

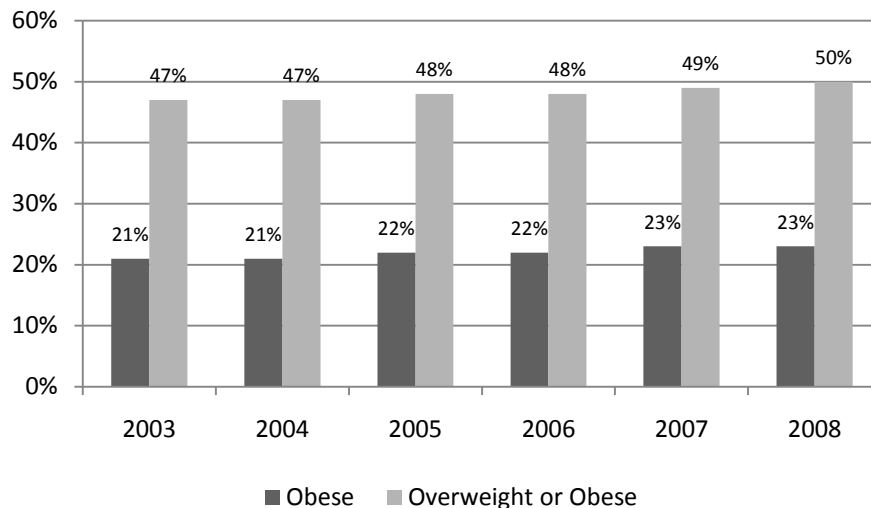
# Obesity and Pregnancy

Laurie Cawthon, MD, MPH, First Steps Database  
DSHS Research and Data Analysis

*In collaboration with the DSHS Medicaid Purchasing Administration*

In Washington and across the nation, obesity is epidemic. Obesity is a risk to the health of pregnant women and their babies. In 2003, the Washington State birth certificate began collecting the mother's height which, along with her pre-pregnancy weight, makes calculation of the BMI (Body Mass Index) possible. This fact sheet will describe the prevalence of pre-pregnancy overweight or obesity, as defined by BMI, among Washington women who gave birth from 2003 to 2008, and compare rates for higher-income and lower-income women and by race/ethnicity.

**The proportion of pregnant Washington women whose pre-pregnancy weight is classified as overweight or obese has been rising slowly and steadily since 2003.**



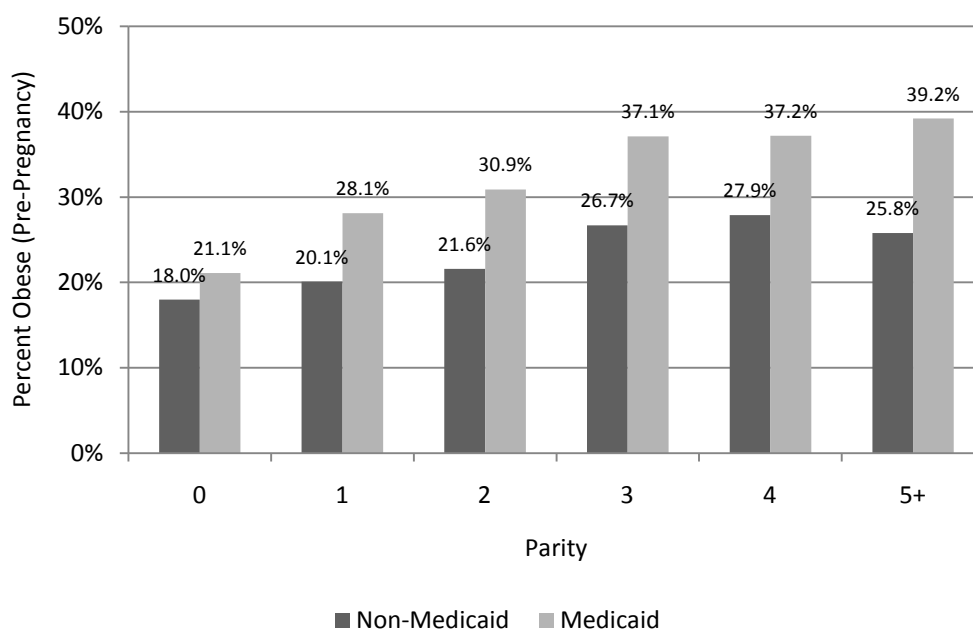
- In 2008, 54% of Medicaid women who gave birth had pre-pregnancy weight indicating they were overweight or obese. Among Non-Medicaid women, 45% were overweight or obese.



## Obesity and Parity

The recommended weight gain for pregnant women depends on the woman's pre-pregnancy BMI and whether she is carrying one baby or more than one. The Institute of Medicine (IOM) developed new guidelines for weight gain during pregnancy in 2009. These guidelines take into consideration changing patterns of obesity in the U.S. and include a recommendation for obese women. As more women enter pregnancy overweight or obese, appropriate weight gain during pregnancy and weight loss after delivery are increasingly important. (IOM guidelines are available at: <http://www.iom.edu/Reports/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines.aspx>)

Prevalence of Obesity (BMI  $\geq 30$ ) By Parity, 2008

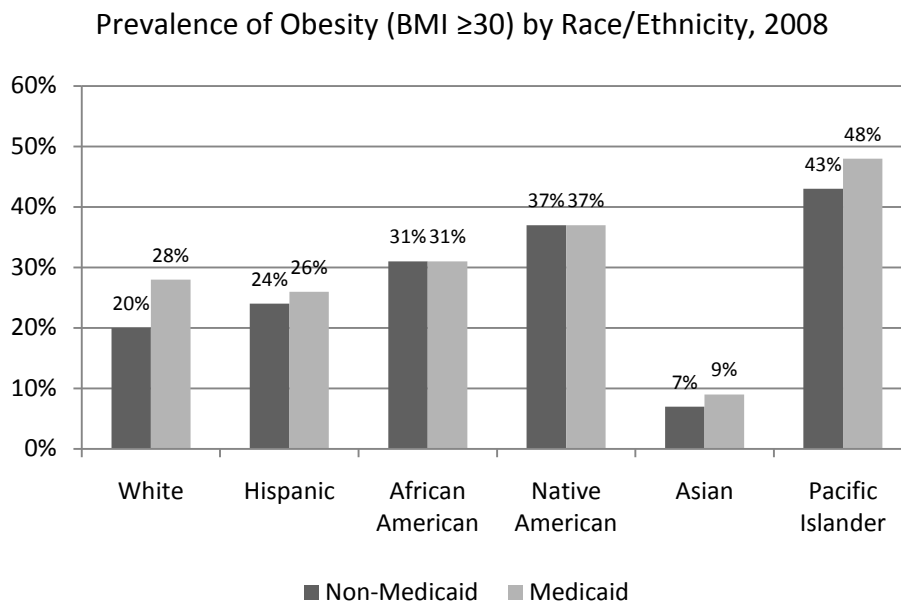


- Among women having their first child (with a parity of 0), one in five is obese before pregnancy: 18% of Non-Medicaid women and 21.1% of Medicaid women were obese before pregnancy.
- The proportion classified as obese is higher for low-income women on Medicaid than for higher-income, Non-Medicaid women at each level of parity.
- With each successive pregnancy, the proportion classified as obese increases steadily. For Medicaid women having their fifth (or greater) child, nearly 4 in 10 are obese before pregnancy—the prevalence of obesity in this group (39.2%) is nearly double the rate for Medicaid women having their first child (21.1%).

## Obesity Prevalence by Race/Ethnicity

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 obesity varies by age, gender, race/ethnicity, and socio-economic status.



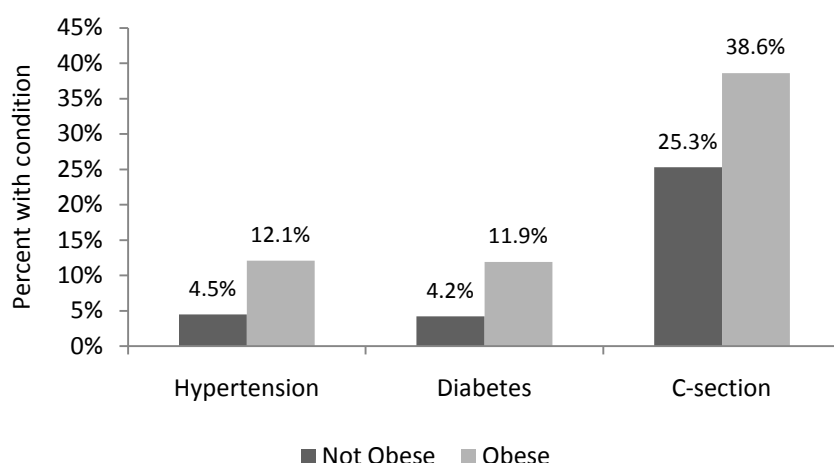
- Among Washington women who gave birth in 2008, Asian women had the lowest proportion of obesity (7.5%) and Pacific Islander women had the highest (46.3%).
- For four groups—White, Hispanic, Asian, and Pacific Islander—Medicaid women had higher rates of obesity than Non-Medicaid women, with the greatest difference among white women.
- For African Americans and Native Americans, the rates of obesity were the same for Medicaid and Non-Medicaid women. This shows the differential effects of poverty and race/ethnicity for different groups of women.

## Consequences of Obesity

As weight increases to the levels of overweight and obese, risks for a wide range of medical conditions—such as heart disease, diabetes, high blood pressure, cancer (breast, colon, and endometrial), stroke, and respiratory problems—also increase. Health consequences of obesity occur both in the general population and among pregnant women. Obese pregnant women have higher rates of delivery by c-section and more complications during and after cesarean delivery. In addition, infants born to obese women have increased risk of still birth, prematurity, macrosomia (large for gestational age), and neural tube defects, and higher rates of childhood obesity (ACOG, 2005).

Overweight and obesity and their associated health problems have a significant impact on the U.S. health care system. One study estimated the annual Medicaid expenditure attributable to obesity for Washington State at \$365 million (Finkelstein, 2004). Indirect costs of obesity include absenteeism, decreased productivity, restricted activity, and loss of future income due to early death.

## Frequency of Pregnancy Complications Among Obese and Non-Obese Women, 2008



- The frequency of hypertension (high blood pressure), either pre-existing or pregnancy-induced hypertension, among obese pregnant women (12.1%) is more than twice that among non-obese pregnant women (4.5%).
- The frequency of diabetes among obese pregnant women (11.9%) is nearly three times greater than among non-obese pregnant women (4.2%).
- The C-section rate among obese pregnant women (38.6%) is 1.5 times greater than that for non-obese pregnant women (25.3%).

**CONCLUSION.** Weight gained during pregnancy tends to accumulate with each successive pregnancy and often stays with the mother for the rest of her life. Pregnancy provides a special opportunity to assess women's nutritional status, to support appropriate weight gain and good nutrition, and, at the same time, to encourage physical activity. Exercise is good for pregnant women, except in certain circumstances. Both during pregnancy and after delivery, exercise can help the mother by keeping the heart and lungs healthy, among other benefits. Regular physical activity can ease many common discomforts of pregnancy, such as constipation, backache, fatigue, sleep disturbances, and varicose veins. Postpartum benefits include mood improvement and weight management. All pregnant women should check with their health care provider before starting or continuing exercise; pregnant women who have not been physically active prior to pregnancy should be encouraged to consider gradually increasing their activities or starting a mild exercise program to gain some of these health benefits.

For further information, see: <http://www.cdc.gov/physicalactivity/everyone/guidelines/pregnancy.html>  
[http://www.marchofdimes.com/professionals/14332\\_1150.asp](http://www.marchofdimes.com/professionals/14332_1150.asp)  
[http://www.acsm.org/AM/Template.cfm?Section=Search&CONTENTID=8638&SECTION=Updated\\_single\\_page&TEMPLATE=/CM/ContentDisplay.cfm](http://www.acsm.org/AM/Template.cfm?Section=Search&CONTENTID=8638&SECTION=Updated_single_page&TEMPLATE=/CM/ContentDisplay.cfm)

**RDA CONTACT**  
Laurie Cawthon, MD, MPH  
360.902.0712

Copies of this paper may be obtained at [www.dshs.wa.gov/rda/](http://www.dshs.wa.gov/rda/)  
or by calling DSHS Research and Data Analysis Division at 360.902.0701.  
Please request REPORT NUMBER 9.99.