Section B

What Are the Factors That Contribute to Obesity?
Individual-Level Factors

- Genetic
- Gene-environment interactions
- Epigenetic
- Gender
- Ethnicity
- Behaviors
  - Activity
  - Diet
  - Portion size and meal frequency
Individual-Level Factors

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Individual-Level Factors

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Family-Level Factors

- Ethnicity/culture
  - Food preferences
  - Food as reward

- Shopping behaviors

- Parental education
  - SES effect

- Parental monitoring

- Parental perceptions of child’s weight
Family-Level Factors

- Ethnicity/culture
  - Food preferences
  - Food as reward

- Shopping behaviors

- Parental education
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- Parental perceptions of child’s weight
Family-Level Factors (cont.)

- Family meals
- Eating behaviors (e.g., pre-portioned vs. “family-style” serving)
- Eating norms and expectations (e.g., “clean plate club”)
- Parental employment patterns
- Family structure
- Television viewing
Family-Level Factors (cont.)

- Family meals
- Eating behaviors (e.g., pre-portioned vs. “family-style” serving)
- Eating norms and expectations (e.g., “clean plate club”)
- Parental employment patterns
- Family structure
- Television viewing
Peers

- Social networks
- Obesity among peers
- Eating/snacking behaviors
- Activity and food consumption norms
Findings from Network Analysis

- Obesity may be spread in social networks in a quantifiable pattern that depends on social ties.

- While shared genetic and environmental factors may influence the contagion effect of obesity, social processes appear to play a key role.

- Proximity was not a key determinant of the effect of social relationships on weight gain; rather, it was affiliational bonds, even across substantial geographic distances.

- Directionality of the friendship influenced the directionality of weight gain.

School

- Vending machines and access to high-calorie, low-nutrient food
- School meals
- Physical education
- Proximity to fast-food restaurants
- Availability of walking/bike paths to school
- Access to health and nutrition education
Vending Machines in Schools

http://www.flickr.com/photos/lowercolumbiacollege/3197337157/. CC-BY-NC-ND
School Cafeterias

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School Fundraising

http://www.flickr.com/photos/beleaveme/3995859282/. CC-BY-ND
Community-Level Factors

- Built environment/green spaces
- Urban/suburban sprawl
- Availability of parks and recreation
- Availability of green grocers
- Neighborhood self-efficacy
Community-Level Factors (cont.)

- Neighborhood safety
- Media/advertising
- Norms (e.g., of beauty and wealth)
- Customs (e.g., that center on consumption)

<table>
<thead>
<tr>
<th>Brand</th>
<th>Expenditures</th>
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<tbody>
<tr>
<td>McDonald’s</td>
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<tr>
<td>Burger King</td>
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<td>Pepsi/Diet Pepsi</td>
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<td>Lunchables</td>
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</table>

National/Policy Level

- Agricultural subsidies
- Taxes
- Menu labeling laws
- Food advertising laws
- Insurance coverage for health promotion and weight loss
Price of Food vs. Food Consumed

Conceptual Framework for Childhood Obesity

Macro-Environmental Factors
- Social, Cultural, Economic
  - Culture
  - Ethnicity
- School lunch program
- Crime rates and neighborhood safety
- Access to recreational facilities
- Supermarket access and cost of energy-dense food

Micro-Environmental Factors
- Social
  - SES
  - Maternal depression
  - Caregiver's feeding style
- Environment
  - Food available at home
  - Parents' BMI and weight
  - Home
    - Food preference
    - Physical activity

Individual Factors
- Biological
  - Birthweight
  - Early infant catch-up growth
- Behavioral
  - Breast feeding
- Biological
  - Diet
  - Genetics
    - Metabolism
- Behavioral
  - Exercise level
  - Eating pattern
- Psychological
  - Depression
  - Stress in social situations

Source: Stephanie Saylor.
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