Obesity in America: What characteristics correlate to urban obesity?

By Will Leimenstoll

Obesity is increasing in the US but at different rates spatially. Three spatial, and one societal factor were analyzed in cities either with high/low overall obesity rates, or high/low rates within their respective states. Population density, transportation infrastructure, land-use patterns, and median household income were chosen as the study variables.

**Population Density**

Denser metro areas typically have lower obesity rates. Do higher densities create walkable environments or just attract fitter individuals?

**Transportation Infrastructure**

Strong pedestrian and/or bicycle infrastructure may reduce obesity rates in states with an otherwise high obesity rate. In Bakersfield, the connection is lost.

**Land-use patterns**

Boulder has a much lower obesity rate, much higher density and more mixed-use spread throughout the community. Mixed-use outside the downtown, unlike in Binghamton reflects a commitment to smart growth in current planning, which could help the city keep its obesity rate down by providing multi-modal transportation options.

**Conclusions**

Obesity is a growing problem in the United States. The Centers for Disease Control estimate that 35.7% of our national population is now obese. Obesity is defined as having a body mass index of 30 or higher and is connected to many serious illnesses including heart disease, stroke, diabetes, and some forms of cancer.

Unfortunately this research shows very little causal or even correlative relationships between the chosen characteristics of the cities where people live and their likelihood of becoming obese. Land use patterns, transportation infrastructure, density, and household income may all play a role, but none is a silver bullet on its own.

**Acknowledgements:**

Dr. Rebecca Dobbs for her patience and advice. GEOG 591 classmates for their technical & moral support. GIS librarians for their timely answers to questions and patience.

**Household income**

Household income in each city could correlate to lower or higher obesity rates. Families with higher incomes may be more likely to eat more wisely due to financial ability and increased education level.

Data was confounded however by inability to find household income by metropolitan area and statewide income levels were not taken into account for context.

**Median Household Income 2009 ($)**

<table>
<thead>
<tr>
<th>City</th>
<th>Income</th>
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<tbody>
<tr>
<td>Boulder, CO</td>
<td>$80,000</td>
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<tr>
<td>Binghamton, NY</td>
<td>$40,000</td>
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</tbody>
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**Obesity Rates (as % of pop)**

- Boulder, CO: 12.1%
- Binghamton, NY: 37.6%
- Boulder has a much lower obesity rate, much higher density and more mixed-use spread throughout the community. Mixed-use outside the downtown, unlike in Binghamton reflects a commitment to smart growth in current planning, which could help the city keep its obesity rate down by providing multi-modal transportation options.