

THE (NOT SO) SKINNY ON SUMMERTIME AND CHILD OBESITY

Joseph L. Mahoney, Ph.D.
Associate Professor of Education
University of California, Irvine

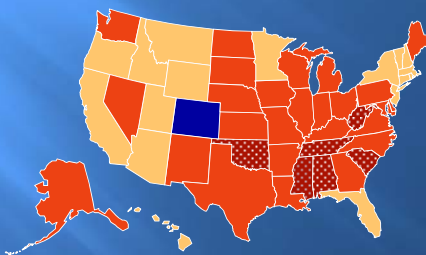
November 17, 2009

PRESENTATION ROAD MAP

- ▣ BACKGROUND ON OBESITY
- ▣ SUMMARY OF TWO RESEARCH STUDIES
- ▣ CONCLUSIONS AND IMPLICATIONS

Obesity Trends* Among U.S. Adults BRFSS, 2008

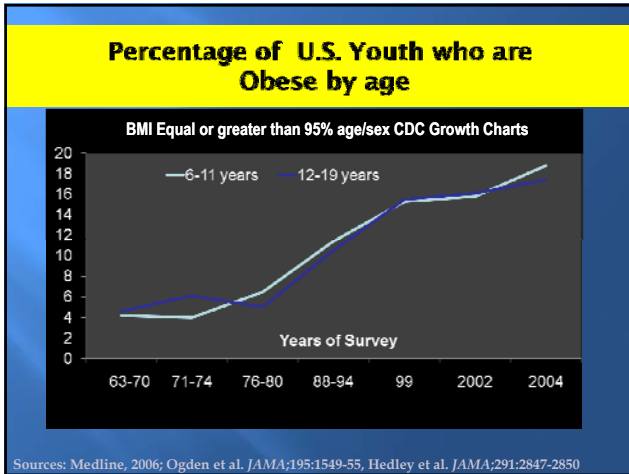
(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



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

Obesity Epidemic

- ▣ Prevalence of adult obesity has doubled in the last 30 years.
- ▣ Relative increase has been greater among young people under 18

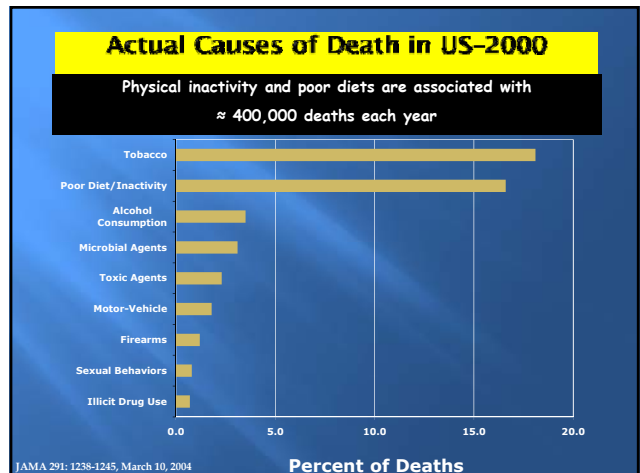


Obesity in California Children

- 32% are overweight or obese.
 - Pacific Islanders (42%), Latinos (40%), American Indians (37%)
- 75% of overweight children will become overweight or obese adults.

Who Cares?

- Sleep apnea
- High Blood Pressure & Hypertension
- Gallbladder Disease
- Psychological Disorders (e.g., depression)
- Type II Diabetes
- Adult Cardiovascular Disease
- Premature Death



Costs of Overweight & Obesity

- National ≈ \$75.1 billion
 - 9.1% of all U.S. medical expenditures
- California ≈ \$7.7 billion
 - ½ paid through Medicare and Medi-Cal
- Note: The 2009 California Center Public Health Advocacy reports ≈ \$21 billion for overweight/obesity

Source: National Health Accounts (WHO) (2008); CDC (2009); Finkelstein, Fiebelkorn, & Wang (2004)

Reasons?

- Energy Input > Energy Output
- Toxic Food Environment
- Sedentary Lifestyle

Summertime and Obesity

- ECLS study of ≈ 17,000 K-1 Graders. BMI gains were more than twice as large during the summer than the school year.
 - Summer weight intensified the racial/ethnic gap in obesity
- Summer weight gain undermines otherwise effective obesity treatments during the school year.
- Why?
 - More sedentary time (e.g., TV and snacking).
 - More opportunities to overeat (e.g., celebrations, socializing).
 - More exposure to highly caloric foods (e.g., sugar drinks).

Source: Gillis et al. (2005); von Hippel et al. (2007)

Main Hypothesis

Organized Activities are Healthy Arrangements for Children

- After-school Programs
- Extracurricular Activities
 - Sports, Lessons, Clubs
- Community-Based Organizations
 - Boys and Girls Clubs, Scouts

Why Should Organized Activities Reduce/Prevent Obesity?

- ▣ Opportunities for physical recreation and health education
- ▣ Controlled eating
- ▣ More “palatable” than traditional treatments

Challenges California Elementary Schools Face

- Avg. 15 min PE/day
- Avg.2 min MVPA/day



MVPA = Moderate to Vigorous Physical Activity
(you can break a sweat)

Physical Education Matters, Failing Fitness, California Endowment Reports 2006

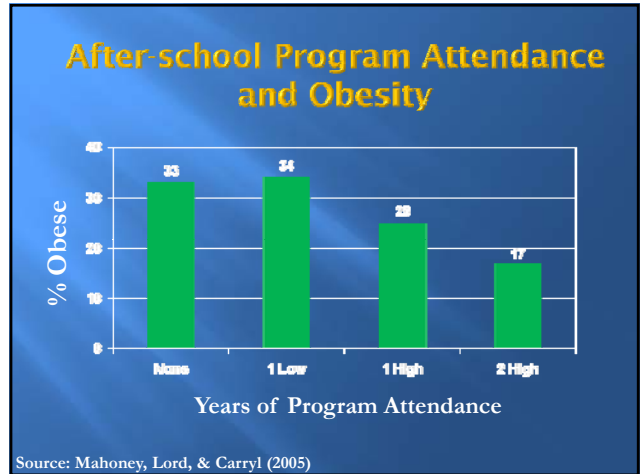
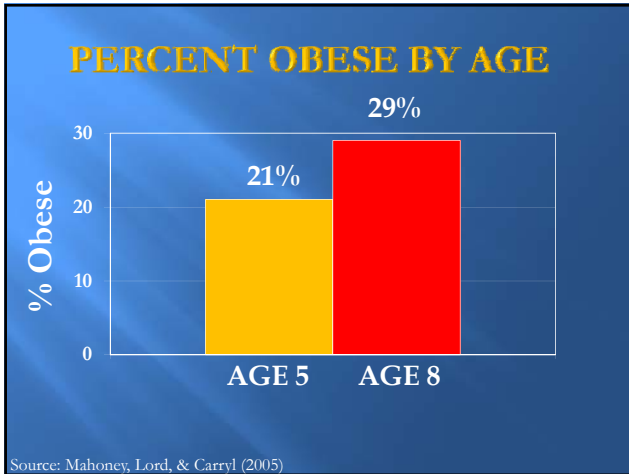
Study 1

After-school Program Participation and Obesity: Disadvantaged Children

National Institutes of Health
Grant # R01HDMH39909

Research Participants

- ▣ 600 Children, Followed Across Ages 5-8
- ▣ Economically Disadvantaged, Urban
- ▣ Key Measures
 - BMI and Obesity
 - After-school Program Attendance



Study 2

Consequences of Summertime for Child/Adolescent Obesity

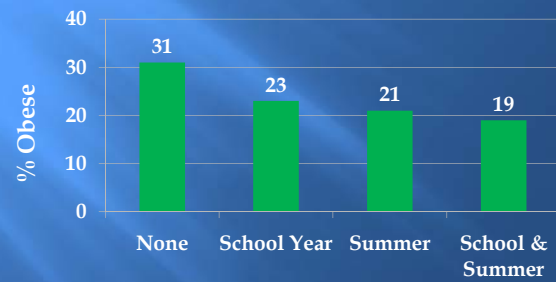
National Institutes of Health
Grant #R03HD055318

- ## Research Participants
- ▣ Panel Study of Income Dynamics
 - Nationally Representative Sample
 - ▣ Followed from 1997 - 2003
 - ▣ 1,750 Youth, Ages 10-18 in 2003
 - ▣ Measures: BMI and Obesity

Summer Arrangements

- ▣ **Organized Activities**
 - Organized Sports
 - Extracurricular Activities
 - After-school Programs
- ▣ **Parent Care**
- ▣ **Other Adult Care** (e.g., Relative, Sitter)
- ▣ **Self Care**

Organized Activity Participation and Obesity



Activity Participation

SUMMER ARRANGEMENTS AND OBESITY



Summer Arrangements

Summary

- ▣ Obesity is a global epidemic that has grown markedly in the past 30 years.
- ▣ Summertime arrangements are significantly associated with child obesity.
- ▣ Participation in organized activities over the summer predicts lower rates of obesity.

Conclusions

- ▣ Children (and adults) tend to gain weight the fastest when their environments lack structure.
- ▣ Summer is a period of risk probably because of the greater opportunities for unhealthy eating and extended time for sedentary behavior.
- ▣ To prevent child obesity, policies that deal with the summer vacation period are likely to be more effective than those concentrating only on the school year.

Implications of the Research

- ▣ **Provide affordable and accessible organized activities during the summertime.**
 - ▣ 19% of CA K-12 in after-school programs
 - ▣ 24% of CA K-12 in self-care
 - ▣ 36% of CA K-12 looking for programs
- ▣ **Encourage organized activity participation.**
 - Public health education campaign
- ▣ **Ensure the activities are of high quality.**

Source: Afterschool Alliance (2009). *America After3PM*.