CHILDHOOD OBESITY AND DIABETES
Foundations of Maternal and Child Health

THE OBESITY EPIDEMIC

It isn’t drugs. It isn’t drunk driving. The most serious health threat facing American children is obesity.
Ladies Home Journal, 2003

Obesity threatens a generation.
The Washington Post, May 2003

Fat children will be the norm within a decade.
Medical News Today, March 2006

Children’s life expectancy being cut short by obesity
The New York Times, March 2005

OBESITY: DEFINITIONS

- Obesity is measured by the body mass index (BMI)
- For children and adolescents, considers both age and sex
- Overweight: BMI at or above 85th percentile, below 95th percentile for children of same sex and age
- Obese: at or above the 95th percentile for children of the same age and sex
The CDC BMI-for-Age Charts

Boys (2-20 years)

Girls (2-20 years)

Increases in Childhood Obesity

Prevalence of Obesity Among U.S. Children and Adolescents

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<tbody>
<tr>
<td>Ages 2 through 5</td>
<td>5%</td>
<td>7.2%</td>
<td>10.3%</td>
<td>12.4%</td>
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<tr>
<td>Ages 6 through 11</td>
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<td>11.3%</td>
<td>15.8%</td>
<td>17.0%</td>
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<tr>
<td>Ages 12 through 19</td>
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<td>10.3%</td>
<td>16.1%</td>
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Source: http://www.cdc.gov/obesity/childhood/prevalence.html

Prevalence of Obesity by Race/Ethnicity

BMI-for-Age (95th Percentile)

WHAT ARE THE CAUSES OF OBESITY?

Social Ecological Model

FACTORS CONTRIBUTING TO OBESITY IN CHILDREN
- Genetics
- Overeating
- Diet high in fat, sugar, simple carbohydrates
- Frequency of eating
- Physical inactivity

What Are the Causes of Obesity?

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What’s Happening in the United States
- ↑ prosperity → ↑ calories
- ↑ technology → ↓ exertion
- ↑ indoor entertainment → ↑ sedentary behavior
- ↑ marketing of poor food → ↓ nutrition
PHYSICAL CONSEQUENCES OF OBESITY
- Diabetes (Type II)
- Chronic diseases
- Asthma
- Hypertension
- High cholesterol
- Gallbladder disease
- Stroke
- Orthopedic complications
- Sleep apnea
- More likely to be overweight or obese as an adult

PSYCHOLOGICAL IMPACT OF OBESITY
- Decreased self-esteem
- Negative self-image
- Stigma
- Eating disorders
- Bullying

HOW THE UNITED STATES COMPARES
**DIABETES: DEFINITIONS**

- **Diabetes**: a disease in which the body does not produce or properly use insulin

- Types of diabetes
  - **Type I**: beta cells of pancreas no longer make insulin because the body's immune system has attached and destroyed them
  - **Type II**: improper use of insulin combined with relative insulin deficiency
  - **Gestational**: high blood sugar during pregnancy

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**DIABETES: SCOPE OF THE PROBLEM**

- 5th deadliest disease in U.S.
- 0.2% of individuals younger than 20 years of age have diabetes
  - Type II is increasing

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**TYPE OF DIABETES BY AGE AND ETHNIC GROUP**

- NHW=Non-Hispanic whites; AA=African Americans; H=Hispanics; API=Asians/Pacific Islanders; AI=American Indians

CONSEQUENCES OF DIABETES IN CHILDHOOD
- Cardiovascular disease
- High blood pressure
- Stroke
- Neglect of condition – unrecognized
- Diabetic retinopathy – blindness
- Kidney disease
- Neuropathy
- Amputations

HOW TO INTERVENE IN CHILDHOOD OBESITY
http://www.nature.com/oby/journal/v14/n6/full/oby2006109a.html