

WIC Prenatal Health Modules

1, 2 & 3

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This text is intended to be used in conjunction with the online portion of these modules.

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Module 1

Introduction

Pregnancy can be one of the most amazing times in a woman's life. This is a time to take extra special care to ensure a woman and her baby stay completely healthy. Pregnancy profoundly affects a woman's body in many ways. Her metabolism, hormones, body weight and nutrient needs all change.

Eating a healthy diet, gaining the proper amount of weight and making positive lifestyle choices all can help a woman have the healthiest possible pregnancy.

In this module, we'll discuss prenatal health in terms of healthy lifestyle choices and food safety.

Prenatal Health

Women who receive prenatal care are more likely to:

- Have healthier babies,
- Experience fewer complications during labor and recovery compared to women who don't seek prenatal care.

As soon as a woman thinks she's pregnant, she should see a health care provider such as an obstetrician, family practitioner or nurse practitioner.

Exercise

According to the American College of Obstetricians and Gynecologists, most pregnant women who were active before pregnancy can continue to exercise moderately for 30 minutes most days.

Suggested exercises include:

- Walking
- Swimming
- Riding a stationary bicycle
- Prenatal aerobics classes

During exercise, pregnant women should always remember to stay cool and drink plenty of water.

Before beginning any exercise routine, pregnant women should first consult their doctor.

Dental Care

Dental care takes on added importance during pregnancy. Periodontal disease, more commonly called 'gum disease' causes a bacterial gum infection that can lead to complications during pregnancy. As with other infections in the body, a person makes certain substances and chemicals to fight the infection. In pregnant women, these substances travel through the body to the uterus increasing risk for:

- Premature delivery
- Low birth weight
- Preeclampsia.

It's extremely important for pregnant women visit their dentist, as well as brush and floss daily.

Caffeine

Caffeine is a stimulant commonly found in:

- Coffee
- Tea
- Colas
- Chocolate
- Cocoa
- Some over-the-counter medication
- Energy drinks

Effects of drinking caffeine while pregnant are still unclear. Women who drink larger amounts are advised to cut back but using the following tips:

- American Dietetic Association – limit intake to less than 300 mg of caffeine per day (three 6ounce cups of coffee or seven 12-ounce cans of caffeinated soda)
- Decrease slowly
- Try half decaffeinated
- Keep hands busy
- Try a brisk walk for energy boost

Smoking, Alcohol and Drugs

Smoking, alcohol and drug use may cause problems for mother and fetus. Miscarriage and stillbirth rates are higher for mothers who use these substances. The baby may also suffer addiction and withdrawal after delivery.

Smoking

Smoking linked to:

- Low birth weight
- Premature births
- Miscarriages
- Other conditions

The goal of for the pregnant woman to quit entirely, if she's unable, she should try to cut down on the amount of cigarettes she smokes each day.

For smokers concerned about weight gain, discuss some ideas for eating right and staying active during pregnancy instead of smoking.

Alcohol

Since researchers haven't determined a safe amount of alcohol to consume during pregnancy, the best advice is to not consume any alcohol during pregnancy.

Drinking alcohol during pregnancy can cause serious birth defects:

- Fetal Alcohol Syndrome (FAS)
- Fetal Alcohol Spectrum Disorder (FASD)

Drugs

All types of illegal drugs can have devastating effects on an unborn baby.

Medications and Herbal Supplements

A woman should not take any medication, herbal supplements **unless first consulting her doctor** (not even over-the-counter medications).

Medications:

- Some drugs are extremely dangerous for a human fetus
- Other drugs helpful during pregnancy for preexisting conditions (asthma, high blood pressure and diabetes)

Herbal supplements:

- Some supplements contain megadoses of nutrients that can be harmful
- Some herbal products can cause uterine contractions that may lead to miscarriage (blue cohosh, juniper, pennyroyal and sage)
- Herbal home remedies may be dangerous, always check with doctor

Lead

Lead can cross the placenta and effect the development of the fetus. More lead is absorbed if the mother's diet is low in iron, calcium, protein or zinc.

Sources of lead include:

- Lead paint (on houses, crafts and toys)
- Soil
- Lead soldiers
- Some ceramic dinnerware and lead crystal

Food Safety

Foodborne illness (food poisoning) comes from various bacteria found in food often causing vomiting and diarrhea. For pregnant women, the illness becomes even more severe as she can pass the foodborne infection on to her unborn baby.

Food Safety Tips

- Thoroughly wash hands, utensils and kitchen surfaces
- Remove dirt and rinse raw fruits and vegetables under running water
- Don't eat raw or undercooked eggs, meat, poultry, fish or shellfish
- Don't eat raw sprouts or unpasteurized milk, cheese or juices
- Keep raw meats and juices separate from other foods
- Use a cooking thermometer to ensure thorough cooking
- Properly chill all leftovers and other foods that should be refrigerated

Listeriosis

Listeriosis is a foodborne illness contracted from eating soft cheeses, cold deli-style meats and poultry. Pregnant women are 20 times more likely to contract listeriosis. An infected mother may feel flu-like symptoms and can pass the illness on to her fetus causing premature delivery, miscarriage, stillbirth or other serious health problems

Prevention:

- Do not eat unpasteurized soft cheeses such as brie, feta, camembert, blue-veined or Mexican style cheeses (queso blanco or queso fresco)
- It is safe to eat hard cheeses, semi-soft cheese such as mozzarella, processed cheeses, cream cheeses, cottage cheese and yogurt
- Reheat hotdogs, luncheon meats and cold cuts until steaming hot
- Do not eat raw or undercooked eggs, meat, poultry, fish or shellfish

Toxoplasmosis

Toxoplasmosis is caused by a parasite found in cat litter. If a pregnant woman becomes infected, her fetus is at risk for severe disease.

Prevention:

- Cook all meat thoroughly
- Wash fruits and vegetables well
- Have someone else change cat litter box or wear gloves
- Wear gloves when gardening or handling soil since some cats use gardens as a litter box.

Methylmercury

Methylmercury and other substances can be present in high levels in certain fish.

U.S. Food and Drug Administration and Environmental Protection Agency recommendations:

- Eat up to 12 ounces a week (two average meals) of a variety of fish or shellfish low in mercury
- Limit intake of albacore or tuna steak to 6 ounces per week (one average meal). Tuna steaks and canned albacore (white) tuna generally have higher levels of mercury than canned light tuna
- Fish low in mercury include – shrimp, canned light tuna, salmon, pollock and catfish

Module 2

Introduction

As mentioned in module 1, women experience dramatic changes to their bodies during pregnancy. In module 2, we'll discuss those changes in terms of weight gain, important nutrients and food sources, healthy eating and common discomforts.

Weight Gain

While many women may cringe at the idea, gaining weight during pregnancy can increase a woman's chance of having a healthy baby along with a healthy pregnancy. Most women return to a healthier post partum weight after delivery if they don't gain excess weight during pregnancy.

Women experience problems during pregnancy when:

- Underweight/overweight at the start of pregnancy – have a higher risk for complications
- Overweight/obese – higher risk for gestational diabetes, high blood pressure, cesarean delivery, inpatient hospitalization during pregnancy
- Poor weight gain – premature birth or restricted infant growth

Prenatal Weight Gain Ranges

The following recommendations are based on pre-pregnancy weight:

- Mothers who are underweight - gain 28-40 lbs
- Mothers who are normal weight - gain 25-35 lbs
- Mothers who are overweight - gain 15-25 lbs
- Mothers who are obese - gain 11-20 lbs

Counseling tips for weight gain

1. Women will gain 1 – 4.5 pounds in the first trimester of pregnancy.
2. Women who were underweight or normal weight before pregnancy may gain about 1 pound/week in the last two trimesters of pregnancy.
3. Women who were overweight or obese before pregnancy may gain about ½ pound/week in the last two weeks of pregnancy.

4. Individual weight gains are best discussed with the woman's health care provider, who will identify factors that may affect weight gain, including special medical concerns.
5. For close-up pictures of each month's fetal development. www.marchofdimes.com/pnhec/28699_2134.asp
6. Healthy weight gain ranges in pregnancy vary by the mother's pre-pregnancy weight. To learn if a woman is considered underweight, normal weight, overweight, or obese, the Body Mass Index (BMI), based on her height and weight are used. To check BMI – click the link - www.nhlbisupport.com/bmi/
7. The Institute of Medicine's May, 2009 report on Pregnancy Weight Gain, lists weight gain by pre-pregnancy BMI: www.iom.edu/pregnancyweightgain
8. Weight gains are needed to increase blood, breasts, uterus, placenta, amniotic fluid additional body fat, as well as the baby's weight. For a chart that shows the approximate weight of pregnant tissues click this link. www.marchofdimes.com/pnhec/159_153.asp

Calorie Needs

Generally, a woman doesn't need to add significant calories to her diet until the start of the second trimester. At that point a woman's calorie needs will depend on her pre-pregnancy weight, her rate of weight gain and her physical activity. The extra calories should come from healthy food.

A pregnant woman needs:

- 340 extra calories per day during the second trimester
- 450 extra calories per day during the third trimester

Important nutrients and food sources

Folate (the main form of this vitamin found in food) and folic acid (the Synthetic form)

- Pregnant women need 1 ½ times amount non-pregnant (600 mg per day)
- Helps prevent neural-tube defects (improper development of brain or spinal cord – spina bifida)
- Important before conception, first 4 weeks of pregnancy
- Potential becoming pregnant should take supplements

Iron

Iron helps an expectant mother's blood carry oxygen. As a result, a woman's blood volume increases 50 percent during pregnancy.

- Need 1 1/2 times more than non-pregnant levels
- Non-pregnant – 18 mg per day, Pregnant – 27 mg per day

Chart

<p>More iron absorbed when:</p> <ul style="list-style-type: none">• Vitamin C food is combined with iron rich food, such as tomatoes with beans• Eating foods containing heme iron with foods containing non-heme iron – such as eating beef with spinach or black-eyed peas• Use vitamin C rich foods in meals – serve green and red peppers with chicken or beef and orange juice with fortified cereal.• Foods cooked in iron pots, such as tomatoes in spaghetti sauce or chili, absorb small amount of iron in food• Include lean meats in your diet. Iron in meat helps absorb iron from plant sources	<p>Less iron is absorbed when:</p> <ul style="list-style-type: none">• Coffee or tea is consumed• Antacids are taken
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Iron Deficiency Anemia

Iron-deficiency anemia develops when the body's iron stores get too low. As a result, a pregnant woman may feel tired, weak and irritable and experience headaches or dizziness.

Blood iron levels usually drop in pregnancy until the body makes more blood. As the volume increases, the iron in the blood becomes more dilute. Iron levels usually increase as the woman progresses through her pregnancy.

Pregnant women:

- Usually tested for anemia during prenatal care visit by checking hemoglobin or hematocrit levels.
- Treated by taking iron supplement and eating iron rich foods

Water

Water, like any other essential nutrient, is necessary for health and survival. Extra water during pregnancy is important because:

- It helps the body make more blood, provides amniotic fluid, gets rid of extra waste, reduces constipation
- Drink at least 8 cups of fluid every day
- Factors such as hot temperatures can increase needs
- Water should be the primary source, but women can substitute some other fluids

Prenatal Vitamins

Many doctors routinely prescribe prenatal vitamins and mineral supplements during pregnancy. Most prenatal vitamins have increased iron and folic acid than regular vitamin supplements. By taking a supplement soon after a meal or before going to bed, a woman can reduce her risk of stomach upset.

First and foremost, prenatal vitamins are simply a supplement and should never be considered a replacement for good nutrition.

Healthy Eating

Pregnant women need to eat a balanced variety of wholesome foods with plenty of fruits, vegetables, whole grains, proteins and low-fat dairy products.

- 5 servings a day fruits and vegetables – provide folic acid, vitamin A, vitamin C, other key nutrients
- Health and nutrition information for pregnant women can be found on the MyPlate website (www.choosemyplate.gov).

Vegetarian Diets

- Can be safe and nutritionally adequate
- Planned diets can help avoid iron-deficiency anemia and vitamin deficiencies

Vegetarian diets for pregnant women can be safe and nutritionally adequate. To meet the additional caloric and nutrient needs during pregnancy, care must be taken to incorporate a variety of nutrient dense foods.

Women who follow a diet that excludes all animal products (vegan), need to take special care to eat foods that provide adequate amounts of iron, vitamin B12, calcium, vitamin D, zinc and protein.

Prenatal vitamins and fortified foods are critical in helping pregnant vegetarians and vegans meet their dietary needs.

Artificial Sweeteners

As the long-term effects of artificial sweeteners a fetus are unknown, it's best:

- Avoid large amounts
- Check labels

Common Discomforts

Pregnant women often experience a number of common discomforts including nausea and vomiting, heartburn and constipation. While these discomforts are usually not serious, they can still be rather unpleasant.

Nausea and Vomiting

- Common during the first trimester
- Nausea without vomiting can still be difficult
- If unable to keep down food or fluids for extended period of time – seek medical attention

Tips for Managing Nausea and Vomiting

- Avoid strong, offensive smells. Get plenty of fresh air, especially in the bedroom, kitchen and eating areas. Have someone else cook meats or foods that trigger nausea.
- After waking up, try eating crackers, dry toast or a handful of dry cereal. Then rest in bed for awhile before slowly getting up.
- Drink liquids between meals, not with them. Avoid drinks with caffeine. Try cold water, cold sweet beverages or drinks that are bubbly.
- Find out by trial and error which foods lessen the nausea and eat those foods to avoid an empty stomach
- Get your doctor's approval first, before taking a medication for nausea or trying any sort of alternative treatment.
- As the nausea gets better, add foods back into your diet and limit sweet liquids or snack foods that have little nutritional value.

Heartburn

In some women, pregnancy hormones relax the valve between the esophagus and the stomach allowing digestive juices from the stomach to rise into the esophagus.

- Burning feeling in the chest
- Bloated, gassy, full-feeling

Tips for Managing Heartburn

- Eat small, low-fat meals and snacks
- Don't overeat
- Avoid spicy, greasy and fried foods
- Don't bend over or lie down for 1 to 2 hours after eating
- Wear clothes that are loose around the waist
- Avoid soft drinks and drinks with caffeine
- Talk with your doctor first before taking antacids or other medicine for heartburn or indigestions.

Constipation

Hormone changes slow food in the intestines

- Infrequent bowel movements
- Hard dry stool

Tips for Managing Constipation

- Drink 8 to 10 glasses of water every day
- Eat whole-grain breads, cereals and grains
- Eat plenty of fruits and vegetables
- Eat prunes or drink prune juice
- Get plenty of exercise. Walking is best.
- Get your doctor's approval first before taking a laxative or home remedy for constipation

Leg Cramps and Swelling

Leg cramps are common during the second half of pregnancy and cause painful tightening of the muscles in the leg.

Mild **swelling** usually develops in the face, hands or ankle during pregnancy. As the due date approaches, swelling can be more noticeable.

Rapid, significant weight gain in the hands or feet can be a sign of preeclampsia (high blood pressure) and women should notify a health care provider as soon as possible.

Tips for Managing Swelling

- Drink 8 to 10 eight ounce glasses of fluids daily (water is best)
- Rest when you can with your feet elevated
- Dress comfortably and avoid tight clothing

Module 3

Introduction

In this final module, we'll discuss medical risk during pregnancy including diabetes, high blood pressure, pica and depression. We'll also cover special circumstances such as teen pregnancy, pregnancy with multiple babies and domestic violence.

Medical Conditions

There are a few medical conditions that women need to be acutely aware of during pregnancy. If a woman suspects any of the following medical conditions, she should contact a medical health professional as soon as possible.

Gestational Diabetes

A quick review – diabetes occurs when the body doesn't produce enough insulin (type 1 diabetes) or when the body isn't able to use the insulin it does make (type 2 diabetes). As a result, blood glucose levels get too high – during pregnancy high levels of glucose can lead to complications for a woman and her fetus.

- Gestational diabetes develops during pregnancy
- Typically goes away after delivery
- Greater risk for developing type 2 diabetes
- Higher risk for developing gestational diabetes in a future pregnancy
- Most women tested between 24 – 28 weeks

Tips for Controlling Blood Sugar

- Keep regular appointments with the health care provider to have glucose levels monitored and get medication if needed
- Check blood glucose levels regularly and keep a record for health care provider
Avoid concentrated sweets such as desserts, soda, juice and sugar as these rapidly raise blood sugar
- Stay physically active, with health care provider's approval. Regular exercise can help maintain normal glucose levels. Take oral medication and insulin on a regular basis as prescribed. Also balance diet and insulin doses to avoid very high or very low glucose levels
- See the WIC dietitians for suggestions on eating with gestational diabetes

High Blood Pressure and Pre-eclampsia

Blood pressure is the amount of force that the blood exerts against the arteries as the heart pumps and relaxes.

- Normal blood pressure less than 120/80. If top number greater than 140 or the bottom number is greater than 90, this is considered high blood pressure or hypertension
- Pre-eclampsia – hypertension/high blood pressure during pregnancy
- Pre-eclampsia can lead to eclampsia which causes seizures and can lead to coma and death
- Prescribed rest helps control blood pressure
- Usually cured by delivery of baby
- May occur up to two weeks after delivery

Closely Spaced Conception

Women who get pregnant right away after having a baby have an extra need for good nutrition, especially if they're breastfeeding. WIC considers close conception less than 16 months between delivery and conception.

Pica

Pica is the compulsive eating of a nonfood substance such as clay, dirt, baking soda, starch, ashes, chalk, coffee grounds, cigarette ashes, paint chips or large quantities of ice.

- Health risk – depends on the substance, the amount and the frequency
- Often goes unnoticed
- Counselor must ask pregnant women directly about condition
- The goal is to change the eating pattern
- Be non-judgmental and assist the mother to understand

Depression

Pregnancy causes huge hormonal changes, besides being a major transformation in a woman's life.

- Some women have their first bout with depression during pregnancy
- Others may have a history of depression
- If a woman is suffering from depression, she should be referred to a health care provider

Special Circumstances:

Teen Pregnancy

Since teens are still growing, they have higher requirements for nutrients essential for growth (calcium, phosphorus, zinc and magnesium).

A pregnant teen may need extra encouragement and non-judgmental support to:

- Make healthy choices
- Breastfeed
- Continue her own education

Multi-fetal Pregnancy

Multi-fetal pregnancies are more common, primarily due to fertility treatments. Being pregnant with more than one baby increases the risk of complications for the baby and the mother.

Potential complications for mother	Potential complications for babies
<ul style="list-style-type: none"> • Pre-eclampsia • Iron-deficiency anemia • Kidney Problems • Cesarean delivery 	<ul style="list-style-type: none"> • Low birth weight • Premature birth • Congenital abnormalities • Cerebral palsy

Early prenatal care and good nutrition help women have successful multi-fetal pregnancies without major complications.

Recommendations for Pregnancy with Multiples

- Gain more weight as higher weight is linked to higher birth weight
- Choose nutritious foods with protein, iron, calcium and other nutrients
- Take prenatal supplements as prescribed

Weight Gain for Twins and Triplets

Weight gain for twins is based on an I.O.M. report in May, 2009

- Mothers with normal weights before pregnancy should aim to gain 37 – 54 pounds. This would be a pound a week in the first half of the pregnancy and a little more than a pound a week in the second half of the pregnancy
- Mothers who are overweight before pregnancy should aim to gain 31 – 50 pounds. Mothers who are obese before pregnancy should aim to gain 25 – 42 pounds
- There are no specific recommendations, at this time, for underweight women with multiples or for higher multiples such as for triplets or more

Domestic Violence

In as many as one-third of all women, physical abuse occurs by a partner or an ex-partner in their lifetimes.

- A great deal of violence goes unreported
- May be common risk factor for pregnant women
- Trust a key factor for victim talking about the situation
- Counselor should be discreet, compassionate and sincere
- Up to the woman to disclose violence and leave violent relationship
- Counselor – only done by those trained in dealing with domestic violence
- Supportive – provide phone numbers of shelters, counseling services and domestic violence advocacy organizations

What to say:

- “This is not your fault”
- “No one deserves to be treated that way”
- “I’m sorry you’ve been hurt
- Help is available to you
-

What not to say

- “Why don’t you just leave?”
- “What did you do to make his so angry?”
- “Why do you keep going back?”

Domestic Violence Hotlines

- Statewide Women’s Crisis Hotline (888) 235-5333

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