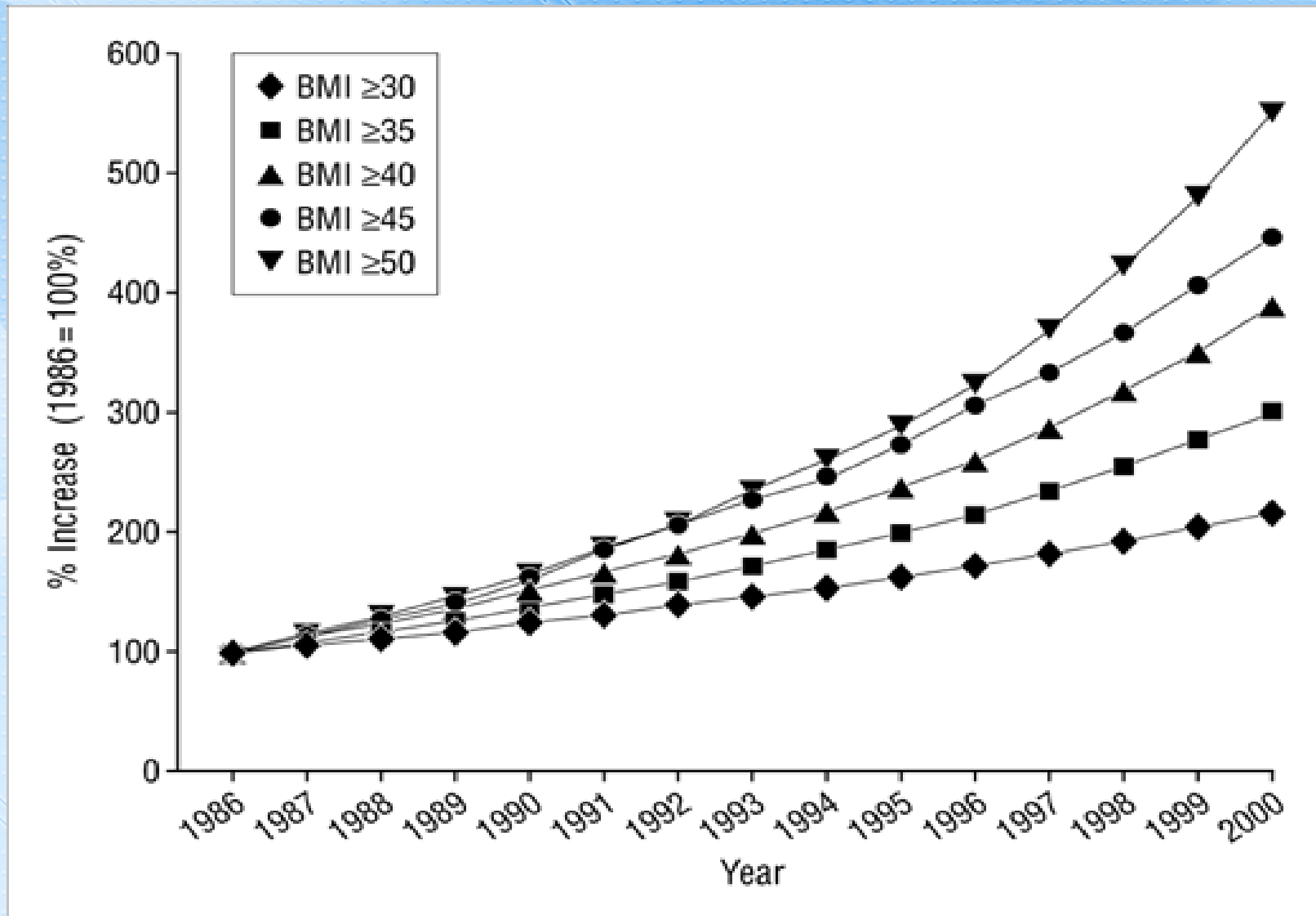


Andreyeva et al, Obesity Research, 2004

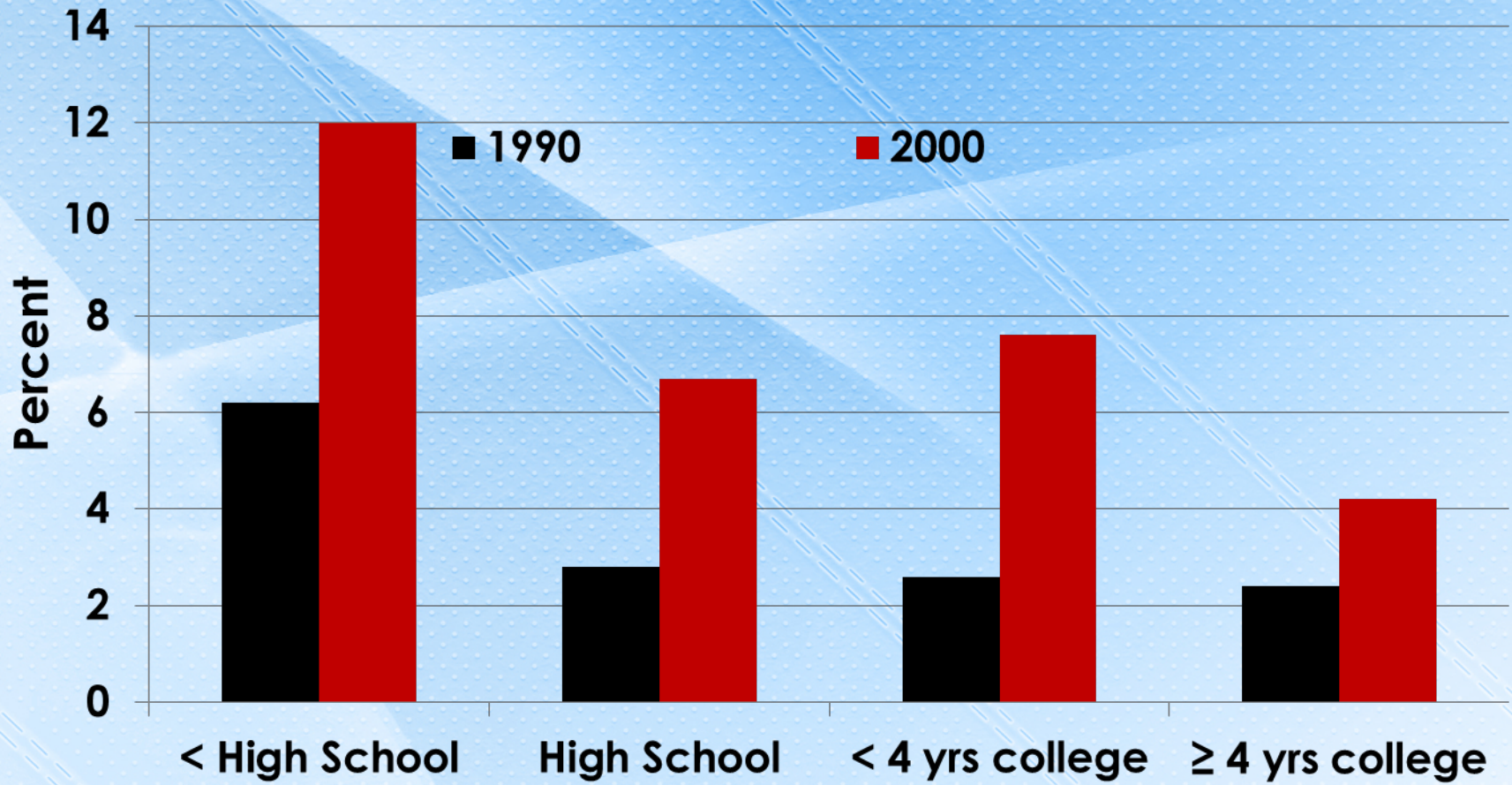


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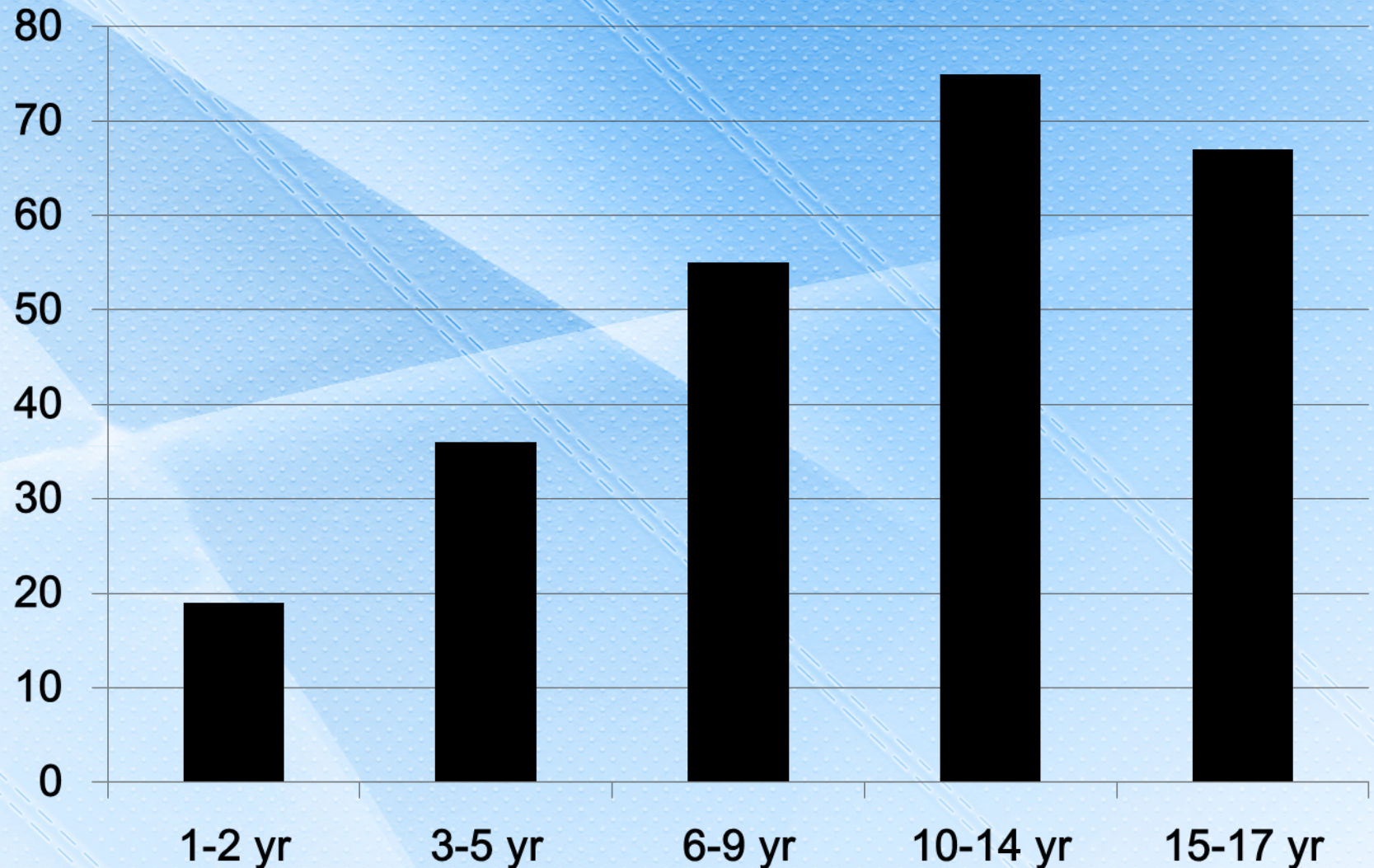
Severe Obesity is Escalating



Severe Obesity (BMI ≥ 40) is Escalating in African American Women



Childhood and Adult Obesity are Linked: Percent of Obese Children Who Become Obese Adults by Age

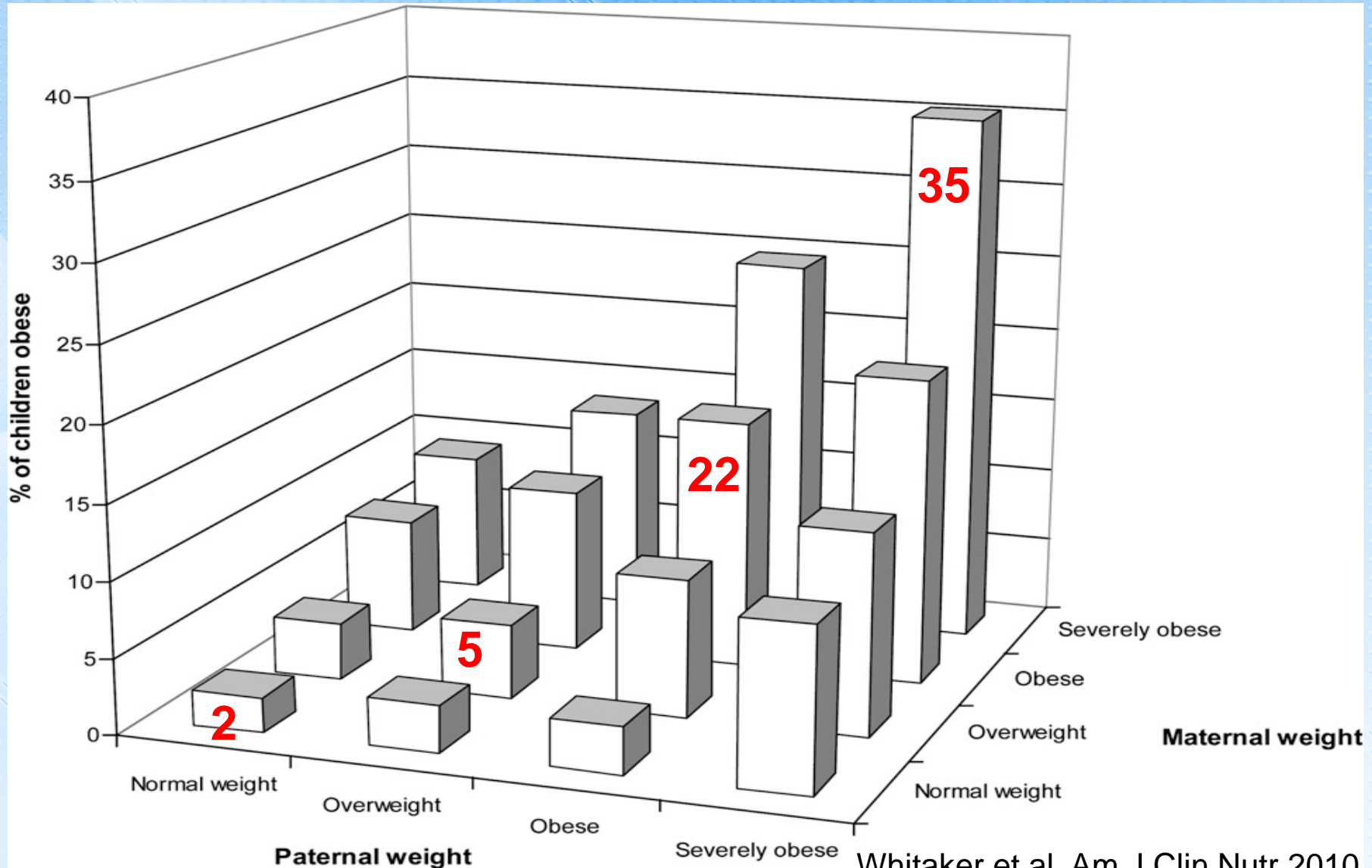


Whitaker et al, NEJM, 1997



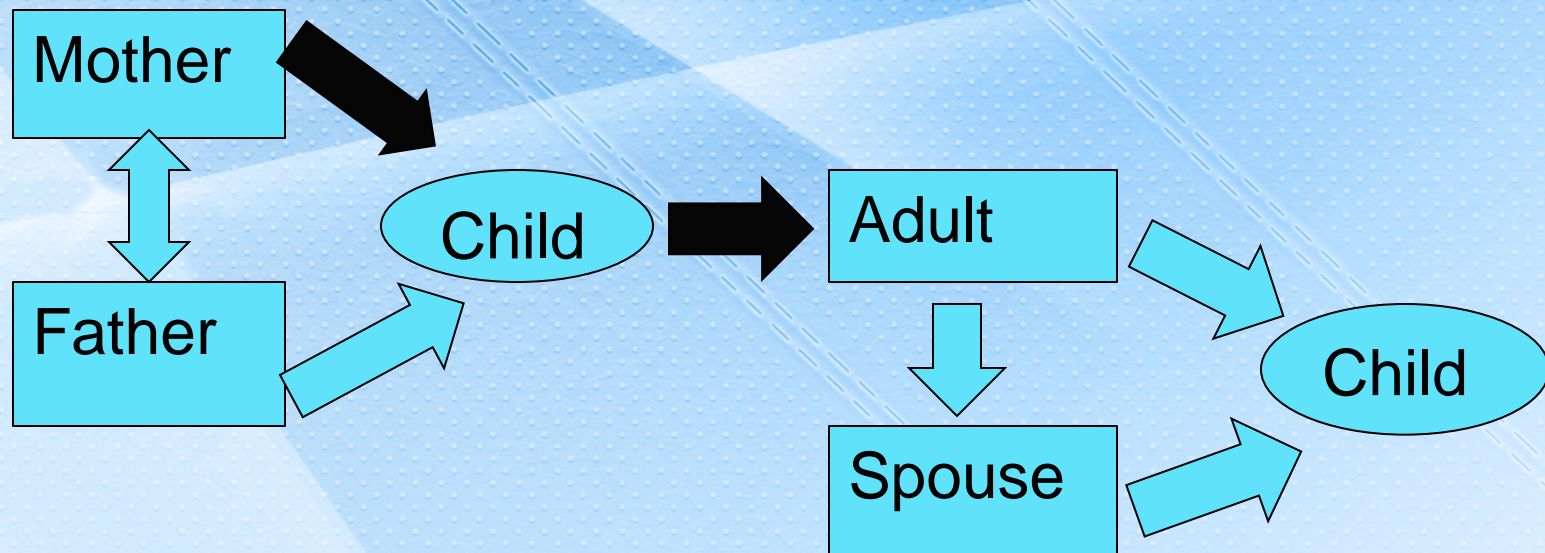
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Childhood and Adult Obesity are Linked: Percent of Obese Children by Parent Weight Status



Whitaker et al, Am J Clin Nutr 2010

Intergenerational Escalation of Obesity



Whitaker et al NEJM 1997

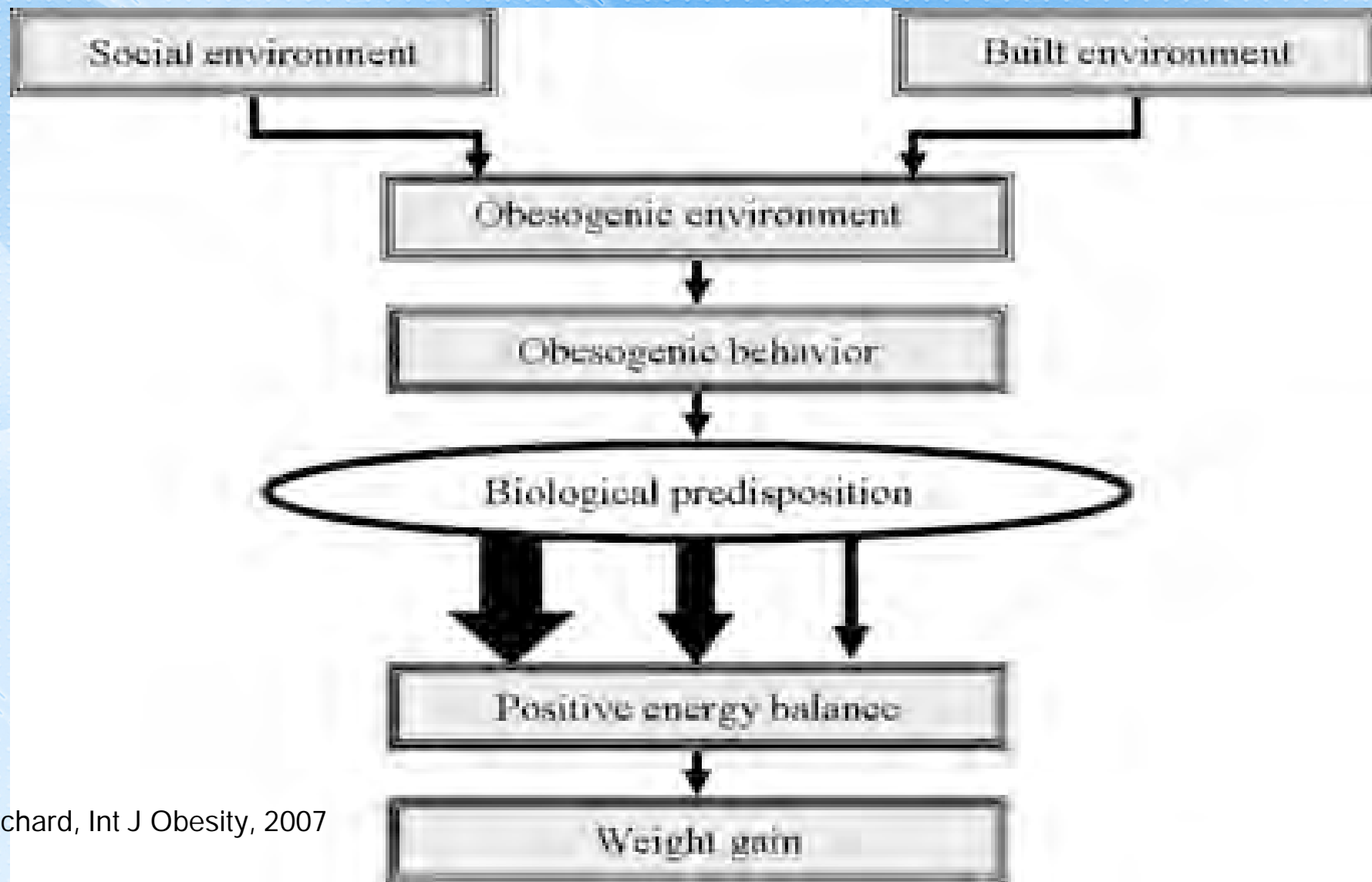
Whitaker et al Am J Clin Nutrition 2010

Murrin et al BMC Public Health 2012

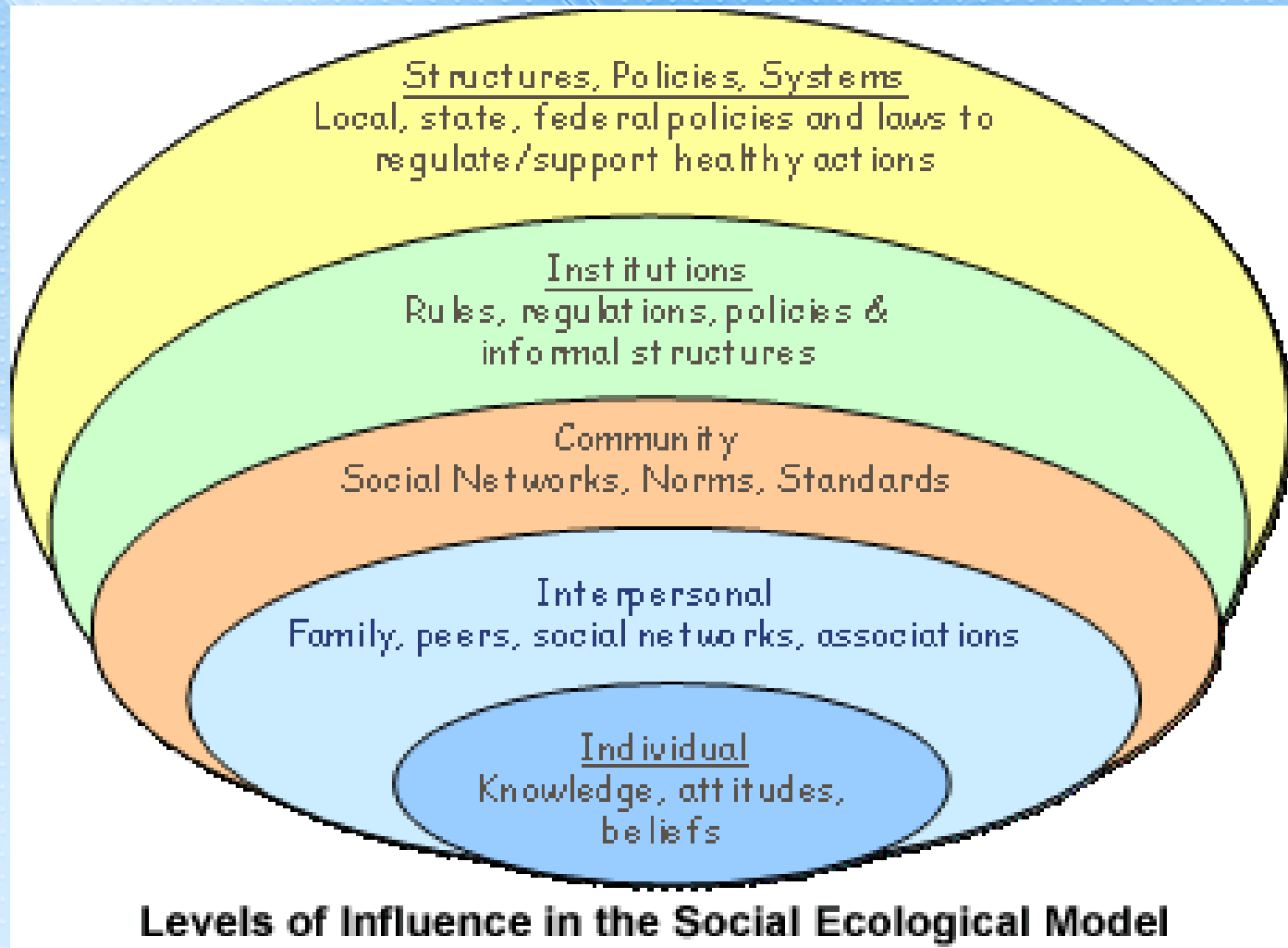


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The U.S. Obesity Epidemic: How Did This Happen?

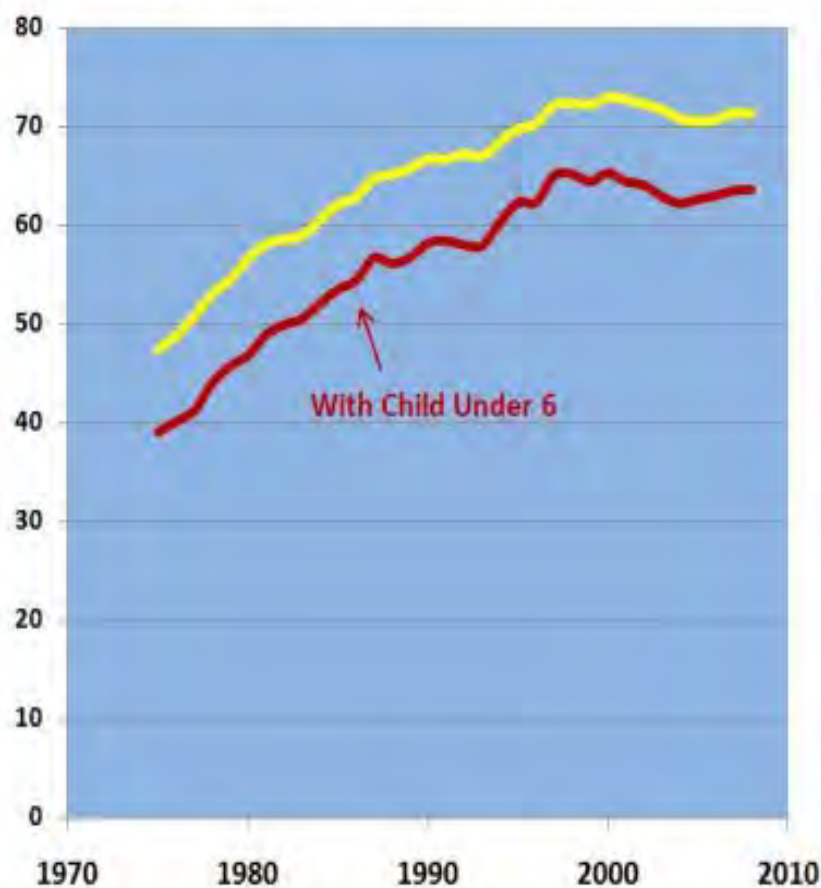


The Obesogenic Environment: A Socio-Ecological Perspective



Factors Promoting Increased Calorie Consumption: Increase in US Working Mothers

PERCENT OF WOMEN WITH CHILDREN IN THE PAID LABOR FORCE, 1975-2008

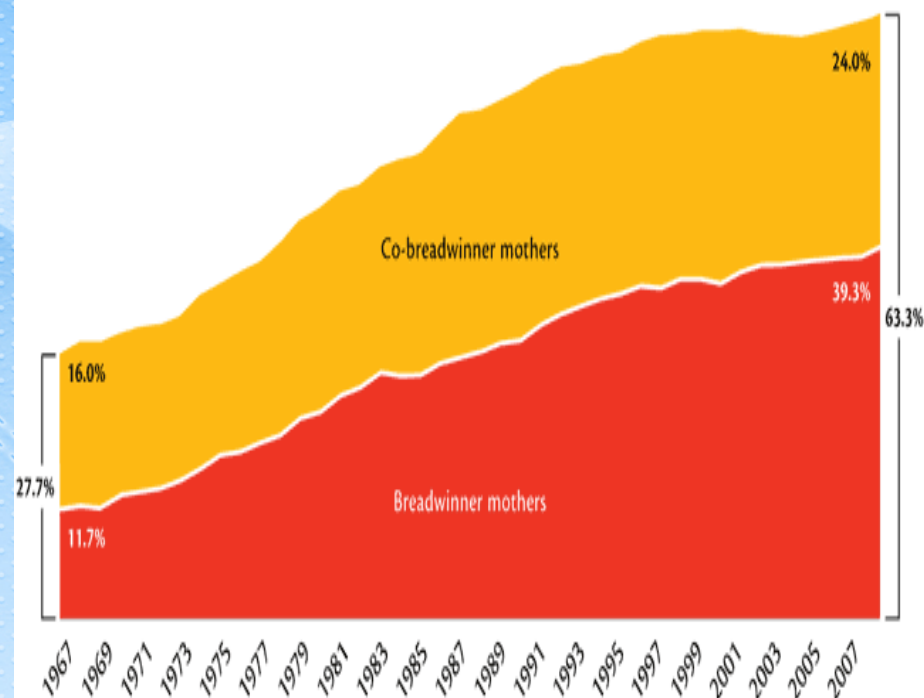


Source: http://www.bls.gov/opub/ted/2009/ted_20091009_data.htm#b

FIGURE 2

The new workforce

Share of mothers who are breadwinners or co-breadwinners, 1967 to 2008



Source: See Table 1.

Notes: Breadwinner mothers include single mothers who work and married mothers who earn as much as or more than their husbands. Co-breadwinners include all breadwinners as well as wives who bring home at least 25 percent of the couple's earnings. The data only include families with a mother who is between the ages of 18 and 60 and who has children under age 18 living with her.



Factors Promoting Increased Calorie Consumption: Rise of the US Fast Food Industry

- ⊙ Number of per capita fast food restaurants doubled between 1972 and 1997 in the U.S.
- ⊙ % family's food budget spent on dining out:
 - 1960's: 21%
 - 2008: 42%
- ⊙ > 50% of US adults eat fast food ≥ 1 per week
- ⊙ 30% of US children eat fast food every day
- ⊙ Per capita calories in the U.S.
 - 1970: 3250 per day
 - 1997: 3800 per day

<http://www.bls.gov/news.release/cesan.nr0.htm>

<http://www.bls.gov/mlr/1990/03/art3full.pdf>

Chou et al, J of Health Economics, 2004

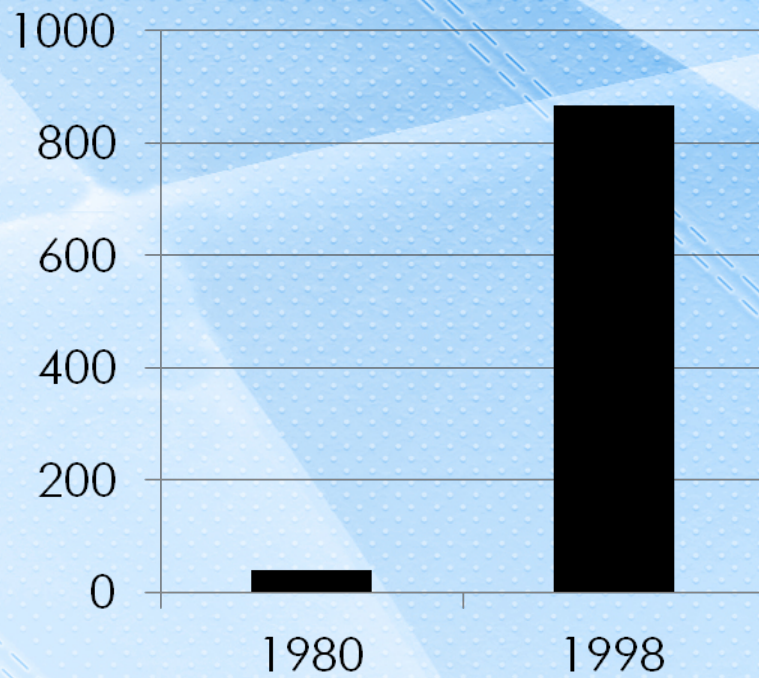
Bowman et al, Pediatrics, 2003

Jeffrey et al. Int J of Behav Nut and Phys Act, 2006

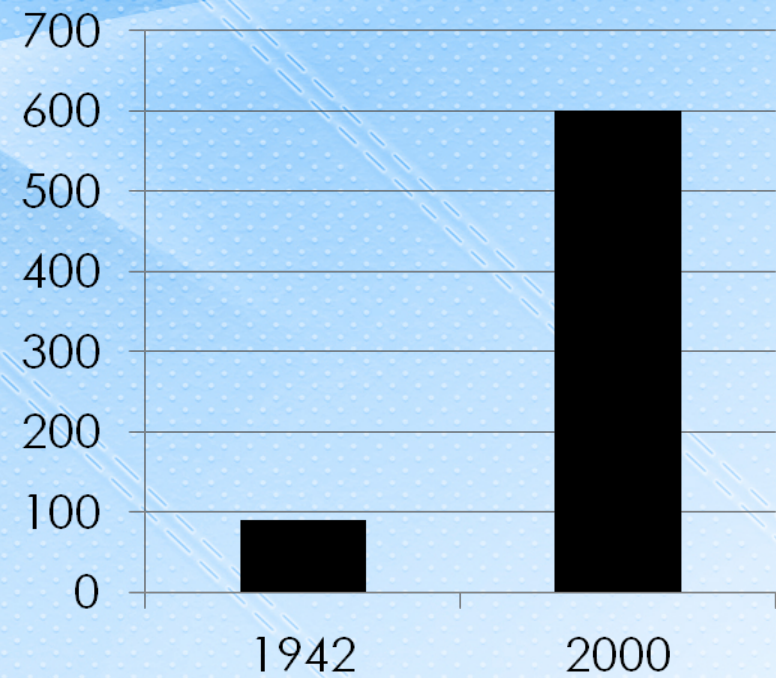


Factors Promoting Increased Calorie Consumption: Rise of the US Soda Industry

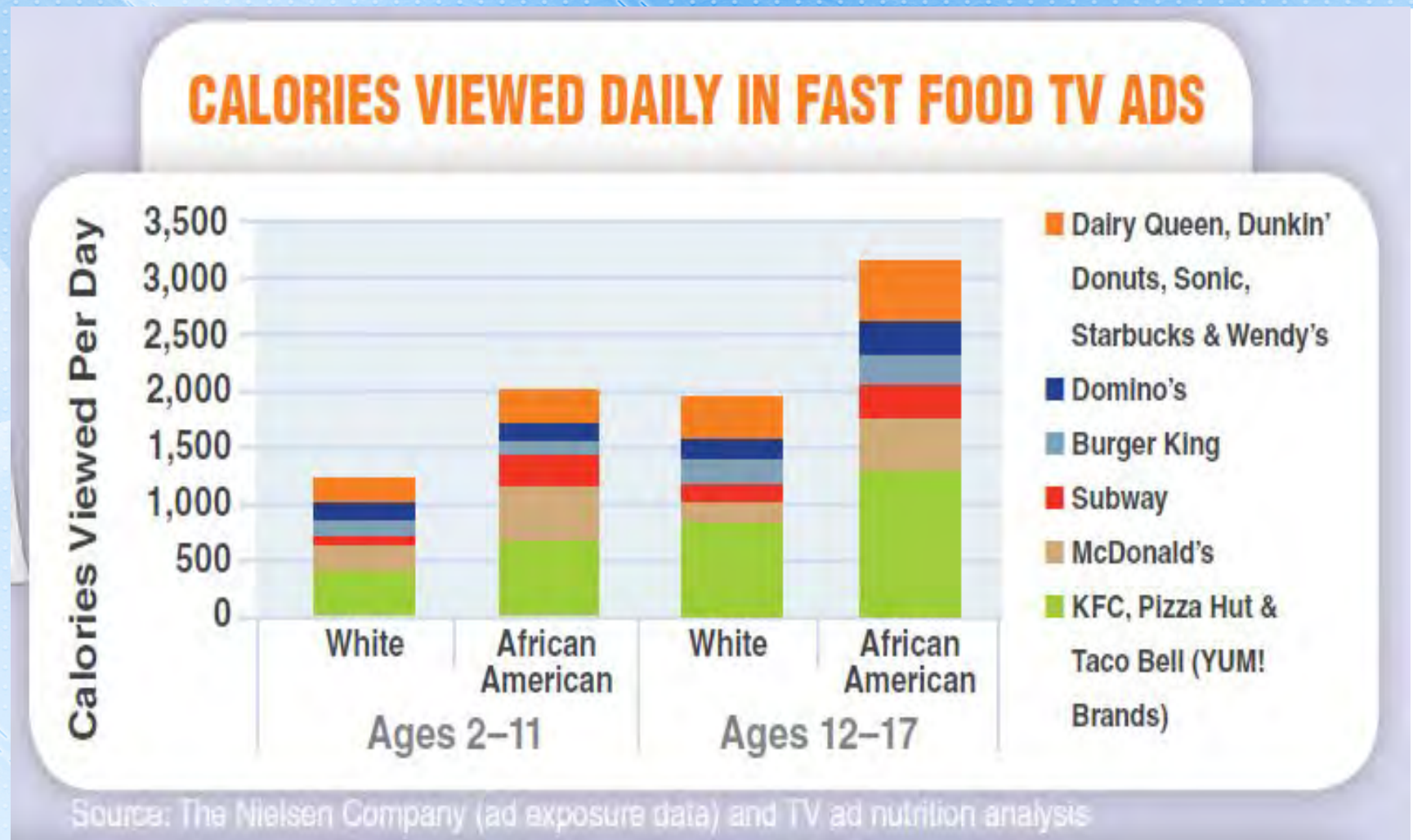
Per Capita Consumption of High Fructose Corn Syrup (lbs)



Annual Per Capita Production of 8 oz Servings of Soft Drinks



Factors Promoting Increased Calorie Consumption: Marketing Fast Food to Youth





Factors Promoting Increased Calorie Consumption: US Farm Subsidies

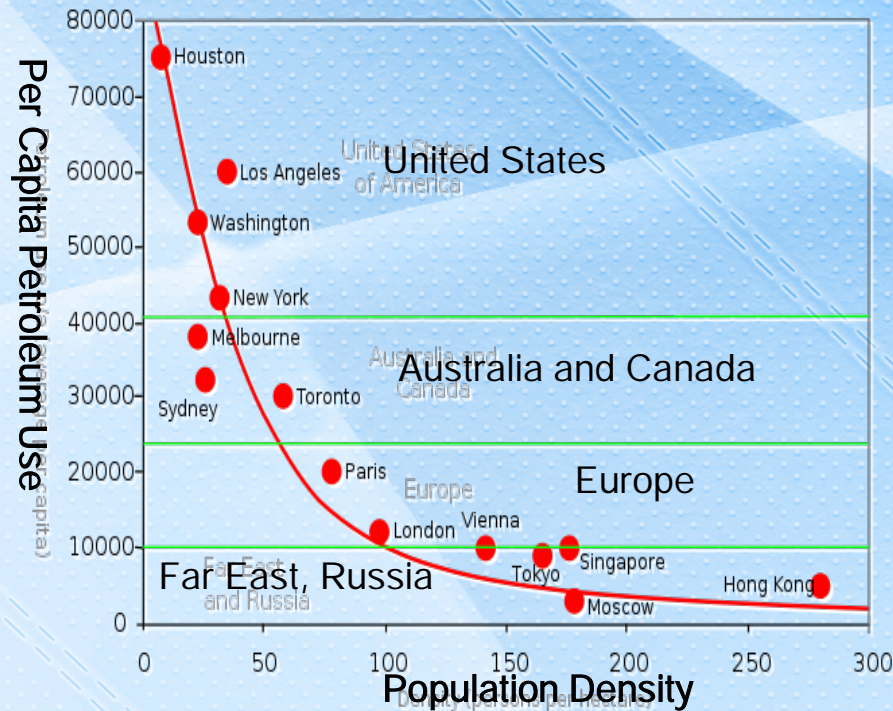
- ◎ US farm subsidies result in mega farms producing so much corn and soybeans that high fructose corn syrup, hydrogenated fats from soybeans, and corn-based feed is kept artificially low, resulting in low prices for fast food, corn-fed beef and pork, and soda
- ◎ No such subsidies exist for fresh fruits and vegetables which are produced in much lower quantities at higher cost to the public



Factors Associated with Decreased Physical Activity: Suburban Living

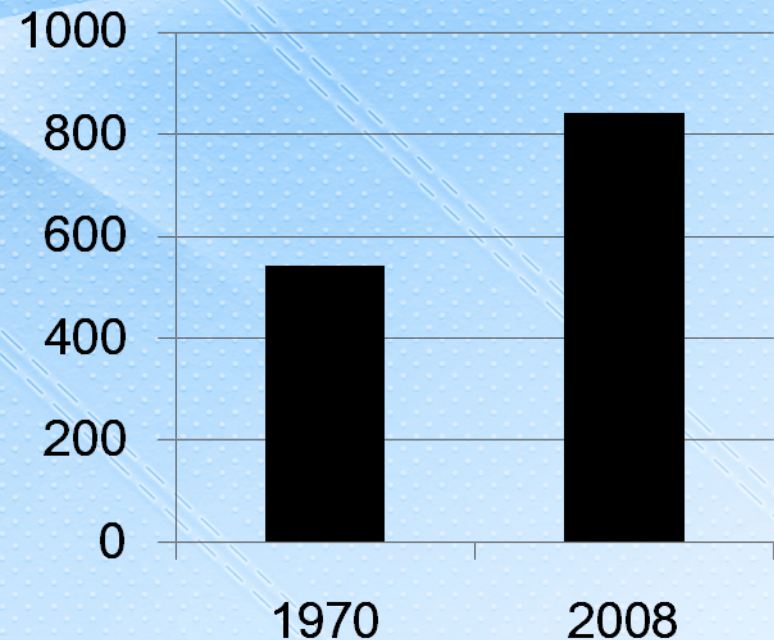
Relationship between Transport and Land Use

A commonly used study of 32 cities by Newman & Kenworthy in 1989 concluded that there was a strong link between urban development densities and petroleum consumption.



Urban Task Force Partnership: Toward an Urban Renaissance, 1999
Annual petroleum use per capita adjusted to US \$1 (1990)
After Andrew Wright Associates, final section taken from 'Towards an Urban Renaissance',
© 1999

US Vehicles per 1000 people

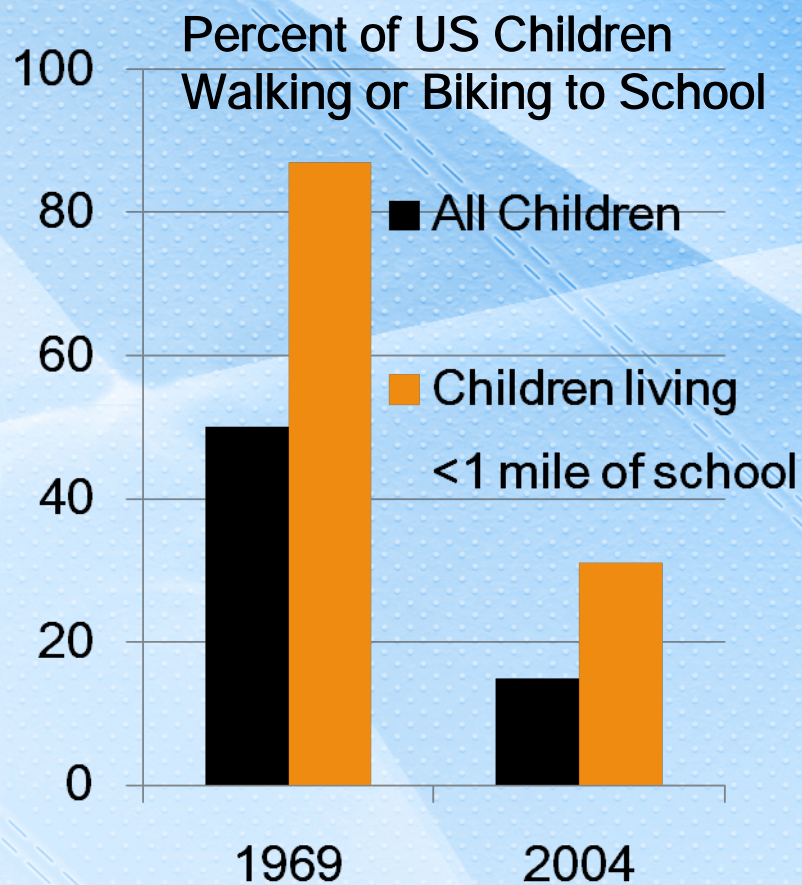


US Dept of Transportation, 2008



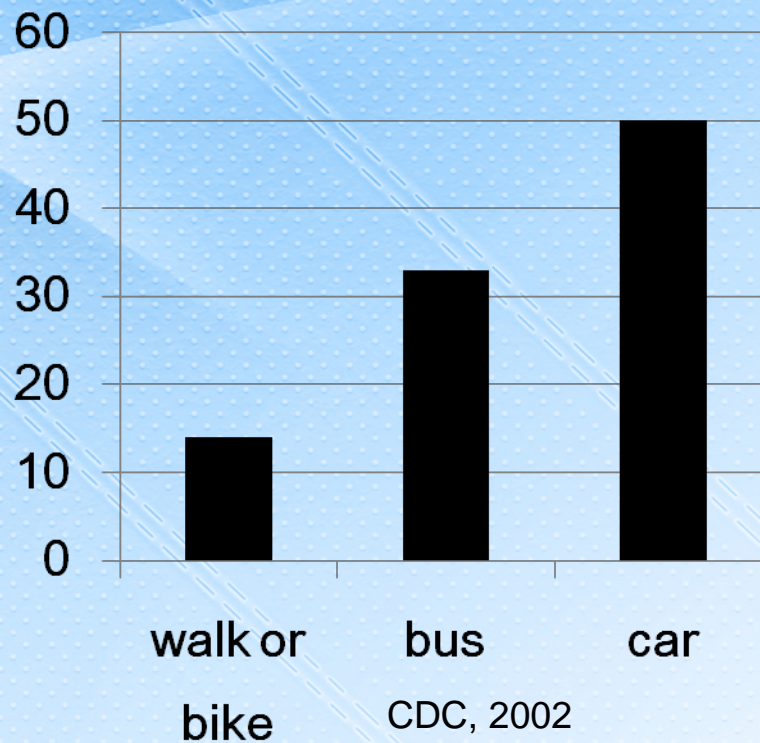
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Factors Associated with Decreased Physical Activity: School Transportation



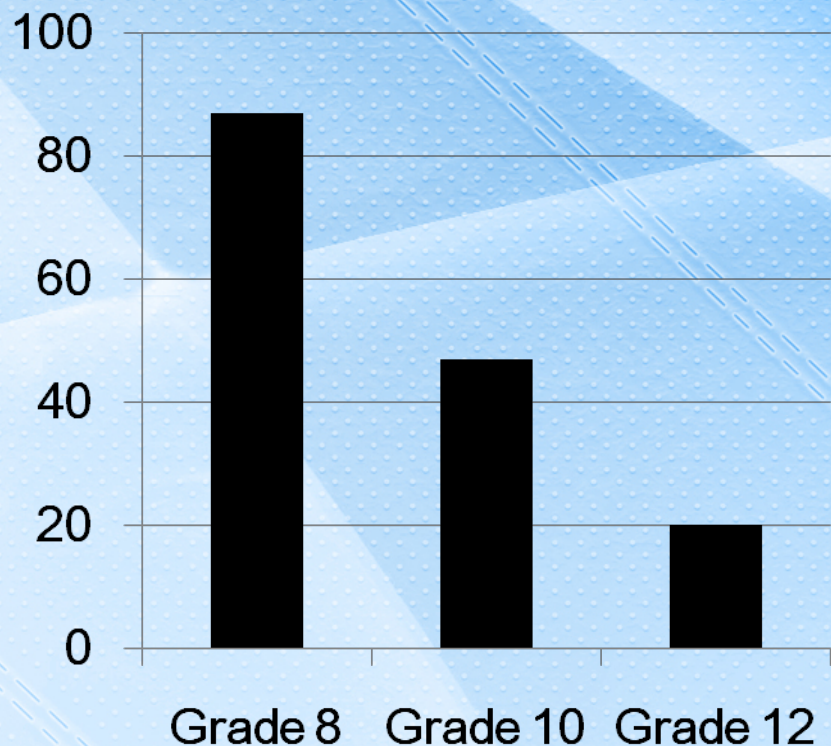
CDC, 2005

US School Transportation (1999): Percent of Children

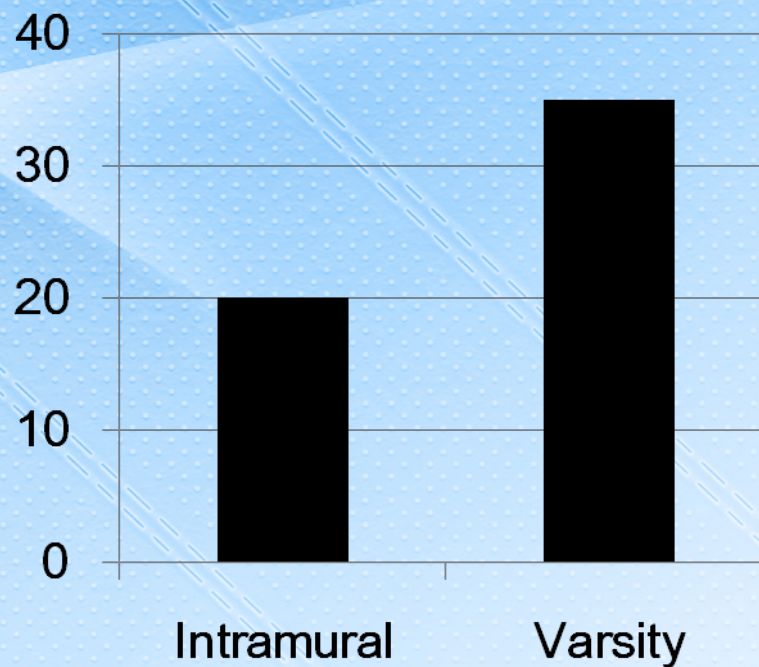


Decreased Physical Activity at School

**Percent of US Schools
Requiring Physical
Education by Grade**



**Percent of US High
School Students
Participating in School
Sports**





Factors Associated with Decreased Physical Activity: US Policies

- ◎ US Department of Transportation spends most of its money on highways
- ◎ Traffic concerns are one of the primary reasons parents do not allow their children to walk or bike to school
- ◎ No Child Left Behind policy resulted in decreased access to physical education and recess as schools focus on high stakes testing

<http://www.dot.gov/budget/2012/fy2012budgethighlights.pdf>

<http://unstats.un.org/unsd/pocketbook/Pocketbook%202006.pdf>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5132a1.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm>

http://www.bus.lsu.edu/mcmillin/seminars/anderson_accountability.pdf

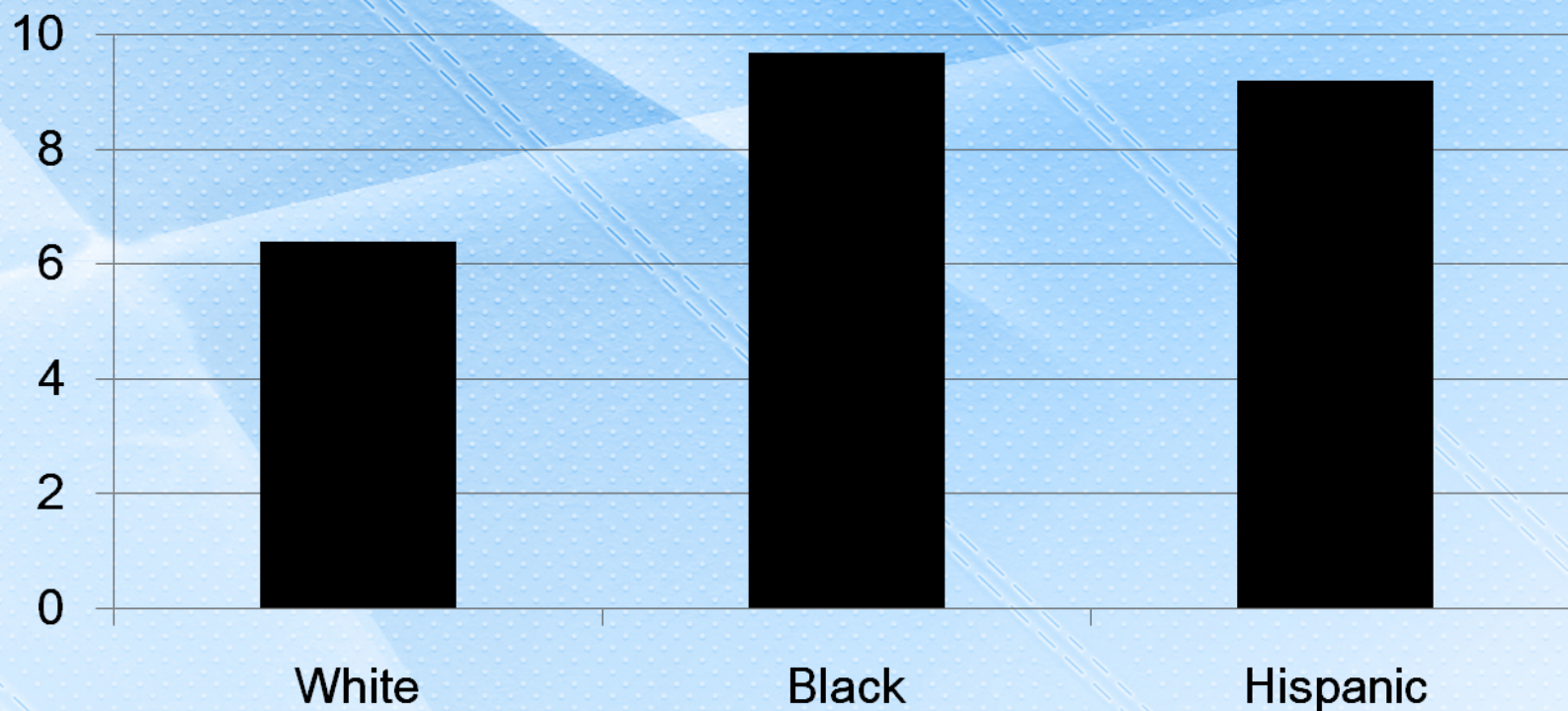


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Factors Associated with Decreased Physical Activity: Escalating Leisure Time Media Use

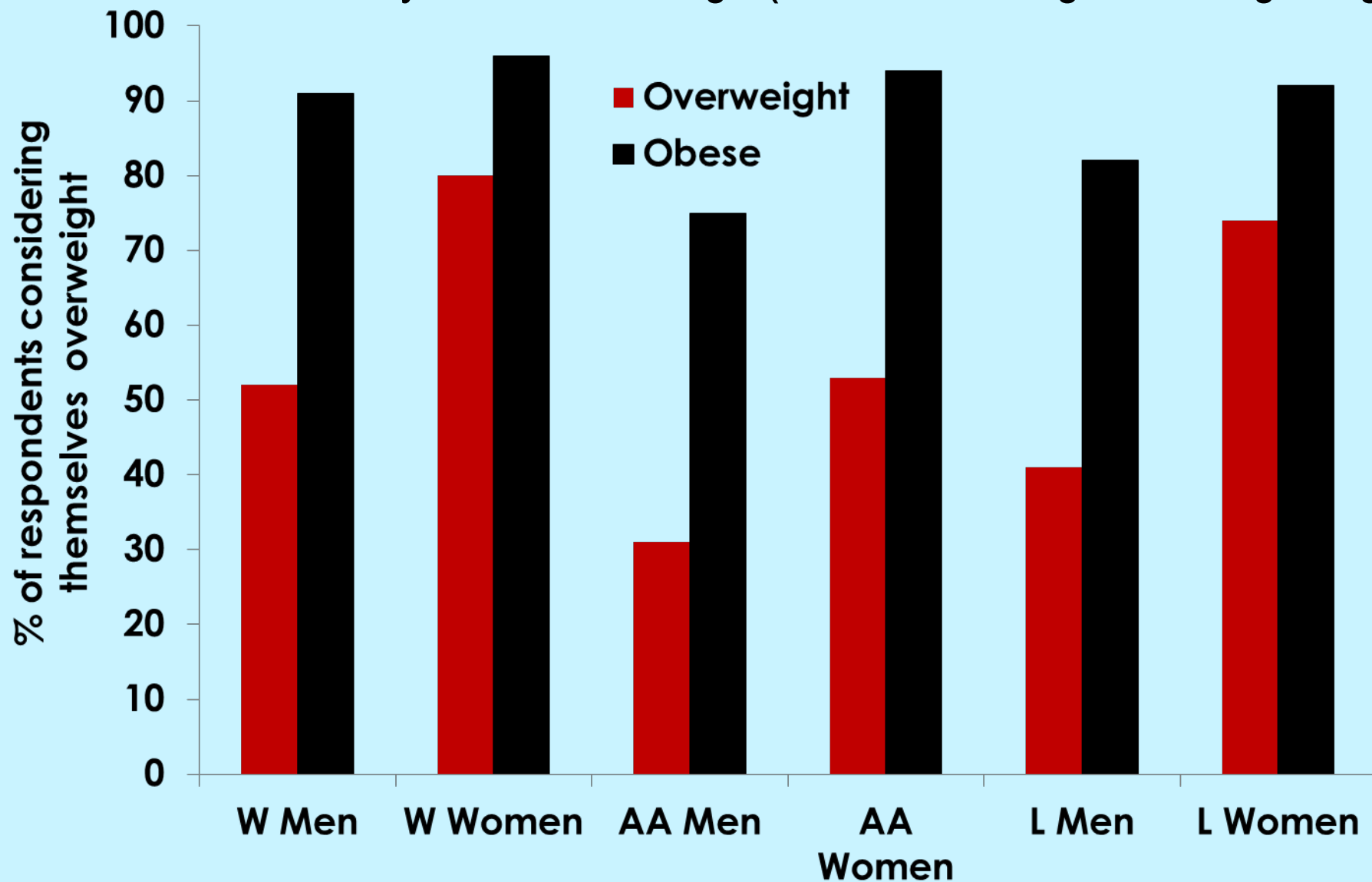
Hours Per Day Among 8-18 Year Olds





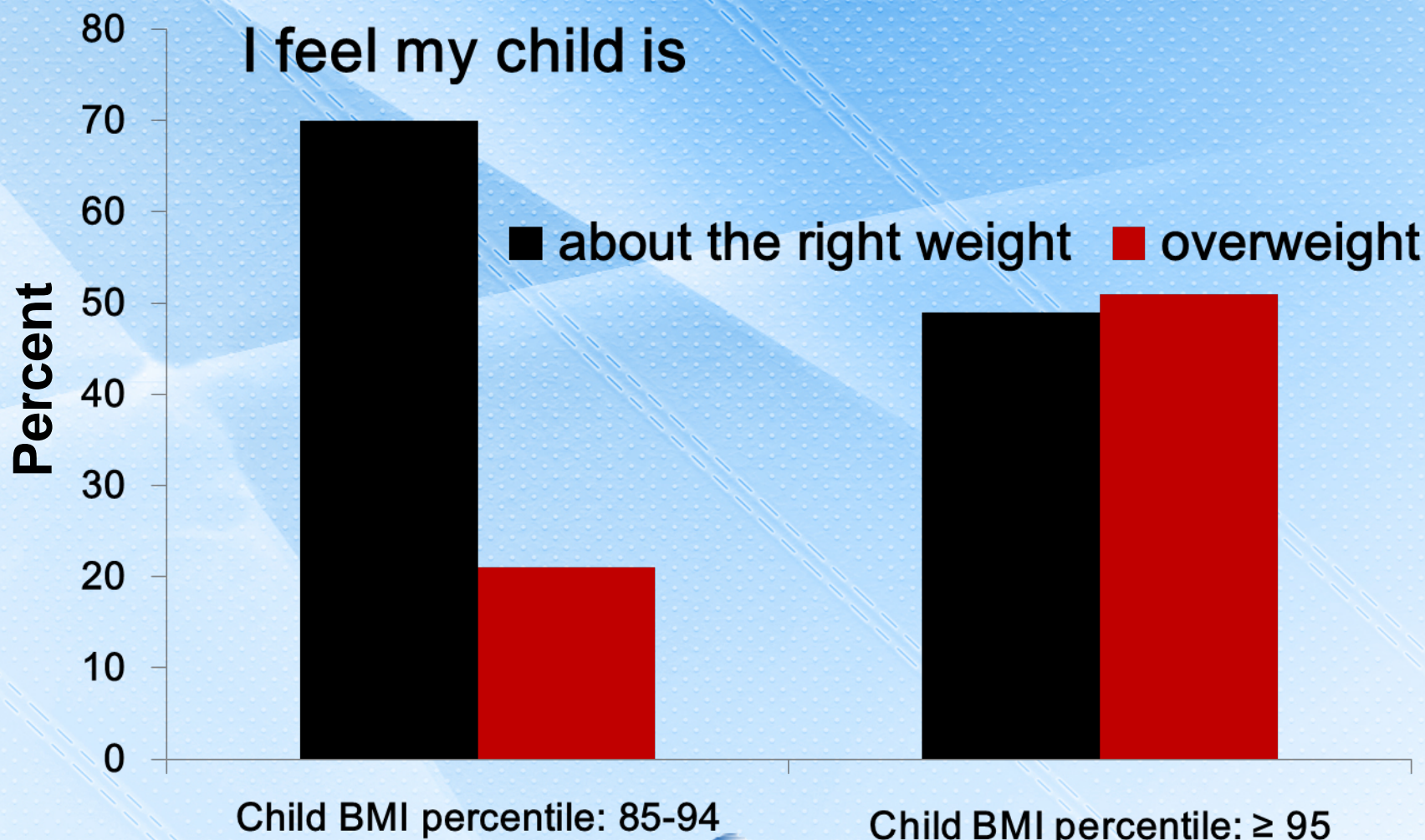
Adults Often Fail to Recognize They Are Overweight

I consider myself to be overweight (versus underweight or average weight)



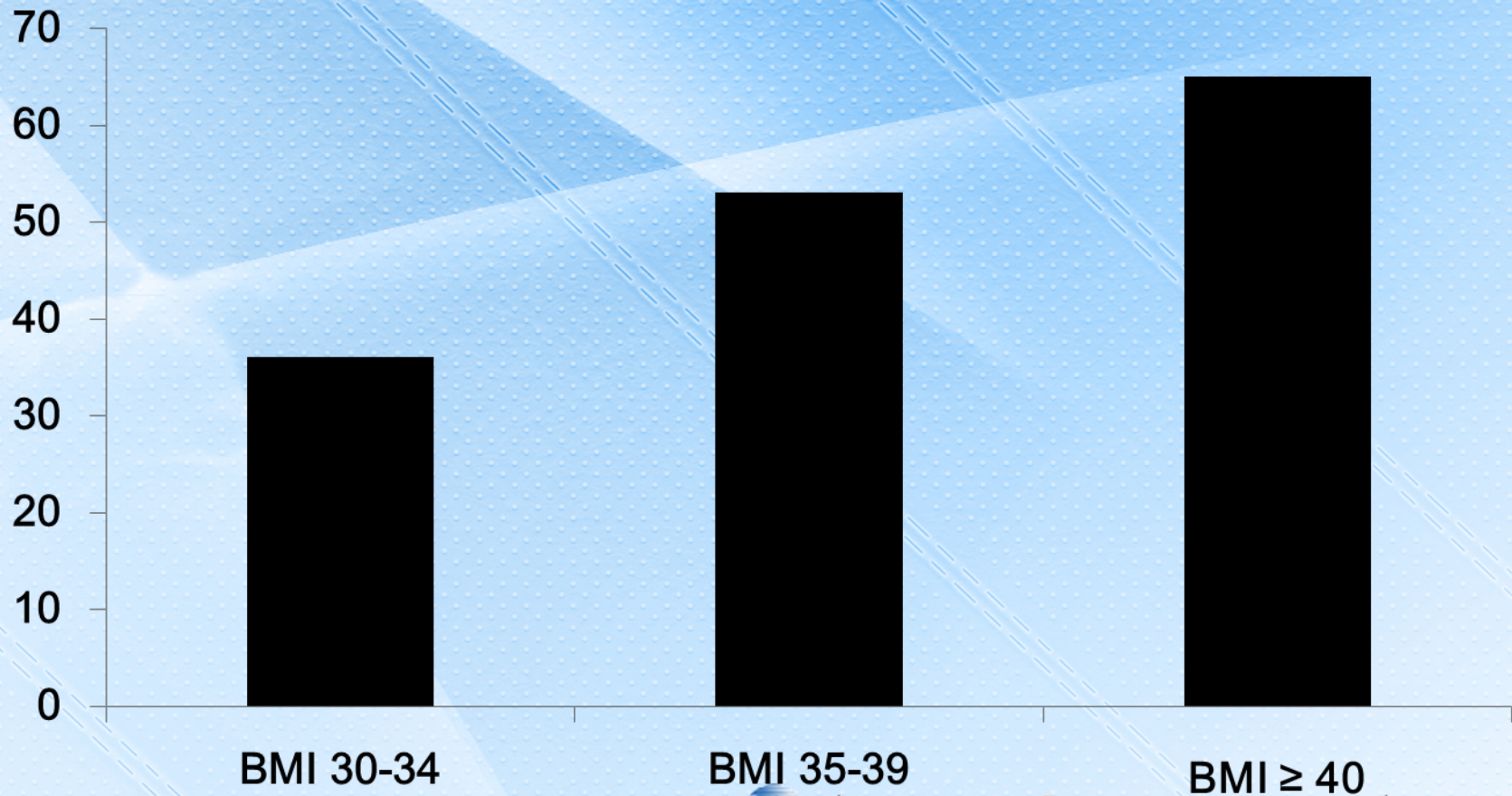


Many Parents Fail to Recognize Their Child is Overweight



Many Health Providers Fail to Monitor Adult BMI

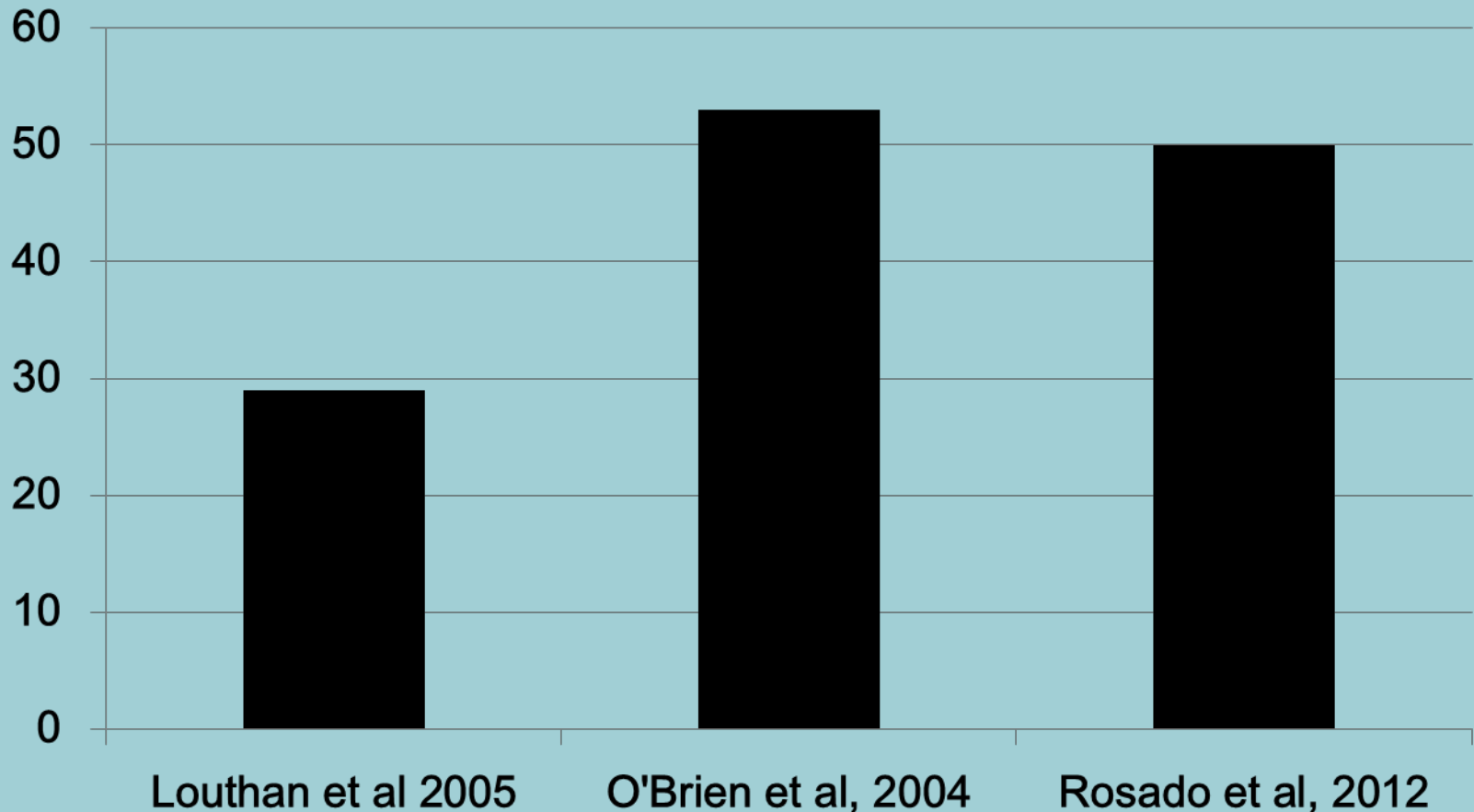
% of obese adults who reported their health care provider advised them to lose weight



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Many Health Providers Fail to Monitor Child BMI

% of obese children identified by provider in a well-child visit



How Should Psychology Respond?

◎ Traditional Mental Health Response: Practice and Research

- Psychological impact of obesity: Stigma, discrimination, bullying
- Psychological impact on obesity: Stress, depression
- Mental health resilience as a strength



How Should Psychology Respond?

- ◎ Expanded Response: Health Using the Social-Ecological Model- Practice and Research
 - Individual
 - ◎ Mental health concerns remain important
 - ◎ Developmental issues – e.g., food & activity preferences
 - ◎ Life style behavior change – including an understanding of the role of food and exercise in the person's life
 - Family - cross generational effects on biology, values, beliefs, perceptions, behaviors



How Should Psychology Respond?

⊙ Expanded Response: Health Using the Social-Ecological Model - Practice and Research

● Systems

- ⊙ Schools, including higher education
- ⊙ Health care
- ⊙ Research enterprise

● Communities

- ⊙ Religious
- ⊙ Social
- ⊙ Work

● Policy: Local, State and Federal



How Should Psychology Respond?

- ◎ Expanded Response : Health Using the Social-Ecological Model - Practice and Research
 - Requires us to define the characteristics of a health promoting –versus an obesogenic –environment
 - Requires a focus on prevention as well as intervention
 - Requires us to abandon the “personal choice” explanation of obesity while promoting agency at all levels
 - Requires communication at all levels



How Should Psychology Respond?

- ⊙ Expanded Response : Health Using the Social-Ecological Model - Practice and Research
 - Requires collaboration and partnerships
 - ⊙ Interdisciplinary research teams
 - ⊙ Community leaders and decision makers
 - ⊙ Systems analysis and buy in
 - ⊙ Partners in advocacy at local, state and federal level
 - ⊙ Collaboration and support among ourselves



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