Update on the Current Epidemiology of Obesity in the United States

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Obesity Trends in Adults over the Past 12 Years

Fryar CD et al. 2012, NCHS data brief
Obesity Trends in 2-19 yo over the Past 12 Years

Fryar CD et al. 2012, NCHS data brief
Obesity Trends in Children 2-5yo
Pediatric Nutrition Surveillance System

Annual decreases and increases in obesity are statistically significant at p<0.05.
States and Communities Reporting Decreases in the Prevalence of Childhood Obesity

- El Paso, TX
- Anchorage, AK
- Chula Vista, CA
- Kearney, NE
- DuPage County, IL
- Fitchburg, MA
- Somerville, MA
- Cambridge, MA
- Portland, ME
- New York City
- Philadelphia, PA
- Vance, NC
- Granville, NC
- San Diego, CA
- El Paso, TX
- Anchorage, AK
- CA
- CA
- CA
Annual Adult per Capita Cigarette Consumption and Major Smoking and Health Events – US 1900-1998

Thousands per year

Great Depression

1st World Conference on smoking and health

End of WW II

1st Surgeon General’s report

Fairness Doctrine messages on TV and radio

1st smoking cancer concern

Nonsmoker’s rights movement begins

Federal cigarette tax doubles

Broadcast advertising ban

1st Great American smokeout

Nicotine medications Available over the counter

Master settlement agreement

Surgeon General’s report on environmental Tobacco smoke
Changes in the Prevalence of Severe Obesity (120% of the 95th %tile) in Girls 1976-2006

Wang et al. Int J Pediatr Obesity 2010; on line
Changes in the Prevalence of Severe Obesity (120% of the 95th %tile) in Boys 1976-2006

Wang et al. Int J Pediatr Obesity 2010; on line
Severe Obesity Trends in Adults

Fryar CD et al. 2012, NCHS data brief

Year

Percent


Men

Women

3.1

6.2

4.4

8.1
Prevalence of Severe Obesity (BMI > 40) among Adults. NHANES 2009-2010

Flegal KM et al. JAMA 2012;307:491
Costs of Obesity – 1998 vs 2008

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total costs</td>
<td>$78.5 B/y</td>
<td>$147 B/y</td>
</tr>
<tr>
<td>Medical costs</td>
<td>6.5%</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

Medicare and Medicaid accounted for 42% of these costs

Finkelstein et al. Health Affairs 2009; 28:w822
Percentage of Costs Attributable to Overweight and Obesity (2000 MEPS Sample)

- Overweight (36%)
- Grade III (3%)
- Grade II (5%)
- Grade I (15%)

Social Ecological Model

- Federal and State: Federal, state and local policies to regulate and support healthy actions
- Community: Policies, standards, social networks
- Institutions: Policy, regulations and informal structures
- Interpersonal: Family, peers, social networks
- Individual: Knowledge, attitudes, beliefs and behaviors
<table>
<thead>
<tr>
<th>Age</th>
<th>HP2010</th>
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</thead>
<tbody>
<tr>
<td>2-5 yo</td>
<td>33 Kcal/d</td>
</tr>
<tr>
<td>6-11 yo</td>
<td>149 Kcal/d</td>
</tr>
<tr>
<td>12-19 yo</td>
<td>177 Kcal/d</td>
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</tbody>
</table>

Principal Targets for Obesity Prevention and Control

Pregnancy: pre-pregnant weight, weight gain, diabetes, smoking
Sleep
Reduce energy intake
  Decrease high energy dense foods
  Increase low energy dense foods
Reduce sugar drinks
Decrease television time
Breastfeeding
Increase daily physical activity
Best Strategies for Reducing Calories*

Foods

• Apply CA stds to competitive foods – 78 Kcal/d

• Eliminate SDs or switch from whole to low fat milk in Early Care and Education Centers – 80 Kcal/d

• Decrease fast food consumption – 125 – 310 Kcal/d

Best Strategies for Increasing Physical Activity (Minutes MVPA/d)*

Physical activity
- Mandatory PE – 23’ MVPA
- Classroom activity breaks – 19’ MVPA
- Walk/bike to school 16’ MVPA

### Cost Benefit of Four Policy Interventions – Childhood Obesity Interventions- Cost Effectiveness (CHOICES)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Reach ($x10^6$)</th>
<th>Total Cost Million US$</th>
<th>BMI Unit Decrease</th>
<th>Cost/Unit BMI Decrease (2 - 19yo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD Excise Tax</td>
<td>287</td>
<td>$147</td>
<td>0.19</td>
<td>$6.44</td>
</tr>
<tr>
<td>Active PE in School (5-11 yo)</td>
<td>16.6</td>
<td>$54.7</td>
<td>0.02</td>
<td>$191.00</td>
</tr>
<tr>
<td>TV Advertising Change (2-19 yo)</td>
<td>74</td>
<td>$0.8</td>
<td>0.13</td>
<td>$0.08</td>
</tr>
<tr>
<td>Early Care and Education Policy</td>
<td>3.2</td>
<td>$6.4</td>
<td>0.42</td>
<td>$6.07</td>
</tr>
</tbody>
</table>
Settings for the Prevention and Treatment of Obesity

- Early care & education
- Schools
- Work Sites
- Health care
- Communities and states
- Federal government
- Business and industry