

# Idaho Prepregnancy Body Mass Index

## 2008-2010

### BMI Points of Interest:

How to calculate body mass index:

$$BMI = \frac{mass (lb) \times 703}{(height (in))^2}$$

Body Mass Index  
Classifications:

Underweight: <18.5  
Normal Weight: 18.5-24.9  
Overweight: 25.0-29.9  
Obese: 30.0+

Recommended pregnancy weight gain range (pounds) by prepregnancy body mass index:

Underweight: 28-40  
Normal Weight: 25-35  
Overweight: 15-25  
Obese: 11-20

Example: a 5' 6" (66") mother with a prepregnancy weight of 120 pounds:

$$\frac{84,360}{4,356} = 19.4$$

The expectant mother has a BMI of 19.4, which is considered normal weight, and she should expect to have a healthy weight gain of 25-35 pounds during pregnancy.

### Body Mass Index

Prepregnancy body mass index (BMI) is a measurement of body fat based on the height and weight of an expectant mother. The Institute of Medicine utilizes four body mass indices for classification: underweight, normal weight, overweight, and obese.<sup>1</sup> Prepregnancy BMI can be used to predict certain outcomes of pregnancy, as increased risk for pregnancy complications and adverse outcomes are associated with mothers who deliver outside of normal weight body mass index.<sup>2</sup> These risks include: gestational diabetes and hypertension, higher rates of cesarean deliveries, and neonatal intensive care unit admission. This fact sheet represents Idaho resident mothers who were pregnant for the first time and had a live singleton (non-multiple) birth. Births to mothers under 18 years of age were excluded from analysis. Between 2008 and 2010 there were 23,633 Idaho resident live births limited to meet this criteria with known body mass index.

### Distribution of Body Mass Index by Maternal Characteristics

Prepregnancy Body Mass Index	Underweight	Normal Weight	Overweight	Obese
	BMI <18.5 n=1,042 4.4%	BMI 18.5-24.9 n=12,899 54.6%	BMI 25.0-29.9 n=5,522 23.4%	BMI 30.0+ n=4,170 17.6%
<b>Maternal Characteristics</b>				
Maternal Age (%)				
18-24	5.6	55.7	22.9	15.7
25-34	2.8	53.2	23.9	20.1
35+	1.8	51.3	25.1	21.8
Maternal Race/ Ethnicity (%)				
White	4.2	54.8	23.3	17.7
Black	6.6	47.0	26.5	19.9
American Indian	4.5	38.4	29.9	27.2
Asian Pacific Islander	11.4	64.4	17.6	6.7
Non-Hispanic	4.4	55.1	23.1	17.4
Hispanic	4.2	50.5	25.5	19.8
Maternal Education (%)				
Less than high school	6.7	52.2	23.4	17.7
Completed high school/GED	5.4	51.0	22.9	20.7
Attended college	3.6	56.6	23.5	16.3

Mothers in the 18-24 age range had the highest percentage of underweight prepregnancy BMI, while mothers who were 35+ years of age had the highest percentage of overweight or obese BMI. Asian Pacific Islander mothers had the highest underweight BMI, and had the lowest percentage of prepregnancy overweight or obesity BMI of all the race categories. American Indian mothers had the highest percentage of obese prepregnancy BMI. Hispanics had a higher percentage of overweight and obese prepregnancy BMI compared to non-Hispanic mothers. Mothers who attended college were more likely to have a normal prepregnancy BMI compared to mothers who did not attend college. Mothers who did not attend college had a higher percentage of obese prepregnancy body mass index, compared to mothers who attended college.

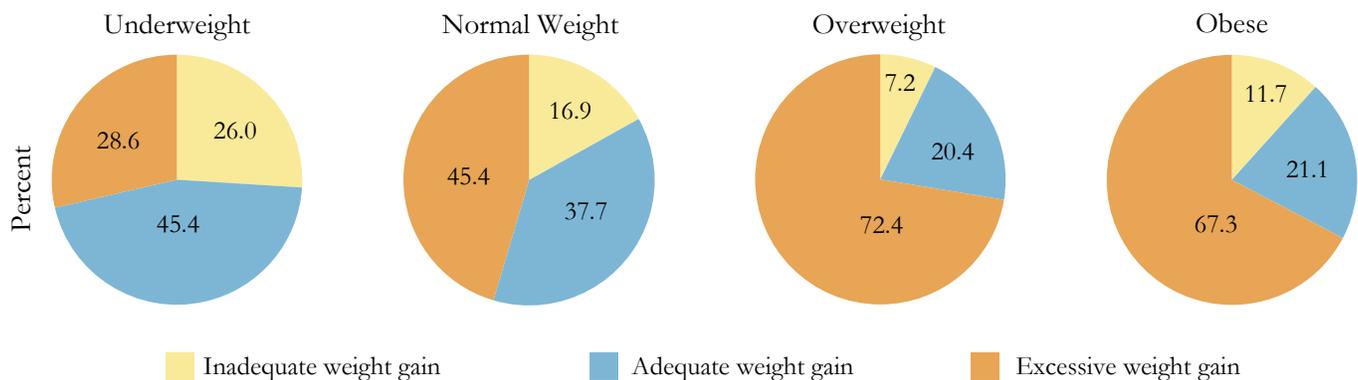
# Pregnancy Weight Gain

Healthy weight gain is an important part to a successful and healthy delivery. The Institute of Medicine has established weight gain ranges for each of the body mass index classifications. According to the Institute of Medicine “a single number cannot accommodate differences such as age, race/ethnicity, or other factors, therefore, a range of weight gain is necessary.”<sup>1</sup>

## Prepregnancy Body Mass Index Categories and Recommended Weight Gain

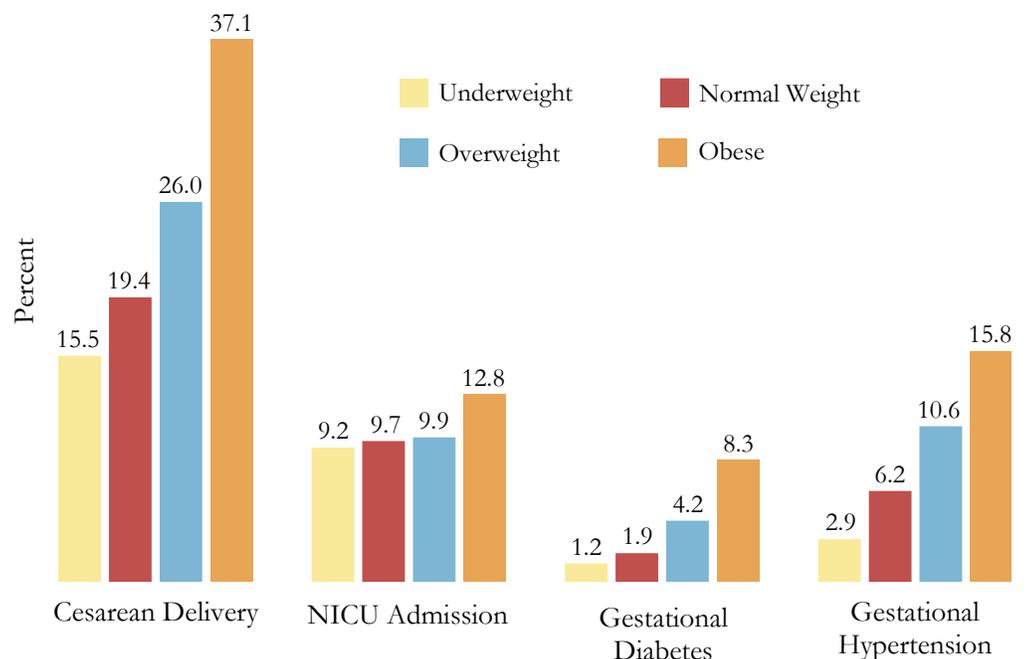
<u>Underweight</u>	<u>Normal Weight</u>	<u>Overweight</u>	<u>Obese</u>
Recommended weight gain: 28-40 pounds	Recommended weight gain: 25-35 pounds	Recommended weight gain: 15-25 pounds	Recommended weight gain: 11-20 pounds

## Idaho Resident Live Births: Percentage of Weight Gain by Prepregnancy Body Mass Index: 2008-2010



## Pregnancy and Delivery Risk Factors by Prepregnancy BMI

Certain pregnancy and delivery risk factors were higher among mothers with prepregnancy BMI classified as overweight or obese. Percentages of neonatal intensive care unit (NICU) admission, gestational diabetes and gestational hypertension was highest among mothers who were either overweight or obese prior to pregnancy. Cesarean delivery percentages was higher among overweight and obese mothers compared to underweight and normal weight mothers.



1. National Research Council. *Weight Gain During Pregnancy: Reexamining the Guidelines*. Washington, DC: The National Academies Press, 2009.  
 2. Callaway LK, Prins JB, et al. *The Prevalence and Impact of Overweight and Obesity in an Australian Obstetric Population*. MJA 2006; 184:56-59.