

Winter/Spring 2006

# *A Call to Action:* Obesity and Pregnancy

WOMEN'S HEALTH POLICY BRIEF

*"Obesity has a major impact on pregnancy outcomes. It is an important medical problem that has long-lasting consequences for women and their children."*

**Laura Riley, MD**

Director of Labor and Delivery  
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Women's Health at Mass General



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“In Massachusetts, 43% of the women in the WIC program are either overweight or obese prior to their pregnancy and 51% of the WIC participants gain too much weight during their pregnancy.”

**Bureau of Family and Community Health,  
Massachusetts Department  
of Public Health**

## The problem:

More than half of all women of childbearing age are overweight or have obesity, making this one of the most common health problems for pregnant women. And it is getting worse. Obesity in pregnancy includes women who have obesity before they become pregnant and women who become obese from excess weight gain during pregnancy.

Obesity in pregnancy disproportionately affects women in low-income households. Nationwide, 43% of women in the Women, Infants and Children (WIC) program are overweight or have obesity; an increase of 19% in 20 years. Nearly 45% of women in WIC gain an excessive amount of weight during pregnancy — an increase of 11% since 1988. Although non-Hispanic Black women have the highest rate of obesity and the highest rate of weight gain, these increases fall across all racial and ethnic groups.<sup>1</sup>

In Massachusetts, 43% of the women in the WIC program are either overweight or obese prior to their pregnancy and 51% of the WIC participants gain too much weight during their pregnancy.<sup>2</sup>

## Impact on health:

**Obesity causes more complications in pregnancy and childbirth. Pregnant women who are obese are at greater risk for:**

- High blood pressure, which increases the risk for pre-eclampsia and eclampsia;
- Diabetes during pregnancy;
- Miscarriage;
- More cesarean deliveries with higher rates of anesthesia complications and infections;
- Longer stays in the hospital;
- Premature delivery in women with

severe cases of obesity;

- More urinary tract infections and long-term incontinence problems; and
- Failure to start or continue breastfeeding.<sup>3,4,5</sup>

**Babies born to mothers who have obesity are more likely to have health problems including:**

- Increased risk of neural tube defects, such as spina bifida;
- Higher rates of birth injuries;
- Low APGAR scores;
- More admissions to neonatal intensive care units; and
- Higher rates of prenatal death.<sup>6</sup>

**Children of mothers who have obesity are more likely to develop obesity as adults.**

Research shows a strong genetic relationship to obesity and fetal development during pregnancy.<sup>7</sup> Solving the problem of obesity may begin before birth. It is as important to understand the role of genetics, as it is to understand the impact of the environment, culture and economics on weight gain in women and children.

**Reducing obesity before and during pregnancy will improve the health of mothers and their children.**

Obesity is not just a pregnancy issue; it is a health issue. Obesity contributes to problems such as high blood pressure, diabetes, heart disease, and colon and breast cancer.

**Obesity costs too much.**

According to the Centers for Disease Control, obesity causes 112,000 deaths a year — nearly three times more than the toll from drugs and alcohol. The direct healthcare costs of obesity have increased from \$52 billion in 1995 to \$75 billion in 2003.<sup>8</sup> In pregnancy, the cost of prenatal care is 5 times higher for overweight women.

“Awareness and education are the first steps in solving the problem of obesity in women of childbearing age. Our job as clinicians is to work with community leaders to find ways to address obesity before women become pregnant.”

**Fredric Frigoletto, MD**  
Associate Chief, Vincent  
Obstetrics and Gynecology  
Massachusetts General Hospital

## Call to action:

### Increase public awareness.

Women of childbearing age need to know the effects that obesity has on their health and the health of their baby. The problem of obesity during pregnancy is not going away. Like smoking and alcohol use, the harmful effects of obesity during pregnancy are well documented, but not as well known. In the last 10 years with an increase in public awareness programs, smoking rates in pregnant women have decreased by 7% and alcohol use has decreased by 10%.<sup>9,10</sup> At the same time, the percent of obesity in women of childbearing age has almost doubled.<sup>1,11</sup>

### Advocate for programs to address obesity and pregnancy.

Current strategies to address obesity in our nation are not working. It is too late

to wait until a child becomes obese. Scientists are beginning to understand how a mother may pass on weight problems to their children. It is time to refocus efforts to address obesity before birth. Promoting healthy weight for women starts with developing partnerships with community, prenatal and wellness programs. Enlisting the support of primary care clinicians is key to the success of this effort.

### Increase access to healthy foods, especially in underserved populations.

Once pregnant, prenatal care and programs are available to women — yet more than half of pregnancies are not planned. Income, lack of education, ethnic traditions and fewer healthy food options make it harder to eat well. The challenge is to make it easier for all women of childbearing age to make healthy food choices.

<sup>1</sup> The Pediatric Nutrition Surveillance System (PedNSS) and the Pregnancy Surveillance System (PNSS), Centers for Disease Control and Prevention, 2003 [www.cdc.gov/pednss](http://www.cdc.gov/pednss)

<sup>2</sup> Growing concerns about obesity in Massachusetts during pregnancy and early childhood: A statistical analysis of WIC PNSS and PedNSS Data, Bureau of Family and Community Health, Massachusetts Department of Public Health, July 23, 2002

<sup>3</sup> Sebire, N.J., Jolly, M., et. al., *Maternal obesity and pregnancy outcome: a study of 287,213 pregnancies in London*, International Journal of Obesity (2001) 25, 1175 – 1182.

<sup>4</sup> Weiss, Joshua L., Malone, Fergal D. et. al. Obesity, Obstetric complications and cesarean delivery rate – a population-based study, *American Journal of Obstetrics and Gynecology*, (2004) 190, 1091 – 7.

<sup>5</sup> Galtier-Dereure, Florence, Boegner, Catherine and Bringer, Jacques. Obesity and pregnancy: complications and cost, *Am J Clin Nutr* 2000; 71 (suppl) 1242s – 8s.

<sup>6</sup> Watkins, Margaret L., Rasmussen, Sonja A., et.al. Maternal Obesity and Risk for Birth Defects, *Pediatrics* Vol III, No. 5, May 2003 1152-1158.

<sup>7</sup> Beall, Marie H., El Haddad, Mostafa et. al. *Adult Obesity as a Consequence in Utero Programming*, *Clinical Obstetrics and Gynecology*, Volume 47, No. 4, December 2004, pp957 – 965

<sup>8</sup> Jackson, Derrick, *Why Obesity is Winning*, Boston Globe. August 19 2005.

<sup>9</sup> Center for Disease Control Morbidity and Mortality Weekly Report, *Smoking During Pregnancy — United States 1990 — 2002*, Oct. 8 2004/53(39); 911 – 915.

<sup>10</sup> Perry, G., Zyrkowski, C., Clark, L., Yu, S., *Pregnancy-Related Nutrition*, Center of Disease Control — Reproductive Health of Women. <http://www.cdc.gov/reproductivehealth/Products&Pubs/DatatoAction/pdf/rhow9.pdf>

<sup>11</sup> Moore, Thomas R., *Adolescent and Adult Obesity in Women: A Tidal Wave Just Beginning*, *Clinical Obstetrics and Gynecology*. Vol. 46. No. 4, December 2004, pp.883 – 889.

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