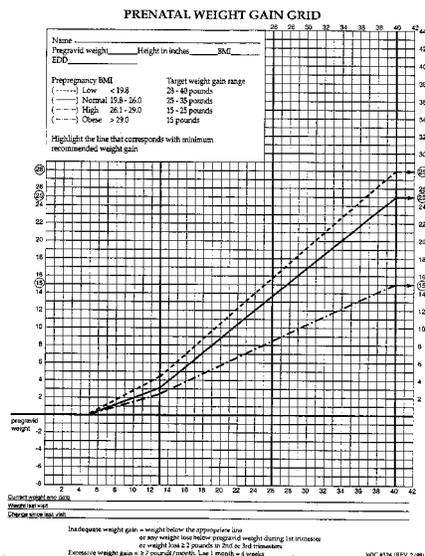


## Prenatal Weight Gain

A woman's weight gain during pregnancy is **very important** in determining the outcome of her pregnancy. Women who do not gain adequate weight during pregnancy tend to give birth to low birth weight (LBW) babies. These infants are less likely to be healthy at birth, are more likely to have serious medical complications, have longer hospital stays and are more likely to die shortly after birth. Excessive weight gain during pregnancy can also have negative effects. Excessive weight gain is associated with complications such as gestational diabetes and difficulties during delivery. Excess weight may also stay with a woman after pregnancy impacting her health for the future.



Because of the strong impact weight gain has on pregnancy, screening for optimal weight gain has become an integral part of the WIC Program. At certification, pregnant women are weighed and the weights are plotted on a Prenatal Weight Gain Grid. Weights at follow-up visits are also plotted on the grid. By following the woman's weight gain on the Prenatal Weight Gain Grid recommendations can be made to help a woman make changes in her diet for an optimal outcome to her pregnancy.

There are two aspects of weight gain which are important to monitor in pregnancy. One is the total amount of weight gain and the other is the **rate** of weight gain. The recommended amount of total weight a woman should gain during pregnancy is determined by her weight status before pregnancy. Studies indicate that normal weight women have the healthiest pregnancies when they gain 25-35 pounds. Women who are underweight need to gain more and women who are overweight need to gain less. The following table lists the recommended weight gains for underweight, normal weight, overweight, and obese women.

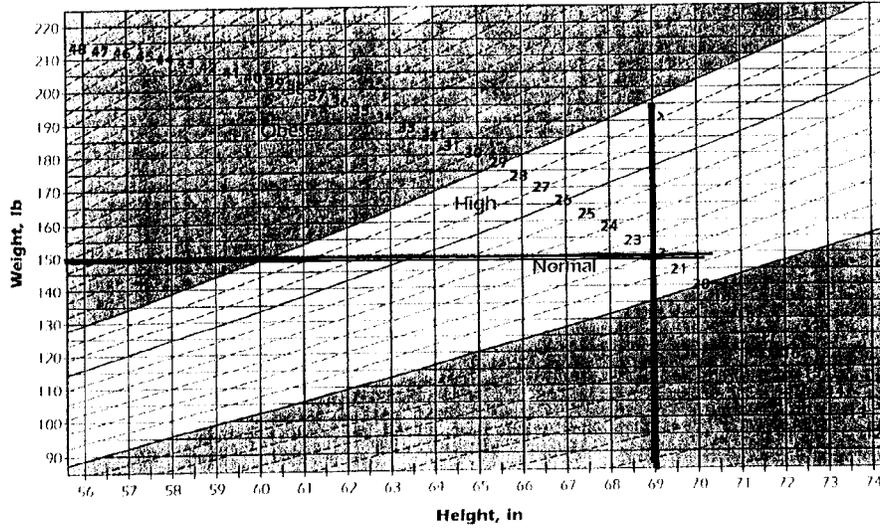
Classification	BMI	Recommended Weight Gain
Underweight	<19.8	28-40 pounds
Normal	19.8-26.0	25-35 pounds
Overweight	26.1-29.0	15-25 pounds
Obese	>29.0	15 pounds

To determine if a woman is normal weight, overweight, or underweight WIC uses Body Mass Index or BMI. BMI compares a woman's weight to her height using a complicated equation (weight in kilograms divided by height in meters squared). You do not need to know this equation. The WIC ASPENS system calculates BMI for each WIC participant. A woman's BMI can be found on the WICPS104 Update Woman Visit screen.

If an estimate of a woman's BMI is needed before her height and weight information are entered into ASPENS there is a BMI chart on the back of the Prenatal Weight Gain Grid. To use the chart for a pregnant woman find the woman's **pre-gravid** weight (not her current weight) on the left side of the chart. Draw a line from her weight across the chart. Find the woman's height on the bottom of the chart and draw a line from her height going up the chart. Where the two lines intersect indicates the woman's approximate BMI. Read the diagonal lines on the chart to find the value for the BMI.

As an example, consider a woman who has a pregravid weight of 150 pounds and height of 5'9" (69 inches). (See chart on following page.) Find 150 pounds on the left margin of the BMI chart. Draw a line from that point going across the chart to the right. Find 69 inches on the bottom of the chart and draw a line up the chart until it crosses the 150 pound weight line. The two lines cross at approximately "22" (slightly more - maybe 22.2) so the woman has an estimated BMI of 22.2. This BMI is in the part of the chart that is labeled "normal." The woman, therefore, is normal weight. She is not overweight or underweight. Her recommended weight gain during pregnancy is 25-35 pounds.

Chart for Estimating Body Mass Index (BMI) Category and BMI (Pounds and Inches)



**Directions**

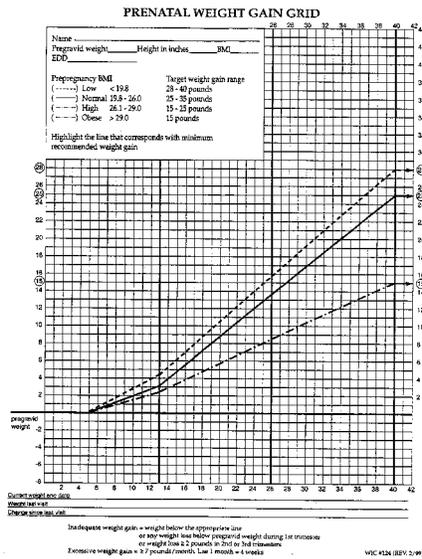
- To find BMI category (e.g., obese), find the point where the woman's height and weight intersect.
- To estimate BMI, read the bold number on the dashed line that is closest to this point.

and Nutrition Board, Institute of Medicine, 1992

## #8 Practice!



1. A pregnant woman has a pregravid weight of 135 pounds and her height is 5'7". What is her approximate BMI? Is she overweight, underweight or normal weight? What is her recommended weight gain during pregnancy?
  
2. A pregnant woman has a pregravid weight of 105 pounds and her height is 5'6". What is her approximate BMI? Is she overweight, underweight, or normal weight? What is her recommended weight gain?
  
3. A pregnant woman has a current weight of 180 pounds and her height is 5'7". What is her approximate BMI? Is she overweight, underweight, or normal weight? What is her recommended weight gain?



**Trimester:** The nine months of pregnancy are divided into three time periods called trimesters. The first trimester ends at 13 weeks, the second at 26 weeks, and the final trimester ends with the birth of the child (usually at 40 weeks).

Look at a Prenatal Weight Gain Grid. Notice the three diagonal lines on the front of the grid. These lines represent the recommended minimal weight gains for underweight, normal, and overweight women. Notice that the “normal” line ends at 25 pounds. This is the minimum recommended weight gain for a normal weight pregnant woman. The upper line (composed of dashes) is for underweight women and shows they should gain a minimum of 28 pounds. The lower line composed of dashes and dots is for overweight and obese women and shows that they should gain a minimum of 15 pounds. The graph does not show maximum recommended weight gains for pregnant women.

In addition to the total amount of weight a woman gains during pregnancy the **rate** at which she gains weight has implications for a healthy outcome to pregnancy. Ideally a pregnant woman would follow her recommended weight gain curve. If you look at the weight gain curves on the Prenatal Weight Gain Grid you will notice that the majority of the weight gain occurs during the last 2 trimesters of pregnancy. It is not recommended that a woman gain all or even a third of her weight during the first trimester of pregnancy. Ideally her weight gain should be similar (though it does not need to be exactly the same) to the curves on the Prenatal Weight Gain Grid. For a normal weight woman the curve shows that she should gain 2-4 pounds during the first trimester and then 3½ pounds per month during the 2nd and 3rd trimesters. Rates of weight gain that are significantly different from this pattern may have negative effects on the outcome of a pregnancy. Referral should be made to the WIC dietitian or nurse when significant deviations occur from the recommended weight gains and rates.

Completing the Prenatal Weight Gain Grid:

1. Complete the box in the top left hand corner of the grid. The actual BMI should be obtained from the WIC ASPENS system when the woman visit data is entered (WICPS104 screen).

2. Depending on a woman's BMI choose the correct line to represent her recommended weight gain curve. Highlight that curve with a highlight pen. It is recommended that staff NOT highlight the woman's weight gain recommendation in the upper left hand corner of the grid. Women may feel offended by having their weight labeled as low, high, or obese.
3. In the left-hand margin of the grid enter the pregravid weight above the line labeled "pregravid weight."
4. Across the bottom of the grid find the number that represents the number of weeks gestation for today's weight. Right under that number write the woman's current weight. On the line below her current weight write her weight last visit (at the first WIC visit a woman's last weight is her pregravid weight). Subtract the last weight from the current weight and write the difference on the line labeled "Change since last visit." Label with a plus or minus sign.
5. If this is a certification visit follow the grid line above the weeks gestation until you come to the pregravid weight line. From there count the squares above or below that indicate her weight gain or loss since she first became pregnant. Each box represents one pound. If a woman has gained 5 pounds over her pregravid weight you would count 5 squares above the pregravid weight line. Make a visible dot at the point. Circle the dot and write the date above the dot.
6. At follow-up visits continue steps 4 and 5 above. Each time you count the squares to indicate weight gained or lost start at the level of the last recorded weight.

Look at the completed grid on the next page. It shows a pregnant woman at 24 weeks who weighs 160 pounds. At 10 weeks (her first visit to WIC) she weighed 149 pounds. Her pregravid weight was 145 pounds. At 10 weeks a dot was made 4 squares above her pregravid weight. At 24 weeks the woman had gained 11 more pounds so a dot was placed at 24 weeks that is 11 squares higher than her weight at 10 weeks.



## **Helpful Hints**

### Unknown Pregravid Weight

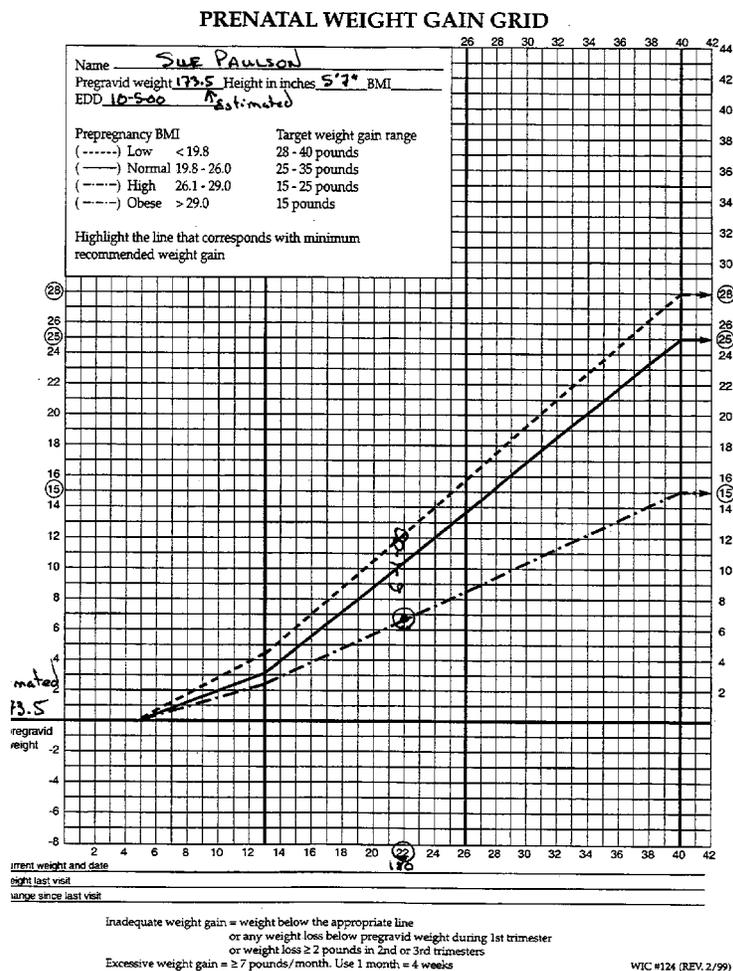
What if the woman does not know her pregravid weight? Most women will have some estimate of their pregravid weight. If the value seems reasonable in comparison to the woman's current weight use the estimated weight. Questions about weight gain or loss since becoming pregnant may also be useful in helping to estimate a woman's pregravid weight based on her current weight.

If a woman has no estimate of her pregravid weight and she is unsure if she has gained or lost weight compared to her current weight, it may be necessary for the WIC staff person to estimate the woman's pregravid weight. Does the woman appear to have been normal weight, underweight, or overweight right before she became pregnant? Discussion with the woman may help to answer this question. If it appears that the woman was normal weight prior to her pregnancy use her number of weeks of pregnancy and plot her current weight on the recommended weight gain curve for normal weight women. Estimate her pregravid weight by counting the squares from the point marked for her current weight down to the line on the grid for her pregravid weight. Use this weight as her estimated pregravid weight on the Prenatal Weight Gain Grid and in ASPENS as her pregravid weight. Note on the grid and in her ASPENS education record that her pregravid weight is estimated. The same would be done for underweight, overweight, and obese women using their appropriate weight gain curves.

Example: A pregnant woman comes into the WIC clinic to be certified. She is at 22 weeks gestation. She just found out this week that she is pregnant. She says she has no idea what her pregravid weight would have been. She does not have a scale and generally does not weigh herself. The only weight she has had taken in the last year was at the doctor's office when she found out she was pregnant. She has not had appreciable nausea and vomiting, but does think she has gained a few pounds since she became pregnant based on how her

clothing fits. By looking at the woman and based on today's height and weight you would guess that she was overweight at the time she became pregnant. In the WIC clinic today her weight is 180 pounds and her height is 5 feet 7 inches.

On the Prenatal Weight Gain Grid find the vertical line that corresponds to 22 weeks gestation. Go up that line from the bottom of the graph until it intersects with the recommended weight gain line for overweight/obese pregnant women. Make a dot on the graph at this point and label it with today's date. Count the number of squares between the recommended weight gain line and the pregravid weight gain line; in this case the difference is 6.5 pounds. Subtract 6.5 from her current weight of 180 pounds ( $180 - 6.5 = 173.5$ ). 173.5 pounds then becomes her estimated pregravid weight for use on the Prenatal Weight Gain Grid and in the ASPENS system.



### Determining Weeks Gestation

How is the number of weeks gestation determined? WIC staff should use the number of weeks gestation calculated by ASPENS. Some staff use handy pregnancy wheels to estimate weeks gestation. This value is not as precise as ASPENS. The value given by ASPENS (based on the EDD) should always be used when recording data in WIC records. The weeks gestation can be found on the ASPENS Update Pregnancy Related Data screen (WICPS103).

### Changes in the EDD

What if the woman reports at a follow-up visit that her expected due date has changed? What should be done depends on the situation. If the change is relatively small and the current grid can be easily altered, cross out the old EDD and write in the new one with the date that it was changed. Adjust new weights (i.e., weights taken since the EDD change) on the graph to represent the change in EDD. Some clinics plot weights in a different color when the EDD has been changed. Occasionally, a new EDD may require that a new Prenatal Weight Gain Grid be completed. This can happen when the changes in the EDD are substantial, when several changes in EDD are made during the pregnancy, or when the EDD has been moved back so that new weights fall on the grid before older weights. The deciding factor is whether the old grid can still be easily understood using a new EDD. If the grid becomes confusing because of multiple changes in the EDD a new Prenatal Weight Gain Grid may need to be made. Do NOT throw away old grids when a new one is completed. The old grid should be attached to the new grid. **Changes in EDD must ALWAYS be made in the ASPENS system on the Pregnancy Related Data screen (WICPS103) when a new EDD is reported.**

### Frequency of Weights During Pregnancy

How often should a woman be weighed during her pregnancy? Ideally at each WIC visit. WIC regulations require that a woman be weighed at least once each trimester while she is on the WIC Program. Because of the importance of a

woman's weight gain in the outcome of her pregnancy, and because it is an easy measurement to obtain, it is recommended that pregnant women be weighed at all WIC visits. Remember that all weights must be entered into the ASPENS system on the Woman Visit Data screen (WICPS104).

## #9 Practice!



1. Complete the Prenatal Weight Gain Grid on the next page using the following information:

Audrey Lewis is a 26 year old pregnant woman. She is 5'7" tall. Her pregravid weight is 140 pounds. At 16 weeks (June 16th ) her weight was 143 pounds. At 24 weeks (August 12) her weight was 151 pounds. Her expected due date is December 2. Her BMI is 21.87.

2. Complete the Prenatal Weight Gain Grid on page 53 using the following information:

Antonia Adams is a 23 year old pregnant woman. She is 5'10" tall. She does not know her pregravid weight, but she is fairly sure that she has not gained more than 6-8 pounds since she became pregnant. Her current weight at 15 weeks gestation is 135 pounds. Her expected due date is July 13.

3. What is the recommended weight gain for a pregnant woman with a BMI of 29?
4. What is the recommended weight gain for a normal weight woman?



