

# FIRST STEPS DATABASE

## OBESITY AND PREGNANCY

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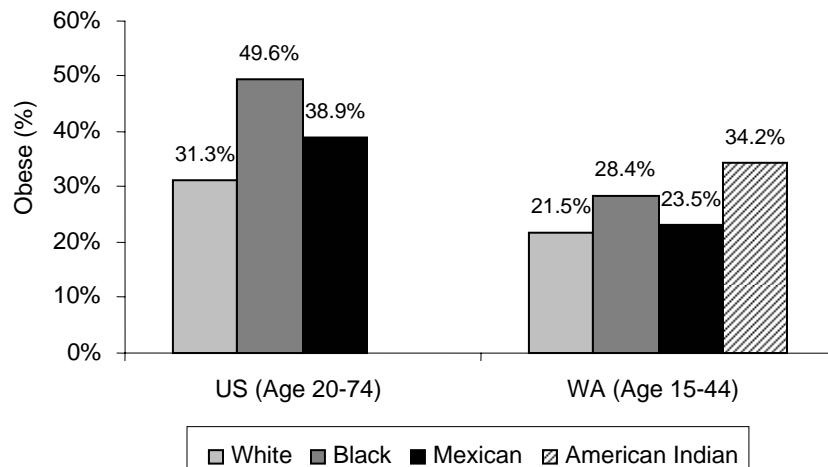
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National obesity and overweight rates, as defined by the body mass index (BMI), are rapidly increasing and often referred to by public health officials as the “obesity epidemic.” Multi-faceted interventions are needed to reduce the prevalence of obesity in the United States.

Body mass index, calculated as weight in kilograms divided by the square of height in meters, is used to define obesity. The recommended BMI for women is 18.5-25. A BMI from 25-29.9 is classified as overweight and a BMI of greater than 30 is considered to be obese. Data from the National Health and Nutrition Examination Survey (NHANES) reveal that the mean BMI for women ages 20-74 has increased from 24.9 in 1960-62 to 28.2 in 1999-2002.

In 2003, the Washington State birth certificate began collecting mother’s height which makes calculation of the BMI possible. While missing data prevented calculating a BMI for 21% of 2003 birth certificates, we hope that reporting will improve in future years. This fact sheet will describe the prevalence of pre-pregnancy overweight or obesity, as defined by BMI, in women who gave birth in Washington State in 2003. This report will also assess the risk of poor birth outcomes for women who are classified as overweight or obese.

Prevalence of Obesity Among Females



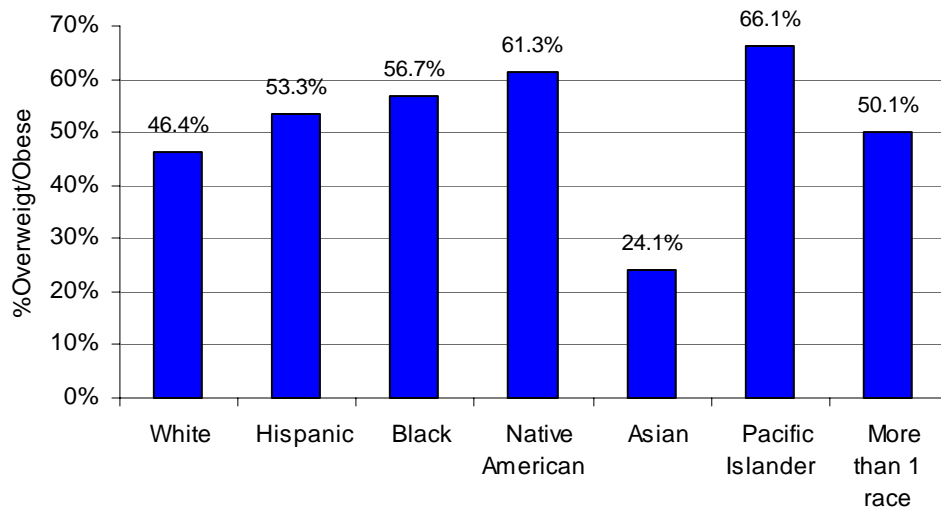
- The 1999-2002 National Health and Nutrition Examination Survey (NHANES) shows that the prevalence of obesity is greatest among non-Hispanic black women (49.6%), compared to Mexican-American women (38.9%) and non-Hispanic white women (31.3%).
- In Washington State among women aged 15-44 who gave birth in 2003, American Indian women have the highest prevalence of obesity (34.2%) compared to black women (28.4%), Mexican American women (23.5%), and white women (21.5%).
- Differences in the prevalence of obesity between national and Washington State data may reflect the tendency for BMI to increase as women age, since the Washington State data report the BMI of women in their child-bearing years who are younger than the age group represented in the NHANES sample.

## Obesity and Overweight Prevalence by Race

Health disparities are experienced by all minority groups in the United States when compared to the white, non-Hispanic population. These disparities are believed to be the result of the complex interaction among genetic variations, environmental factors, and specific health behaviors (*Healthy People 2010*).

The prevalence of overweight and obesity varies by age, gender, race/ethnicity, and socio-economic status. Overweight and obesity are more prevalent among minority women than among non-Hispanic white women, but Mexican-American men are more likely to be overweight or obese than non-Hispanic whites or non-Hispanic blacks. Racial and ethnic disparities in overweight also occur among children and adolescents (Surgeon General's Call to Action, 2001).

Prevalence of Overweight or Obesity by Race/ Ethnicity  
(BMI  $\geq$  25)



- Overall, 46% of Washington women were classified as overweight or obese in 2000 (BRFSS). Among women who gave birth in 2003, 47% were classified as overweight or obese using Washington State birth certificate data.
- Among women with valid data who gave birth in 2003 in Washington State (N=62,919), Asian women have the lowest proportion (24.1%) of overweight/obesity (BMI  $\geq$  25), and Pacific Islander women have the highest (66.1%).
- White, Hispanic, Black, and Native American women have intermediate proportions of overweight/obesity (46.4%, 53.3%, 56.7%, and 61.3%, respectively).

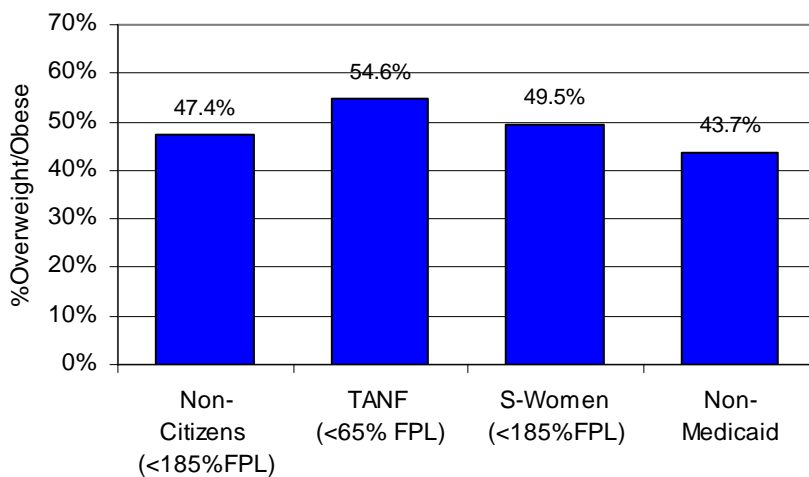
## Obesity and Overweight Prevalence by Poverty Status

Inequalities in socio-economic status (SES) underlie many health disparities in the United States. In general, population groups that suffer the worst health status also are those that have the highest poverty rates and the least education. Disparities in SES are associated with differences in rates of illness and death, including heart disease, diabetes, obesity, and low birth weight. Higher incomes permit increased access to medical care, enable people to afford better housing and live in safer neighborhoods, and increase the opportunity to engage in health-promoting behaviors (*Healthy People 2010*).

Socioeconomic status also impacts the prevalence of overweight and obesity. Women of lower socioeconomic status (income less than or equal to 130% of poverty threshold) are approximately 50% more likely to be obese than women with incomes greater than 130% of poverty threshold. The likelihood that men will be overweight or obese is approximately equal regardless of socioeconomic group (Surgeon General's Call to Action, 2001).

In the First Steps Database, categories of Medicaid eligibility provide an indicator of SES for women who have given birth: non-Medicaid women are in general higher income women, with family incomes above 185% of the FPL, and Medicaid women, with family incomes at or below 185% of the FPL, are divided into three groups.

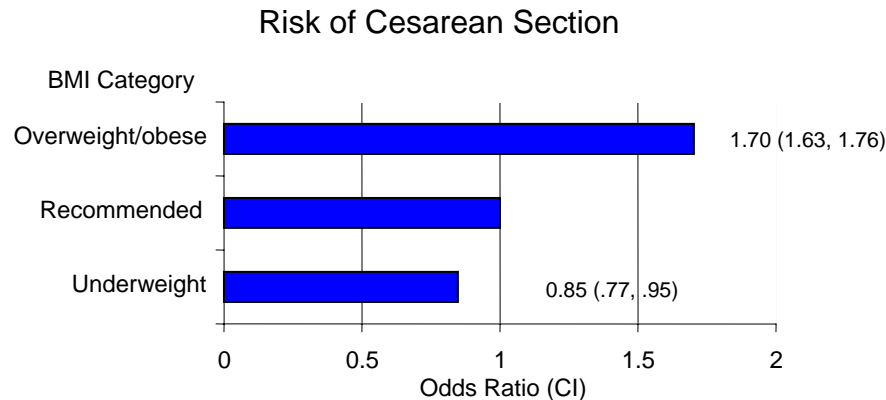
Prevalence of Overweight or Obesity by Poverty Status  
(BMI  $\geq$  25)



- Among women who gave birth in 2003, more than 40% of women across every income category are overweight or obese (BMI  $\geq$  25). The lowest rates of overweight or obesity occur among higher income (Non-Medicaid) women (43.7%).
- TANF women (women who received cash grants through the Temporary Assistance for Needy Families program) have the highest prevalence of overweight or obesity (54.6%).
- For Non-Citizens (mostly Hispanic women who were not U.S. citizens) and middle income women who were Medicaid eligible solely because of pregnancy (referred to as S-Women), the rates of overweight or obesity were intermediate (47.4% and 49.5%, respectively).

## Risk of Cesarean Section

The higher a woman's body mass index (BMI), the greater the risk she may need delivery by cesarean section. In addition, obese women have more complications during and after cesarean surgery. Infants of obese women have increased risk of stillbirth, prematurity, macrosomia (large for gestational age), neural tube defects, and higher rates of childhood obesity (ACOG, 2005).



- After controlling for poverty, education, BMI, race/ethnicity, and maternal age, the risk factors most strongly associated with increased cesarean section rates were BMI and age, with more modest effects shown by race/ethnicity and level of education.
- Women who were overweight or obese were 1.7 times more likely to have a cesarean section than women in the recommended weight category, and women age 30 or older were 1.5 times more likely to have a cesarean section than women in their twenties.
- Black, Asian, and Pacific Islander women were more likely (by 1.2 – 1.3 times) to have a cesarean section than white women. Women who had an associate or higher degree were more likely (by 1.1 – 1.2 times) to have a cesarean section than women with some high school but no degree. These added risks, while small, were statistically significant.

## OBESITY– FUTURE DIRECTIONS

Optimizing weight before conception is one of the most important things a woman can do to have a healthy baby. Recent recommendations from the American College of Obstetrics and Gynecology (2005) address prenatal interventions for obese women: different goals for prenatal weight gain depending on BMI, recording height and weight in the medical record, nutritional consultation, exercise programs, gestational diabetes screening, discussion of potential pregnancy complications, and consultation with an anesthesiologist due to the higher risk of c-section.

Many challenges remain to control the obesity epidemic. Programs designed to heighten awareness and encourage behavioral changes such as the *Governor's Community Health Bowl* are the first step. By identifying population groups with the highest rates of overweight/obesity, we can target interventions to groups with the greatest risks. Partnering with primary care providers is also a critical factor to achieve improvements in rates of overweight/obesity.

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Data sources for this report include the Department of Health Center for Health Statistics and the First Steps Database. The First Steps Database was developed as a program monitoring tool for First Steps. The database links Medicaid claims and eligibility with birth and death certificates. Additional copies of this report and a list of references may be requested from DSHS Research and Data Analysis (phone 360-902-0707). RDA reports are available at the website, [www1.dshs.wa.gov/rda](http://www1.dshs.wa.gov/rda).