

Module C:

PRENATAL NUTRITION AND BREASTFEEDING OBJECTIVES

TABLE OF CONTENTS

PRENATAL NUTRITION OVERVIEW	1
Nutritional Needs of Pregnant Women.....	2
Pregnancy-Related Problems & Solutions.....	13
Diabetes.....	19
Substance Abuse.....	18
Indicators of Nutritional Need.....	20
PROGRESS CHECK	23
LEARNING ACTIVITIES	25
1: Discussion of Pregnancy Issues.....	26
2: Observations.....	28
3: Case Scenarios.....	30
4: Role Plays.....	36
PROGRESS CHECK ANSWERS	38

Breastfeeding Objectives	40
PROGRESS CHECK	41
LEARNING ACTIVITIES	42
1: Breastfeeding Views.....	43
2: Breastfeeding Misconceptions.....	45
PROGRESS CHECK ANSWERS	49

PRENATAL NUTRITION OVERVIEW

Introduction

This module will help the Trainee assess the pregnant woman's nutritional status and provide individual education.

Learning Objectives

After completing this module the Trainee will be able to:

- Describe the general nutritional needs of pregnant women
 - Describe common nutrition-related problems of pregnant women and identify solutions to these problems
 - Describe the effects of substance abuse on the mother and child
 - Identify indicators of nutritional need to determine if a pregnant woman is eligible for WIC
 - In a case study situation, assess prenatal growth, assess biochemical and clinical status, and evaluate the diet of a pregnant woman using the nutrition questionnaire
 - In a role-play situation, interview a pregnant woman, assess her nutritional status, prioritize her needs, and provide individual education
-

NUTRITIONAL NEEDS OF PREGNANT WOMEN

Importance of Pregnant Woman's Diet

What a woman eats during her pregnancy may affect:

- Fetal development
 - Delivery
 - The woman's comfort and emotions
 - Maternal and infant health outcomes
-

Fetal Development

The food choices a woman makes during her pregnancy will greatly affect her baby's health. Women with poor diets are much more likely to have children who:

- Are stillborn
- Are premature
- Have birth defects
- Have a low birth weight (< 5 lbs.)

In the first trimester, a lack of the nutrient folate may result in birth defects. In the third trimester, lack of protein and calories can cause problems with brain development.

Pre-Term Delivery

Women with healthy diets are less likely to deliver prematurely than women with poor diets.

Comfort of the Pregnant Woman

Fatigue, morning sickness, constipation, leg cramps, and other pregnancy discomforts can be reduced or prevented with a good diet.

A good diet may also help the pregnant woman's emotional state. It can help moderate mood swings.

Nutrition Recommendations

The chart on the next page lists general nutrition recommendations for pregnant women.

Continued on next page

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

General Nutrition Recommendations for Pregnant Women

- Pregnancy increases the need for energy (calories) and most nutrients, especially iron, calcium, and folic acid (folate).
- Eat a healthy, varied, and adequate diet to meet prenatal needs.
- Gain weight as recommended based on pre-pregnancy weight and trimester.
- Take daily supplements as recommended by the health care provider.
- Avoid:
 - Weight reduction diets
 - Sodium-restricted diets (unless prescribed by their physician)
 - Diuretics (these cause the body to urinate more often)
 - Harmful substances (such as alcohol, tobacco, and drugs)
 - Excessive fat, salt, caffeine, sugar, and artificial sweeteners
 - Homemade remedies, herbs, special diets (restrictive diets)
 - Skipping meals or fasting during pregnancy is not advised.

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Recommended Diet

A pregnant woman's diet should have the nutrients and calories needed to support the changes in her body and to help the fetus grow and develop.

Recommended Food Group Servings

Use the *Food Group Servings for Prenatal Women* chart on the following pages to guide you when talking to a pregnant participant.

Pregnant women whose caloric needs are low or moderate (such as women who are not physically active) should eat at the low-end of the range of servings.

Those women whose caloric needs are high (such as women who are physically active) should select additional servings from the food groups.

Pregnant teens have slightly greater nutritional needs than women. They should select four choices from the Milk Products group to obtain the necessary calcium needed for bone growth.

continued on next page

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Food Group Servings for Pregnant Women

Food Group	Amount Per Day	Foods
Breads, Cereals & Grains	7-9 choices	(Whole Grain) Bread, tortilla, crackers, roll, bun, bagel, muffin, biscuit, pancake, cooked rice, noodles, macaroni, spaghetti, cereal <u>Folic Acid Sources:</u> Fortified breakfast cereal, wheat germ
Vegetables	3 cups	<u>Vitamin A-Rich Vegetables:</u> Carrot, greens, tomato, spinach, winter squash, sweet potato, bok choy, red bell pepper, red chili pepper <u>Vitamin C–Rich Vegetables:</u> Broccoli, tomato, cabbage, cauliflower, bell pepper, chili pepper <u>Folic Acid Sources:</u> Leafy greens, asparagus <u>Other Vegetables:</u> Potato, peas, green beans, corn, lettuce, summer squash, zucchini, asparagus
Fruits	2 cups	<u>Vitamin A-Rich Fruits:</u> Cantaloupe, apricot, mango, papaya <u>Vitamin C–Rich Fruits:</u> Orange, lemon, tangerine, cantaloupe, strawberry, kiwi, grapefruit, mango, papaya, orange juice, grapefruit juice <u>Folic Acid Sources:</u> Orange juice, oranges, strawberries, cantaloupe, other melons <u>Other Fruits:</u> Apple, banana, grapes, peach, nectarine, raisins, pear, watermelon, pineapple

continued on next page

**Refer to the “Give Your Baby a Healthy Start” handout for serving sizes.*

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Food Group Servings for Pregnant Women *(continued)*

Food Group	Amount per day	Foods
Milk Products	3-4** choices ** for teens	Milk, yogurt, cheese, cottage cheese. <i>Eat mostly non-fat or low-fat milk products.</i>
Protein Foods	6 choices	<u>Vegetable Protein:</u> Cooked dry beans or peas, peanut butter, nuts, seeds, soy products (such as tofu) <u>Animal Protein:</u> Chicken, turkey, fish, beef, pork, other meats, eggs <u>Folic Acid Sources:</u> Liver, beans, sunflower seeds <i>These foods also are good sources of iron.</i>

continued on next page

*Refer to the [Give Your Baby A Healthy Start](#) handout for serving sizes.

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Important Nutrient Needs for Pregnant Women

Nutrient	Function
Calcium	Calcium is necessary to replenish the mom's calcium stores. Babies need calcium to develop healthy teeth and bones.
Iron	<p>A woman's blood volume doubles over the course of her pregnancy to help deliver oxygen and nutrients to the fetus.</p> <ul style="list-style-type: none"> • Needs increase significantly • Difficult to meet increased needs by diet alone, a supplement is often required.
Folic Acid (Folate)	<p>Folic acid is a B vitamin associated with healthy babies.</p> <ul style="list-style-type: none"> • Inadequate folic acid may increase the risk of neural tube birth defects such as spina bifida and anencephaly • Megaloblastic anemia (too few red blood cells in body)
Protein	Protein supports the production of new cells, enzymes, and hormones. As the baby grows, it needs protein to develop hair, skin, nails, and organs. Protein also helps the mom with fluid balance, preventing swelling and maintaining a healthy blood pressure.

Note: Refer to Task III, Module A, "Vitamins and Minerals" for food sources.

Pregnant vegetarians and vegans may have additional nutrition needs, please refer to your nutritionist.

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Adequate Weight Gain

Adequate weight gain is closely related to a good pregnancy outcome.

The amount of weight a pregnant woman should gain will depend on:

- Her weight before she became pregnant
- Her age (teenagers have greater needs)
- The number of fetuses she is carrying (twins, triplets, etc)
- Her health status (diabetes, high blood pressure)

Total Weight Gain Recommendations

WIC recommends women gain between 25 to 35 pounds if she was within normal weight range prior to the pregnancy.

The chart below shows recommended total weight gain ranges for pregnant women by pre-pregnancy body mass index (BMI) and pre-pregnancy weight category.

Total Weight Gain Recommendations

Pre-Pregnancy BMI	Pre-Pregnancy Weight Category	Total Weight Gain Recommendation
< 18.5	Underweight	28–40 lbs.
18.5 – 24.9	Normal weight	25–35 lbs.
> 25.0 –29.9	Overweight	15–25 lbs.
≥ 30.0	Very Overweight	11–20 lbs.

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Monthly Weight Gain Recommendations

Women will gain weight at varied rates from the recommendations. A woman who has nausea and vomiting during the first 4 or 5 months of her pregnancy will most likely be challenged meeting the following recommendations.

If a woman has trouble gaining weight, she should at least maintain her weight.

The chart below shows recommended minimum monthly weight gains for the **second** and **third trimesters** by pre-pregnancy weight category for single fetus pregnancies.

Pre-Pregnancy Weight	Minimum Monthly Weight Gain
Underweight	4 pounds
Normal Weight	2 pounds
Overweight	2 pounds
Obese	1 pound

Where Do the Pounds Go?

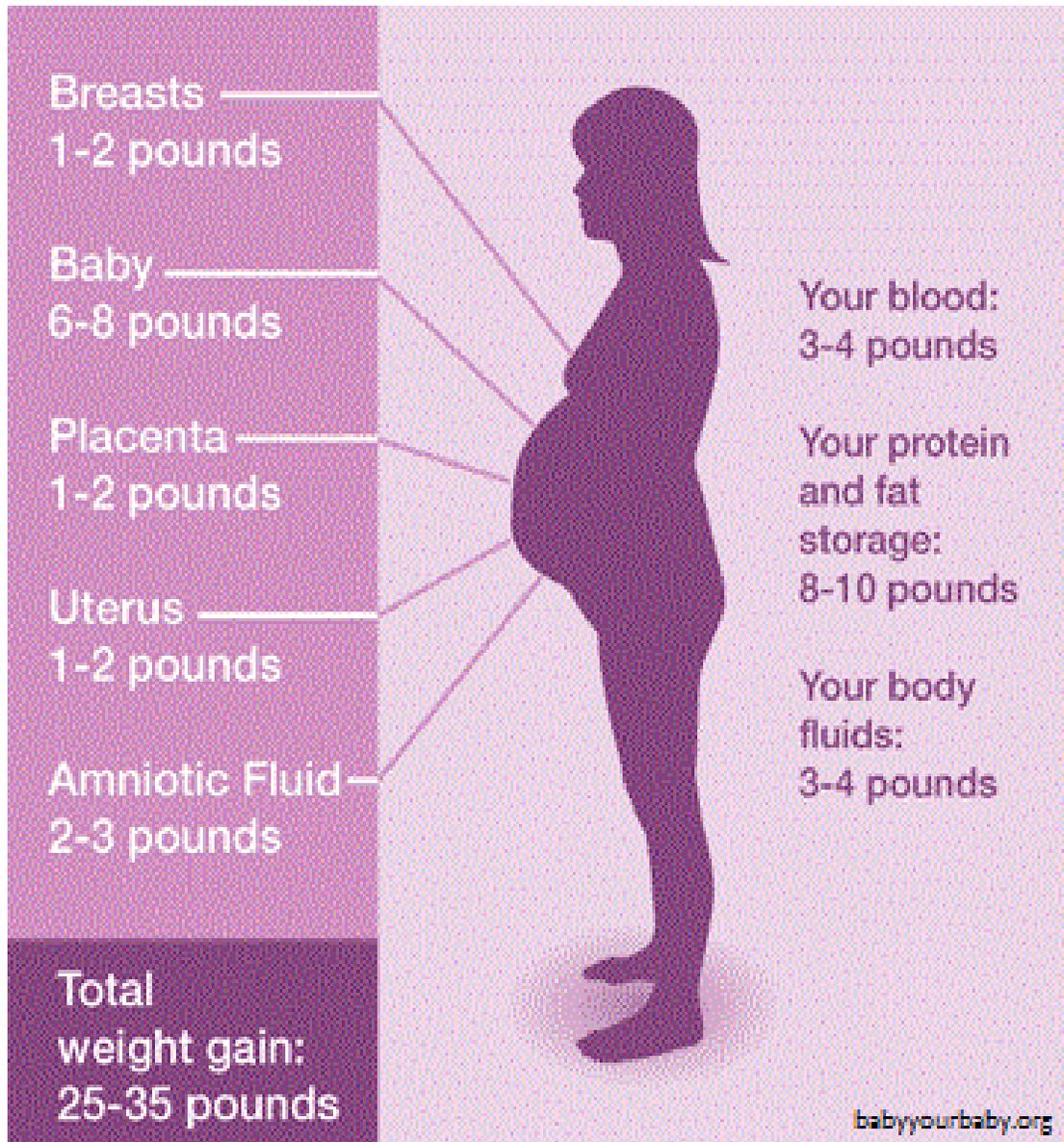
Why does a pregnant woman need to gain about 25-35 pounds for a 7½ pound baby?

The diagram on the next page shows how the pregnant woman and her fetus use this additional weight.

continued on next page

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Where the Pounds Go...



continued on next page

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Not Enough Weight Gain

A baby whose mother does NOT gain enough weight during her pregnancy is more likely to:

- Grow poorly in the uterus,
- Be small for age, and/or
- Be born prematurely,
- Poor growth and development

Too Much Weight Gain

A baby whose mother gains too much weight during her pregnancy may have:

- A high birth weight,
- A cesarean section delivery, and/or
- Birth trauma.

A woman who gains too much weight during her pregnancy may have:

- Gestational diabetes,
- Difficulty at delivery,
- High blood pressure,
- Problems losing weight after the baby is born.

Calories

Calories give the pregnant woman energy for her body to function.

If the pregnant woman does not consume enough calories to meet the needs of pregnancy, her body will use its own protein stores for energy. This can harm the fetus because it needs protein for growth.

If the pregnant woman consumes too many calories, she will gain too much weight and may have problems losing the weight after delivery.

The chart below gives guidelines on the number of additional calories needed above the woman’s usual dietary intake.

Additional Calories Needed during Pregnancy

Woman Who Is:	Additional Calories Needed Each Day
<ul style="list-style-type: none"> • Underweight • Expecting twins, triplets 	>300
<ul style="list-style-type: none"> • Normal weight 	300*
<ul style="list-style-type: none"> • Overweight or Obese 	< 300

** A woman could get 300 calories by drinking a glass (8 ounces) of 1% milk, eating a flour tortilla (6") and a small banana.*

NUTRITIONAL NEEDS OF PREGNANT WOMEN *(continued)*

Fluids

During pregnancy a woman needs more fluids.

Both the mom and fetus need fluids. Extra fluids help the pregnant woman:

- Avoid constipation,
- Reduce excessive swelling,
- Help the body get rid of waste products, and
- Reduce the risk for urinary tract infection.

A pregnant woman should consume at least 8 cups of fluids a day. Healthy choices of fluids can include milk, juice, water, soup, decaffeinated tea and low-calorie beverages.

- Limit high sugar drinks such as sport drinks (Gatorade), soda, etc.
- Limit juice to one serving (6 oz.) per day

Pregnant women should limit the amount of caffeinated products they consume. Coffee, tea, cola-flavored sodas, and cocoa products are usually high in caffeine. (Drinking large amounts of caffeinated products may lead to premature labor).

PREGNANCY-RELATED PROBLEMS & SOLUTIONS

Problems

A pregnant woman may experience all or some of the following common problems.

- Anemia
- Constipation
- Heartburn
- Leg cramps
- Nausea, vomiting
- Swelling
- Diabetes/gestational diabetes
- Difficulty sleeping

Learn more about these problems and their solutions to help pregnant participants identify solutions.

Chart of Problems & Solutions

The chart on the following pages lists some common problems pregnant women may have and some possible solutions.

Refer the participant to the RD if a pregnant woman reports use of herbs, laxatives, homemade remedies, medications, or special diets not specifically approved by her doctor.

Learning Activity 1

To help you learn more about some of the pregnancy issues at WIC, you may want to try **Learning Activity 1** found at the end of this module.

continued on next page

PREGNANCY-RELATED PROBLEMS & SOLUTIONS *(continued)*

Common Problems & Solutions

Problem	Solution(s)
<p>Anemia (low iron levels in the blood)</p> <p>Women need more iron when pregnant because their blood volume increases by 50%. The blood is needed for the baby and maternal tissues.</p> <p>Pregnant women may not be able to eat large amounts of iron rich foods (e.g., meat) during pregnancy due to nausea, vomiting, taste aversions or limited food availability.</p>	<div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 10px;"> <p><i>Ask if participants would like to talk to a Registered Dietitian if: Hgb <10g/dl or Hct <30%.</i></p> </div> <ul style="list-style-type: none"> • Eat iron-rich foods (such as meat, beans and iron-fortified cereals) along with Vitamin C-rich foods (such as orange juice, tomatoes, and broccoli). Vitamin C helps the body absorb iron. • Cook foods in cast-iron cookware. • The body absorbs iron more efficiently during pregnancy. • Many doctors will recommend iron supplements. • Take iron supplements on an empty stomach with Vitamin C juice. If nausea or stomach pain occurs, eating some crackers can reduce these symptoms. • Decrease intake of coffee and tea. Caffeine interferes with iron absorption. • A side effect of iron supplements is constipation.
<p>Constipation (less often than usual or difficult bowel movements) may be due to:</p> <ul style="list-style-type: none"> • Being tired • Medications • Anxiety • Inappropriate diet (low in fiber foods) • Not enough fluids • Changes in hormones cause changes in the intestinal movements 	<div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 10px;"> <p><i>Do NOT use laxatives unless advised by a doctor (some products can harm the fetus).</i></p> </div> <ul style="list-style-type: none"> • Drink: <ul style="list-style-type: none"> ○ Plenty of fluids to help keep the stool soft ○ Small amounts of prune juice ○ Hot or very cold liquids to bring on a bowel movement • Eat high-fiber foods (such as bran cereals, whole-grains, dried fruits, fresh fruits and vegetables) throughout the day. • Do mild exercise (such as walking) each day. • Do not force bowel movements. Allow enough time to use the restroom. Relax and do not rush. • Do NOT use mineral oil since it interferes with absorption of fat-soluble vitamins. • Talk to your doctor if your constipation continues or becomes painful.

continued on next page

PREGNANCY-RELATED PROBLEMS & SOLUTIONS *(continued)*

Common Problems & Solutions

Problem	Solution(s)
Heartburn	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><i>Do NOT use medications unless advised by a doctor</i></p> </div> <ul style="list-style-type: none"> • Watch your portion sizes. Small frequent meals and snacks instead of large meals • Small amounts of bland food between meals (this helps absorb the acid) • Chew well and slowly to avoid swallowing large chunks of food • Avoid drinking large quantities of liquids when eating a meal • Do NOT eat immediately before going to bed. (Last food should be 2-3 hours before bedtime) • Prop the head of your bed up 2-3 inches so your head is higher than your stomach when sleeping • Wait 30 minutes after eating before you lie down • Drink plenty of fluids • Drink milk or eat several crackers • Avoid lying down flat. Raise the head when sleeping • Do mild exercise (such as walking) • Sit quietly and breathe deeply • Wear loose fitting clothing • Talk to your doctor if you continue to have frequent heartburn after trying these tips <p>Avoid or limit:</p> <ul style="list-style-type: none"> • Fried, fatty, spicy or carbonated foods as well as alcohol • Limit acidic foods (tomatoes, citrus, salad dressings.) Watch chocolate, mint)

PREGNANCY-RELATED PROBLEMS & SOLUTIONS *(continued)*

Common Problems & Solutions

Problem	Solution(s)
Leg Cramps	<ul style="list-style-type: none"> • Get enough calcium by eating or drinking milk products. • Get enough magnesium by eating whole grains, beans, dried fruits, nuts and seeds. • Eat only the recommended servings of protein foods. • Drink plenty of water throughout the day. • Try not to stand or sit in one spot for long periods. Do not sit with your legs crossed. • Gently stretch your leg muscles before going to bed. Stretch your heel out and pull your toes towards you. • Limit intake of processed foods and carbonated beverages. • To increase blood flow in legs: <ul style="list-style-type: none"> ○ Do mild exercise (such as walking) ○ Stretch calf muscles and curl the toes ○ Take a warm bath ○ Place a hot water bottle or a towel soaked in hot water over the cramped muscle

continued on next page

PREGNANCY-RELATED PROBLEMS & SOLUTIONS *(continued)*

Common Problems & Solutions

Problem	Solution(s)
<p>Nausea/Vomiting</p>	<ul style="list-style-type: none"> • Eat: <ul style="list-style-type: none"> ○ Crackers, dry cereal, yogurt, popcorn, toast, or other high-carbohydrate food before getting out of bed in the morning ○ Small amounts of food every few hours ○ A light bedtime snack, or tea • Avoid fried, fatty, spicy, or strong smelling foods • Avoid going a long time without eating • Avoid strong smells like cooking meats, coffee, cigarette smoke and alcohol • Find a smell you enjoy, such as a scented candle, to sniff when you feel sick • Take prenatal vitamins with food at the time of the day when you are not feeling sick • Stay hydrated • Drink fluids between meals instead of with meals • Move slowly and avoid sudden movements • Open windows for fresh air and to get rid of odors • Avoid brushing teeth immediately after waking up (Putting things in the mouth may cause nausea) <p>Talk to your doctor if you have been vomiting constantly for 24 hours or are not urinating at least every six hours.</p>
<p>Swelling</p> <p><i>Most pregnant women have swelling of feet, puffiness in the ankles and legs during the last months of pregnancy.</i></p>	<ul style="list-style-type: none"> • Avoid standing for long periods of time. • Rest with legs elevated. • Lie on side. • Wear loose fitting clothing and avoid tight pants, thigh-high stockings, and/or knee-high stockings. • NEVER use diuretics or “water pills” because they can cause a dangerous imbalance in the body. (Unless prescribed by a physician)

PREGNANCY-RELATED PROBLEMS & SOLUTIONS *(continued)*

Common Problems & Solutions

Problem	Solution(s)
<p>Pregnancy-Induced Hypertension (PIH)</p> <p><i>PIH is high blood pressure occurring during pregnancy</i></p> <p><i>PIH symptoms include:</i></p> <ul style="list-style-type: none"> • <i>A puffy face for more than 12 hours</i> • <i>Swelling in the hands</i> • <i>Headaches</i> • <i>Vision problems</i> • <i>A rapid increase in weight</i> 	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>A woman with PIH should get immediate medical care.</p> </div>

DIABETES

Problem	Solution(s)
<p>Pre-Diabetes</p> <p>The blood sugar levels are higher than normal, but not high enough to be diagnosed as Gestational Diabetes Mellitus (GDM) or Diabetes Mellitus (DM).</p> <p>Gestational Diabetes</p> <p>Women may be diagnosed with GDM if they have high blood sugar during their pregnancy.</p> <p>Definition of Diabetes</p> <p>Diabetes is a condition where sugars stay in the bloodstream and are not able to enter the body's cells. This may be due to insufficient insulin, or insulin not being used efficiently. This can cause damage to the arteries including the heart and kidneys.</p> <p>High blood sugar during pregnancy results in above average infant weight. This can lead to complications during delivery for both the mother and infant. Following a diabetic diet during pregnancy maintains normal blood sugar levels and can help reduce or prevent complications. Some women with GDM will need to take medications to control blood sugars.</p> <p>All pregnant women are screened for GDM. Early prenatal care and intervention can prevent the complications.</p> <p>A history of GDM can lead to the onset of Type II Diabetes after a women turns 40.</p> <p>For more information check out the following website.</p>	<ul style="list-style-type: none"> • Control blood sugar through diet and exercise. • Get regular prenatal care. • Refer to a nutritionist for Medical Nutrition Therapy. • Follow medical provider's advice and/or referrals (e.g., to special programs like "Sweet Success.") • Follow up after delivery is important to determine if blood sugars have returned to normal. Blood sugar levels go down after delivery and may be normal; however, they may rise within 6 weeks after delivery. • After pregnancy, GDM usually goes away but may return with subsequent pregnancies. • Treatment can include diet, oral medications, and insulin.

SUBSTANCE ABUSE

Definition

Substance abuse (or drug abuse) is the use of alcohol, tobacco, recreational drugs, or over-the-counter and prescription medications in a manner not medically or legally approved.

Substance Abuse During Pregnancy

Drug use during pregnancy can cause serious problems for the mother and fetus. A woman who uses harmful drugs during her pregnancy is more likely to give birth to an infant with:

- Low birth weight
- Developmental problems
- Birth defects
- Human immunodeficiency virus (HIV) (from unsanitary needles)
- Hepatitis (from unsanitary needles)
- Early death

The most common substance abused during pregnancy is tobacco.

The second most common substance abused during pregnancy is alcohol. Use of alcohol can have a negative impact on fetal development during all stages of pregnancy. WIC and the American Academy of Pediatrics recommend women consume NO alcohol during pregnancy.

Chart of Common Drugs

The chart on the next page lists effects for the following groups of drugs:

- Alcohol
 - Inhalants
 - Marijuana
 - Narcotics
 - Stimulants
 - Depressants
 - Hallucinogens
 - Tobacco
 - Prescription medications
-

continued on next page

SUBSTANCE ABUSE *(continued)***Effects of Some Common Substances Used During Pregnancy**

Drug Type & Common Names	Effects
Alcohol	<ul style="list-style-type: none"> • Problems for mother: <ul style="list-style-type: none"> ○ Impaired judgment (may result in abuse and neglect of child) ○ Cancer, heart and liver damage ○ Miscarriage • Problems for child: <ul style="list-style-type: none"> ○ Low birth weight ○ Fetal Alcohol Syndrome (facial feature malformations, heart defects, deformities, poor growth, behavioral issues, miscarriage) ○ Low IQ ○ Developmental delays
Inhalants Marijuana Narcotics Depressants Hallucinogens Stimulants	<ul style="list-style-type: none"> • Problems for mother: <ul style="list-style-type: none"> ○ Miscarriage ○ Still birth • Problems for child: <ul style="list-style-type: none"> ○ Low birth weight ○ Premature birth ○ Birth defects ○ Delayed growth ○ Developmental problems ○ Addiction ○ Early death ○ Behavioral problems ○ Heart, brain, liver damage
Tobacco	<ul style="list-style-type: none"> • Problems for mother: <ul style="list-style-type: none"> ○ Addiction ○ Cancer, lung and heart disease ○ Miscarriage ○ Still birth • Problems for child: <ul style="list-style-type: none"> ○ Premature birth ○ Low birth weight ○ Respiratory problems ○ Premature death

INDICATORS OF NUTRITIONAL NEED

Charts of Indicators of Nutritional Need

The WIC Program Manual (WPM) provides policy and procedures on charting “indicators of nutritional need” for participants.

Overview: Refer to [WPM-210-09](#)

Anthropometric: Refer to [WPM-210-10](#)

Biochemical: Refer to [WPM-210-11](#)

Clinical: Refer to [WPM-210-12](#)

Dietary: Refer to [WPM-210-13](#)

Non-Specific Nutrition Codes: Refer to [WPM-210-14](#)

Learning Activity 2 through 4

To help you reinforce your learning about the pregnancy issues at WIC, you may want to try **Learning Activities 2 through 4** found at the end of this module.

PROGRESS CHECK

1. Mark the following as “TRUE” or “FALSE”.

- _____ WIC recommends a gain 25 to 35 pounds for normal weight pregnant woman.
- _____ All pregnant women gain weight exactly at the same rates.
- _____ A baby whose mother does NOT gain enough weight during her pregnancy is more likely to grow poorly in the uterus, be small for gestational age, and/or be born prematurely.
- _____ A woman who gains too much weight during her pregnancy may have gestational diabetes, difficulty at delivery, high blood pressure, and/or problems losing weight after the baby is born.

2. The amount of weight a pregnant woman should gain is based on her _____ weight.

3. Name 3 problems common to pregnant women.

4. For each of the food groups listed in the chart below, write in the amount recommended for a pregnant woman each day. Use *Give Your Baby a Healthy Start* pamphlet.

FOOD GROUP	AMOUNT PER DAY
Breads, Cereals and Grains	
Vegetables	
Fruits	
Milk Products	
Protein Foods	

PROGRESS CHECK *(continued)*

5. Match the common pregnancy-related problem to a possible solution.

<u>Problem</u>	<u>Solution</u>
_____ Anemia	A. Avoid lying down flat. Raise the head when sleeping.
_____ Constipation	B. Eat foods high in iron and Vitamin C.
_____ Heartburn	C. Avoid standing for long periods of time.
_____ Leg Cramps	D. Increase the amount of fiber in the diet.
_____ Nausea	E. Keep the legs warm for good blood flow.
_____ Swelling	F. Avoid brushing teeth right after waking up.

6. List 2 effects of smoking during pregnancy.

7. List 2 effects of drinking alcohol during pregnancy.

8. Identify the following indicators of nutritional need for a pregnant woman. Write in “**A**” for **anthropometric**, “**B**” for **biochemical**, “**C**” for **clinical**, and “**D**” for **dietary**.

- _____ Diabetes
- _____ Low weight gain or weight loss during pregnancy
- _____ Smoking cigarettes
- _____ Congenital blood disorder (sickle cell anemia)
- _____ Low hemoglobin
- _____ Drinks whole milk

LEARNING ACTIVITIES

The following activities are included and are recommended for interactive learning:

- **Learning Activity 1:** Discussion of Pregnancy Issues
- **Learning Activity 2:** Observations
- **Learning Activity 3:** Case Scenarios
- **Learning Activity 4:** Role Plays

ACTIVITY 1: DISCUSSION OF PREGNANCY ISSUES

Learning Objectives

After completing this activity, the Trainee will be familiar with some of the pregnancy issues seen at WIC.

Instructions

1. Ask your supervisor/mentor to arrange for you to spend some time, at least an hour, with one of your WIC coworkers.
 2. Ask your coworker to discuss their experiences with pregnancy issues at WIC.
 3. Ask the following questions about the pregnant participant:
 - *What are the most commonly observed nutrition problems?*
 - *What are the most commonly observed indicators of nutritional need?*
 - *What are some challenges you have experienced when assessing her nutritional status?*
 - *What are your recommendations to help Trainees prepare for addressing her needs?*
 4. Write down your notes on the next page.
 5. When you are finished, discuss your findings with your mentor/supervisor.
-

ACTIVITY 1: DISCUSSION OF PREGNANCY ISSUES

Ask your coworker to discuss their experiences with pregnancy issues at WIC.

Notes:

What are your most commonly observed nutrition problems?

What are your most commonly observed indicators of nutritional need?

What are some challenges you have experienced when assessing the nutritional status of a pregnant participant?

What are your recommendations to help Trainees prepare for addressing the pregnant participant's needs?

ACTIVITY 2: OBSERVATIONS

Learning Objectives

After completing this activity, the Trainee will be able to explain how to:

- Interview a pregnant woman
- Assess a pregnant woman's nutritional status
- Prioritize needs
- Provide individual education

Instructions

1. Have your mentor or supervisor arrange to observe several individual nutrition education sessions with a pregnant woman.
2. Observe your coworker as they:
 - Assess the woman's needs/problems
 - Prioritize these needs/problems
 - Provide individual education

Use Learner-Centered Education or Motivational Interviewing techniques.

3. Write down your notes on the next page.
4. Discuss your observations with your mentor or supervisor.

ACTIVITY 2: OBSERVATIONS

Notes:

ACTIVITY 3: CASE SCENARIOS

Learning Objectives

After completing this activity, the Trainee will be able to assess a pregnant woman's anthropometric, biochemical, clinical, and dietary status.

Instructions

1. Review each of the following five case scenarios.
 2. Refer to page 20 of this training module to access the WPM links to identify the anthropometric, biochemical, clinical and dietary risk codes.
 3. Complete the form following each case scenario.
 4. Identify any referrals or handouts to offer the participant.
 5. Talk to your supervisor/mentor if you need additional help.
 6. When you are finished, discuss your responses with your supervisor/mentor.
-

ACTIVITY 3: CASE SCENARIOS

Case Scenario 1:

Rebecca is 26 years old. The following information is available about her:

- Height is 5 feet, 1 inch
- Pre-pregnancy weight is 110 pounds
- Current weight is 112 pounds
- Last menstrual period was 2 months ago
- Hematocrit is 32.0%
- Smokes ½ pack (10 cigarettes)/day
- Nutrition questions show she likes to eat sushi.

Assessment:

Pre-pregnancy weight: normal overweight underweight

Number of weeks pregnant:

Weight gain:

What are her **anthropometric** risks?

What are her **biochemical** risks?

What are her **clinical** risks?

What are her **dietary** risks?

Referrals/handouts:

ACTIVITY 3: CASE SCENARIOS

Case Scenario 2:

Cassandra is 16 years old. The following information is available about her:

- Height is 5 feet, 7 inches
- Pre-pregnancy weight is 130 pounds
- Current weight is 137 pounds
- Last menstrual period was 2 months ago
- Hematocrit is 30.8%
- Has bruises on her arm and says her boyfriend beat her
- Nutrition questions show she does not eat vegetables.

Assessment:

Pre-pregnancy weight: normal overweigh underweight

Number of weeks pregnant:

Weight gain:

What are her **anthropometric** risks?

What are her **biochemical** risks?

What are her **clinical** risks?

What are her **dietary** risks?

Referrals/handouts:

ACTIVITY 3: CASE SCENARIOS

Case Scenario 3:

Rosario is 23 years old. The following information is available about her:

- Height is 5 feet, 9 inches
- Pre-pregnancy weight is 140 pounds
- Current weight is 143 pounds
- Last menstrual period was 2 months and 1 week ago
- Hematocrit is 33.9%
- She is temporarily living in a motel
- Nutrition questions show she does not eat many whole grains.

Assessment:

Pre-pregnancy weight: normal overweight underweight

Number of weeks pregnant:

Weight gain:

What are her **anthropometric** risks?

What are her **biochemical** risks?

What are her **clinical** risks?

What are her **dietary** risks?

Referrals/handouts:

ACTIVITY 3: CASE SCENARIOS

Case Scenario 4:

Xena is 30 years old. The following information is available about her:

- Height is 5 feet, 6 inches
- Pre-pregnancy weight is 175 pounds
- Current weight is 183 pounds
- Last menstrual period was 21 weeks ago
- Hematocrit is 30.9%
- She has not seen a doctor since she became pregnant
- Nutrition questions show she drinks whole milk.

Assessment:

Pre-pregnancy weight: normal overweight underweight

Number of weeks pregnant:

Weight gain:

What are her **anthropometric** risks?

What are her **biochemical** risks?

What are her **clinical** risks?

What are her **dietary** risks?

Referrals/handouts:

ACTIVITY 3: CASE SCENARIOS

Case Scenario 5:

LaShonda is 21 years old. The following information is available about her:

- Height is 5 feet, 3 inches
- Pre-pregnancy weight is 160 pounds
- Current weight is 160 pounds
- Last menstrual period was 2 months ago
- Hematocrit is 33.6%
- She has a 7-month old infant son
- Nutrition questions show she frequently eats and likes fried foods.

Assessment:

Pre-pregnancy weight: normal overweight underweight

Number of weeks pregnant:

Weight gain:

What are her **anthropometric** risks?

What are her **biochemical** risks?

What are her **clinical** risks?

What are her **dietary** risks?

Referrals/handouts:

ACTIVITY 4: ROLE PLAYS

Learning Objectives

After completing this activity the Trainee will be able to:

- Interview a pregnant woman.
- Assess her nutritional status.
- Prioritize her needs.
- Provide individual education.

Background

A role play is a scenario in which two or more people act out a “scene as though it is real life”. Props are not required but may be helpful.

Instructions

1. Ask your mentor, supervisor, or a co-worker to role play any three of the five roles (A-E) described on the following page.
2. Using the information you have learned about prenatal nutrition, role play a WIC Trainer counseling these three pregnant women.
***Remember to promote breastfeeding in each session.**
3. Mentor/Supervisor/Co-Worker: Using the role plays as your guide, act out the role of the participant. Try to be as realistic as possible.
4. After each session, ask your co-worker to share their observations of your role play. Ask for feedback on your strengths as well as any areas for improvement.

ACTIVITY 4: ROLE PLAYS

5 Participants

Role Play A	Debbie Coleman is 22 years old. She is 15 weeks pregnant. She is 4 feet, 11 inches tall and weighs 157 pounds. Her pre-pregnancy weight is 153 pounds. Her hemoglobin is 10.6 gm/dl. She smokes and averages about 20 cigarettes per day. Her nutrition questionnaire shows she eats very little fruit and no vegetables.
Role Play B	Grace Nguyen is 15 years old. She is 2 months pregnant. She is 5 feet, 5 inches tall and weighs 122 pounds. Her pre-pregnancy weight is 120 pounds. Her hemoglobin is 11.0 gm/dl. She lives in a homeless shelter. Her nutrition questionnaire shows she eats very few protein foods.
Role Play C	Tina Dickson is 24 years old. She is 21 weeks pregnant and has not gone to see her doctor. She is 5 feet, 11 inches tall and weighs 215 pounds. Her pre-pregnancy weight is 200 pounds. Her hemoglobin is 12.8 gm/dl. Her nutrition questionnaire shows she eats very few whole grains.
Role Play D	Evita Juarez is 26 years old. She is 8 months pregnant. She is 5 feet, 4 inches tall and weighs 160 pounds. Her pre-pregnancy weight is 135 pounds. Her hemoglobin is 10.2 gm/dl. Her nutrition questionnaire shows she drinks whole milk.
Role Play E	Tanya Wilson is 21 years old. She is 5 months pregnant. She is 6 feet tall and weighs 183 pounds. Her pre-pregnancy weight is 170 pounds. Her hemoglobin is 9.8 gm/dl. Her nutrition questionnaire shows she eats many high fat foods.

PROGRESS CHECK ANSWERS

1. Mark the following as “TRUE” or “FALSE”.

TRUE WIC recommends a normal weight pregnant woman gain 25 to 35 pounds.

FALSE All pregnant women gain weight exactly at the same rates.

TRUE A baby whose mother does NOT gain enough weight during her pregnancy is more likely to grow poorly in the uterus, be small for gestational age, and/or be born prematurely.

TRUE A woman who gains too much weight during her pregnancy may develop gestational diabetes and have difficulty with delivery, incur high blood pressure, and/or challenges losing weight after the baby is born.

2. The amount of weight a pregnant woman should gain is based on her pre-pregnancy weight.

3. Name 3 problems common to pregnant women.

ANY 3 OF THE FOLLOWING RESPONSES ARE CORRECT:

- **Anemia**
- **Constipation**
- **Heartburn**
- **Leg cramps**
- **Nausea**
- **Swelling**

4. For each of the food groups listed in the chart below, write in the amount recommended for a pregnant woman each day. Use *Give Your Baby a Healthy Start* pamphlet.

Food Group	Amount Per Day
Breads, Cereals and Grains	7-9 choices <i>1 choice = 1 slice bread, 1 cup dry cereal or ½ cup rice</i>
Vegetables	3 cups
Fruits	2 cups
Milk Products	3-4 choices <i>1 choice = 1 cup cheese or 1 ½ ounces cheese</i>
Protein Foods	6 choices <i>1 choice = 1 ounce meat, 1 egg or ¼ cup cooked beans</i>

PROGRESS CHECK ANSWERS *(continued)*

5. Match the common pregnancy-related problem to a possible solution.

<u>Problem</u>	<u>Solution</u>
<u>B</u> Anemia	A. Avoid lying down flat. Raise the head when sleeping.
<u>D</u> Constipation	B. Eat foods high in iron and Vitamin C.
<u>A</u> Heartburn	C. Avoid standing for long periods of time.
<u>E</u> Leg Cramps	D. Increase the amount of fiber in the diet.
<u>F</u> Nausea	E. Keep the legs warm for good blood flow.
<u>C</u> Swelling	F. Avoid brushing teeth right after waking up.

6. List 2 effects of smoking tobacco during pregnancy.

ANY 2 OF THE FOLLOWING RESPONSES ARE CORRECT:

- ***Miscarriage***
- ***Still birth***
- ***Premature birth***
- ***Low birth weight***
- ***Premature death***

7. List 2 effects of drinking alcohol during pregnancy.

ANY 2 OF THE FOLLOWING RESPONSES ARE CORRECT:

- ***Miscarriage***
- ***Fetal Alcohol Syndrome***
- ***Low IQ***
- ***Developmental delays***
- ***Low birth weight***

8. Identify the following indicators of nutritional need for a pregnant woman. Write in "A" for anthropometric, "B" for biochemical, "C" for clinical, and "D" for dietary.

- C Diabetes
- A Low weight gain or weight loss during pregnancy
- C Smoking cigarettes
- B Low hemoglobin
- D Drinks whole milk

Breastfeeding Objectives

Learning Goal	Peer Counselor (PC) Handbook Topic	PC Handbook Pages	Peer Counselor Handbook Topics Covered
Benefits to the mother and baby	Formula and Its Disadvantages	30-33	Reviews ingredients of formula and compares with breastmilk. The disadvantages to babies, mothers, families and society are reviewed.
Myths, barriers, common problems and solutions	Challenges to Breastfeeding	115-125	Discusses common challenges to breastfeeding: hospital practices, lack of confidence, lack of support, body image, diet, embarrassment, returning to work or school and busy lifestyles
	Early Breastfeeding Problems	63-80	Discusses early breastfeeding problems: Sore nipples, engorgement, plugged ducts, mastitis, thrush, jaundice, spitting up, slow weight gain, failure-to-thrive and breast refusal.
	Helping Mothers with Special Challenges	92-105	Discusses helping mothers with special challenges: Twins, premature babies, sick or hospitalized babies/mothers, mothers with diabetes, mothers who should not breastfeed, and mothers who are grieving or experiencing postpartum depression.
Feeding and Storage Guidelines	Breast Anatomy and Milk Production	7-14	Reviews anatomy of the breast, hormones involved with milk production, feedback inhibitor of lactation, breast storage capacity, and the stages of milk production.
	Exclusive Breastfeeding, Baby Cues, Getting Breastfeeding Off to a Good Start and Signs of Successful Breastfeeding	33-57	Discusses exclusive/full breastfeeding as a gold standard, feeding cues and patterns, sleepy, fussy and colicky babies, making enough milk, skin-to-skin contact, positioning, latching, weight gain and effective feeds, plus importance of diaper output.
	Expressing Milk	106-110	Reviews hand expression, pumps, and storage.
Referrals for Support	Referral to a Lactation Specialist or Health Care Provider	124-125	The pages referenced list of specific situations and identify the lactation specialist. Referring to a lactation specialist or health care provider is discussed throughout the handbook.

Resource: [WIC Peer Counselor Handbook](#)

PROGRESS CHECK

1. Name 3 benefits of breastfeeding:

2. According to the American Academy of Pediatrics, breastfeeding _____ is ideal for the _____ after birth and should continue for at least one year.

3. True or False: Which of the following are reasons a woman should NOT breastfeed?

- _____ The breast hurts.
- _____ She has diagnosed HIV infection.
- _____ She works full-time.
- _____ She is on chemotherapy.

4. Below are 3 statements a woman might make regarding her concerns about breastfeeding. For each, write a response to assure her these concerns will not prevent successful breastfeeding.

a. "Breastfeeding will tie me down"

b. "I doubt I can make enough milk"

c. "It will be embarrassing to breastfeed in public"

LEARNING ACTIVITIES

The following activities are included and are recommended for interactive learning:

- **Learning Activity 1:** Breastfeeding Views
- **Learning Activity 2:** Breastfeeding Misconceptions

ACTIVITY 1: BREASTFEEDING VIEWS

Learning Objectives

After completing this activity the Trainee will be aware of some of the breastfeeding views of the local community.

Instructions

1. Ask five different people to answer the question on the next page. Ask family, friends, teachers, WIC participants, but do NOT ask WIC staff.
 2. Discuss with your mentor or supervisor what you learned.
-

ACTIVITY 1: BREASTFEEDING VIEWS

Question: What are your thoughts about breastfeeding?
(Ask person to explain their views)

Identify Person (i.e. participant's friend, family)	Response/Feedback
1)	
2)	
3)	
4)	
5)	

ACTIVITY 2: BREASTFEEDING MISCONCEPTIONS

Learning Objectives

After completing this activity the Trainee will be able to correct some of the misconceptions participants may have about breastfeeding.

Instructions

1. For each of the statements on the next page write a response to help promote breastfeeding as the norm for infant feeding and provide information to minimize the participant's misconceptions about breastfeeding.
 2. When responding remember to create an environment where the participant feels comfortable.
 3. Discuss your responses to the statements with your supervisor or mentor.
-

ACTIVITY 2: BREASTFEEDING MISCONCEPTIONS

Situation 1:

“I cannot breastfeed. I do not have enough milk.”

Response:

Situation 2:

“I have to go to work, so I will have to stop nursing my baby.”

Response:

ACTIVITY 2: BREASTFEEDING MISCONCEPTIONS *(continued)*

Situation 3:

“I cannot breastfeed. My breasts are too small.”

Response:

Situation 4:

“I feel uncomfortable exposing my breasts in public. I won’t be able to breastfeed.”

Response:

ACTIVITY 2: BREASTFEEDING MISCONCEPTIONS *(continued)*

Situation 5:

“I do not eat healthy. Why should I breastfeed my baby?”

Response:

Situation 6:

“My friends told me to get formula.”

Response:

PROGRESS CHECK ANSWERS

1. Name 3 benefits of breastfeeding:

ACCEPTABLE ANSWERS INCLUDE:

- **Breastfeeding is specific for human infants**
- **Breastfeeding saves money and reduces missed work**
- **Breastfeeding is readily accessible**

2. According to the American Academy of Pediatrics, breastfeeding **exclusively** is ideal **for the first 6 months** after birth and should continue for at least **one year**.

3. True or False: Which of the following are reasons a woman should NOT breastfeed?

FALSE The breast hurts.

TRUE She has diagnosed HIV infection.

FALSE She works full-time.

TRUE She is on chemotherapy.

4. Below are 3 statements a woman might make regarding her concerns about breastfeeding. For each, write a response to assure her these concerns will not prevent successful breastfeeding.

POSSIBLE ANSWERS MIGHT INCLUDE:

a. “Breastfeeding will tie me down.”

Most moms prefer to stay close to their babies if given the option. A breast pump may be appropriate, depending on a person’s situation. Although during the first 6-8 weeks after delivery mom is establishing her milk supply and should limit the use of a breast pump.

b. “I doubt I can make enough milk”

Breast milk output increases with more frequent breastfeeding. Appropriate counseling and support can help most women overcome problems with milk production.

c. “It will be embarrassing to breastfeed in public”

There are ways to breastfeed discreetly and to time feedings so fewer feedings would take place away from home.