

## OREGON PUBLIC HEALTH DIVISION • OREGON HEALTH AUTHORITY

### TIPPING THE SCALES DURING PREGNANCY

In just 9 years from 2000 through 2008, the prevalence of overweight or obesity among Oregon women aged 18–34 years increased from 36–42%.\* Consequently, more women begin pregnancy overweight or obese than in the past. In addition, excessive weight gain during pregnancy has become too common. Pre-pregnancy overweight or obesity and excessive weight gain during pregnancy are often accompanied by chronic disease, and present health risks for the mother and child.<sup>1</sup>

This *CD Summary* will focus on three areas specific to gestational weight gain: 1) revised Institute of Medicine's (IOM) Pregnancy and Pre-pregnancy Weight Gain Guidelines, 2) prevalence of pre-pregnancy obesity and overweight, and excessive gestational weight gain among Oregon women, and 3) simple intervention strategies that you can implement within your own practice.

#### PREGNANCY WEIGHT GAIN GUIDELINES

After more than two decades, the IOM recently revised its guidelines for weight gain during pregnancy.<sup>1</sup> The new guidelines are generally more restrictive than the earlier ones with regard to pre-pregnancy weight and gestational weight gain. The most notable difference is the inclusion of a new recommended weight gain range for obese women. The new guidelines express ideal weight gain in pregnancy as a range for each category of pre-pregnancy Body Mass Index (BMI) to account for differences such as age, race or other factors that may affect pregnancy outcomes (Table 1).

Research evidence substantiates a link between overweight and obesity in pregnancy and adverse outcomes. A somewhat less extensive research literature indicates that excess gestational weight gain alone (in absence of pre-pregnancy overweight or obesity)

\* [www.dhs.state.or.us/dhs/ph/chs/brfs/brfss.shtml](http://www.dhs.state.or.us/dhs/ph/chs/brfs/brfss.shtml)

**Table 1. IOM Guidelines: Recommendations for weight gain during pregnancy**

Pre-pregnancy BMI (kg/m <sup>2</sup> )	Total Weight Gain (lbs)	Weight Gain During 2nd and 3rd Trimester (lbs/week)
Underweight (<18.5)	28–40	1.0–1.3
Normal Weight (18.5–24.9)	25–35	0.8–1.0
Overweight (25.0–29.9)	15–25	0.5–0.7
Obese (>30.0)	11–20	0.4–0.6

might also be associated with adverse short- and long-term consequences. In other words, too much weight gain is probably bad no matter the pre-pregnancy weight and worse if the woman begins pregnancy overweight or obese. Consequences may present prenatally or postpartum, and may even influence the health of the child as an adult (Box, below).<sup>2-5</sup>

#### Box

##### Risks of excessive weight gain during pregnancy

###### Maternal

- gestational diabetes
- hypertension
- pre-eclampsia
- increased likelihood of C-section
- induction of labor
- extended hospital stay
- post-partum obesity
- overweight

###### Child

- large for gestational age
- macrosomia
- childhood obesity

#### OREGON DATA

In 2008, Oregon began collecting birth certificate data for maternal pre-pregnancy weight, height, and weight at delivery. These data allow calculation of pre-pregnancy BMI and gestational weight gain of Oregon mothers. Among Oregon women who delivered a live-born child during 2008, 47% en-

tered pregnancy overweight or obese according to the new IOM guidelines. Forty percent of first-time mothers were overweight or obese. The percentage of women entering pregnancy overweight or obese increases with parity, and 60% of women having their 4<sup>th</sup> child begin pregnancy overweight or obese (Table 2, *verso*). In addition, Oregon women who start pregnancy overweight or obese are more likely to gain more weight than recommended. Among singleton births, 61% of overweight women and 55% of obese Oregon women gain more weight than the guidelines suggest (Table 3, *verso*).

#### INTERVENTION STRATEGIES

If she successfully follows the new IOM guidelines, a woman who begins pregnancy overweight or obese should actually *lose* fat mass that is unrelated to the fetus during pregnancy. Realistically, these goals may be quite difficult to achieve since a woman who begins pregnancy overweight or obese has likely had significant historical difficulty achieving and maintaining an ideal weight. Therefore, as always, clinicians should combine the guidelines and supporting recommendations with good clinical judgment, and should start with a frank and compassionate discussion with the woman about diet and exercise and other barriers to achieving healthy weight gain during pregnancy. Particular attention should be paid to women whose pre-pregnancy BMI falls into the higher category, women who get little exercise before pregnancy or women who consume diets of poor nutritional quality.

#### WHAT YOU CAN DO

- **Promote healthy weight.** If you regularly see patients of childbearing age, helping each patient achieve a healthy weight before becoming pregnant can increase the chance that they will have healthy weight gain during pregnancy and healthy weight loss after pregnancy. Remind your patients that healthy weight loss pre- and post-pregnancy happens slowly



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**Table 2. Percentage of Oregon women by pre-pregnancy BMI category and parity, Oregon live births, 2008 (n=47,295)**

Pre-pregnancy BMI (kg/m <sup>2</sup> )	Parity (%)			
	1	2	3	4+
Underweight (<18.5)	4.3	3.1	2.7	1.8
Normal Weight (18.5–24.9)	54.3	48.2	42.2	36.7
Overweight (25.0–29.9)	22.3	24.7	27.2	28.1
Obese (> 30.0)	17.8	22.6	26.4	31.5

and healthy weight gain during pregnancy should too, about 0.5–1.0 pounds per week during the second and third trimester.

- **Discuss the pregnancy weight gain guidelines with your patient.** Research shows that if a prenatal care provider suggests a weight gain range to a patient, the patient is more likely to gain within the healthy range than if no one had intervened.<sup>2</sup>
- **Talk about a healthy diet and the benefits of physical activity.** Help your patients understand healthy eating patterns, limiting sugar sweetened beverages, and the benefits of exercise. While mothers are technically “eating for two,” remind patients that the second person is very small!
- **Provide referrals.** Because weight gain is multifaceted, referrals to other providers and programs such as registered dietitians and the WIC program can help provide nutrition counseling which may be beneficial in controlling weight during pregnancy.<sup>6</sup>

- **Encourage your patients to lose all of their pregnancy weight before becoming pregnant again.** Pregnancy may be associated with an increase in permanent maternal weight gain, with the effect increasing with increasing parity.<sup>7</sup>

**Table 3. Pregnancy weight gain by maternal pre-pregnancy BMI. Oregon singleton births, 2008 (n=47,295)**

Pre-pregnancy BMI (kg/m <sup>2</sup> )	% of Women gaining more than the IOM recommended amount
Underweight (<18.5)	23.2
Normal Weight (18.5–24.9)	39.2
Overweight (25.0–29.9)	61.2
Obese (> 30.0)	54.8

## CONCLUSION

Weight gain during pregnancy is a topic that is often misunderstood by the general public and health care providers. Too many women enter pregnancy overweight and gain more than recommended in Oregon. Without intervention, we leave Oregon mothers and children at risk for adverse health outcomes before, during, and after pregnancy.

## RESOURCES FOR PRACTITIONERS AND PATIENTS

- Online BMI Calculator (for estimation of pre-pregnancy BMI: [www.nhlbisup-port.com/bmi/](http://www.nhlbisup-port.com/bmi/))
- MyPyramid for Pregnancy: [www.mypyramid.gov/mypyramidmomsACOG](http://www.mypyramid.gov/mypyramidmomsACOG)

- Guidelines for Exercising During Pregnancy: [www.acog.org/publications/patient\\_education/bp045.cfm](http://www.acog.org/publications/patient_education/bp045.cfm)
- Dietary Guidelines for Americans, 2005 (for general nutrition guidance, including special recommendations for pregnant women): [www.health.gov/Dietary-Guidelines/dga2005/document/default.htm](http://www.health.gov/Dietary-Guidelines/dga2005/document/default.htm)

## FOR MORE INFORMATION

Visit Oregon Public Health Department Center for Health Statistics at [www.oregon.gov/DHS/ph/chs/index.shtml](http://www.oregon.gov/DHS/ph/chs/index.shtml)

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