LESSON ASSIGNMENT

LESSON 9
Patient Education During Pregnancy.

TEXT ASSIGNMENT
Paragraphs 9-1 through 9-8.

LESSON OBJECTIVES
After completing this lesson, you should be able to:

9-1. Identify types of education used to prepare prenatal patients for parenthood.

9-2. Select statements concerning layette planning.

9-3. Identify principles of proper nutrition during pregnancy.

9-4. Identify statements concerning cravings during pregnancy.

9-5. Identify statements concerning the obese, pregnant patient.

9-6. Select the definition of teratogen.

9-7. Identify drugs, viruses, parasites, and conditions that are considered teratogenic.

9-8. Identify statements concerning labor and delivery that refer to the preparation of labor and delivery.

9-9. Identify definitions as they refer to approaching labor.

SUGGESTION
After studying the assignment, complete the exercises at the end of this lesson. These exercises will help you to achieve the lesson objectives.
LESSON 9

PATIENT EDUCATION DURING PREGNANCY

9-1. GENERAL

The practical nurse can play a significant role in the process of providing patient education during pregnancy. The prenatal patient, especially the first-time mother, may have many questions and concerns about this period in her life. Much of the information she may have is probably inaccurate or incomplete. You, as a practical nurse, must provide accurate and complete information about self-care concerns, diet needs, what to expect as labor and delivery approaches, and the dangers within the environment, which may affect the health of the unborn infant.

9-2. TYPES OF EDUCATION FOR PRENATAL PATIENTS PREPARING FOR PARENTHOOD

Individual teaching and counseling, information groups, discussion or counseling groups, and prepared childbirth groups are the types of education that are presented in this lesson.

a. Individual Teaching and Counseling.

(1) One-to-one teaching. This type of teaching is used in all nursing settings. It teaches on an individual basis as needed. One-to-one teaching is beneficial in teaching patients to understand and to adapt to health problems with a pregnancy.

(2) Counseling. This entails an interchange of opinions or giving of advice. It is more personal and feeling-oriented. When counseling is used in combination with facts, it enhances learning. It takes into account the patient's feelings.

b. Information Groups.

(1) These are planned groups to serve everyone in the community. It provides information on the physiology of childbearing, general hygiene, nutrition during pregnancy and lactation, preparations for the baby, and care of the mother and baby after delivery.

(2) Methods of presentation include lecture, films and slides, questions and discussion, and tours of appropriate areas (labor and delivery, newborn, and postpartum).

(3) These groups are organized by the American National Red Cross, the YWCA, Public Health Departments, Adult Education Programs at community schools/colleges, hospitals, and groups of physicians.
c. **Discussion or Counseling Groups.**

(1) There is no structured curriculum for this type of teaching. Discussion is developed from the contributions of group members. The group leader must be knowledgeable and able to discuss all topics concerning obstetric and newborn care.

(2) This type of instruction has the advantage of not limiting the discussion to certain topics as done in class groups. It allows for more participation and involvement by the parents. Remember, it takes a highly qualified individual who is good at listening but who is also capable to keep the discussion going.

d. **Prepared Childbirth Groups.**

(1) This is a form of informational instruction but includes active participation by the group to prevent the fear-tension-pain mechanism of labor. It is designed to eliminate fear during pregnancy.

(2) Facts taught concern:

(a) Anatomy and physiology of childbearing.

(b) Appropriate care of the pregnant woman.

(c) Sensations likely to accompany labor.

(d) Methods to work cooperatively with the sensations.

(e) Exercises to strengthen muscles in labor.

(f) Breathing techniques to develop relaxation during labor.

(g) Needs of the baby after birth.

(h) Information about growth and development.

9-3. **LAYETTE PLANNING**

a. **Layette.** A layette is considered as the clothing and supplies needed to care for the infant following birth. Parents in classes are encouraged to prepare for the infant's arrival before birth. Baby showers are usually given by the family and friends to help provide some of the necessary items. Some clothing and care items are taken to the hospital to bring the infant home. It is important to remind new parents that infants grow quickly. Encourage them to not buy a lot of newborn items; infants outgrow clothes very quickly, and in some cases, the clothes are never worn.
b. **Layette Contents.** Table 9-1 shows items that are commonly found in a layette.

<table>
<thead>
<tr>
<th>CLOTHING</th>
<th>SUPPLIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Diapers (disposable or cloth)</td>
<td>• Crib, bassinet, or cradle</td>
</tr>
<tr>
<td>• Nightgowns, clothing sets</td>
<td>• Diaper pail, maybe diaper plan</td>
</tr>
<tr>
<td>• Sweaters, cap, booties</td>
<td>• Bottles, nipples, formula</td>
</tr>
<tr>
<td></td>
<td>• Car seat, blankets, crib sheets</td>
</tr>
<tr>
<td></td>
<td>• Diaper pins, rubber sheets</td>
</tr>
<tr>
<td></td>
<td>• Towels, washcloths, bath lotion</td>
</tr>
</tbody>
</table>

Table 9-1. Typical items in a layette.

9-4. **PRINCIPLES OF PROPER NUTRITION**

a. **Good Nutrition.** Good nutrition during pregnancy is essential for:

1. The well-being of the mother and the developing fetus.

2. Development of effective uterine musculature.

3. Development of breast tissue.

4. Development of an adequate functioning placenta. Poorly nourished mothers have placentas with fewer and smaller cells. Also, poorly developed placentas have a reduced ability to synthesize substances needed by the fetus, to facilitate the flow of needed nutrients, and to inhibit passage of potentially harmful substances.

5. Development of infant's weight, length, bones, and brain. A nutritionally deprived fetus may have decreased development of brain cells. If optimum nutrition is provided after birth, the effects on the brain may be reversible.

6. Continued development of the infant after birth.

b. **Chronic Malnutrition.** This has been shown to be related to reproduction problems (this includes difficulties during pregnancy, labor, and delivery), increased perinatal mortality, low birth weight, and other problems with the newborn.
c. **Nutritional Risk Factors in Pregnancy that Require Observation.**

(1) **Risk factors at the onset of pregnancy.**

(a) Adolescence. Many adolescents are nutritionally at risk due to a variety of complex and interrelated emotions and social and economic factors that may adversely affect dietary intake. Their nutritional needs are greater and pose much concern from nurses and physicians.

(b) Frequent pregnancies. These pregnancies may have depleted nutrient stores. This situation can compromise maternal and fetal health and well-being.

(c) Poor reproductive history. Previous poor weight gain, pregnancy-induced hypertension (PIH), previous stillbirth or small for gestational age (SGA) baby, premature delivery, and prenatal infection are all common in women who are or have been poorly nourished in the past. These women may need more than the usual nutrition guidance.

(d) Economic deprivation. This refers to the pregnant patient who is not able to afford proper food. There are several programs that help with the purchase of food or that offer supplements.

(e) Bizarre food patterns. This includes faddish diets. A woman may enter pregnancy either having or continuing to be on a faddish or otherwise nutritionally inadequate diet.

(f) Vegetarian diets. This diet may not contain any or enough protein or vitamins for a developing fetus. Intense nutritional counseling will be required to work out a diet pattern during the prenatal period.

(g) Smoking, drug addiction, and alcoholism. Physiologic problems may have been present. Pregnant patients who indulge in this category may have major physiologic problems. There is the possibility that the patient may not consume sufficient quantities of nutritious foods and, in addition, can cause major problems to the fetus.

(h) Chronic systemic disease. There may have been medical problems, which may have interfered with ingestion, absorption, or utilization of nutrients. Drugs used to treat these conditions may also affect nutrition by similar interference. Counseling should include general nutrition guidelines for prenatal care and diet therapy.

(i) Pre-pregnant weight. This may be at risk if the patient is fifteen percent or more below or twenty percent or more above the standard weight for health.
(2) **Risk factors identified during pregnancy.**

(a) Anemia of pregnancy. Many pregnant patients have a lack of iron stores large enough to meet the needs of pregnancy.

(b) Pregnancy-induced hypertension (PIH). This may be seen in more patients with poor diets. However, there is no definite documentation of PIH's relationship to the diet.

(c) Inadequate weight gain. This may be an indication of maternal and fetal malnutrition (intrauterine growth retardation (IUGR)). It is important to document the pattern of weight gain in pregnancy as well as the total amount of weight gained.

(d) Excessive weight gain. This may be due to fluid retention. However, the pregnant woman should be carefully assessed for PIH.

d. **Caloric Requirements of Pregnancy.**

(1) Daily caloric requirements for a pregnant woman are about 300 more than their normal requirements of 2300 to 2700 calories. The exact requirements are dependent on the patient's age, multiple birth, and the patient's activity. Calories should be selected for **quality** rather than **quantity**. "Empty calories" do not count.

(2) Pregnancy is not the time to correct weight problems. Maintenance of a minimum of 1500 calories a day is essential for fetal development throughout the pregnancy. Patients who gain extra weight the first seven months then decide to cut back so as not to go overweight deprive the fetus of:

(a) Nutrients necessary when the fetal brain cells are growing the fastest.

(b) Nutrients necessary when the protective layer of fat is being developed.

(3) Foods rich in protein, iron, and essential nutrients are recommended to be eaten on a daily basis. During the first two trimesters of pregnancy, iron is transferred to the fetus in moderate amounts, but during the last trimester when the fetus builds its reserve, the amount transferred is accelerated ten times.

(4) Recommended weight gain for a normal pregnancy is 24 to 30 pounds. See figure 9-1 for the distribution of weight gained after 40 weeks of pregnancy.
e. **Menu planning.** A diet consisting of a variety of foods can supply needed nutrients. The increased quantities of essential nutrients needed during the pregnancy may be met by skillful planning around the basic four food groups. The recommended daily intake from the basic four food groups are as follows:

1. **Milk group**-32 oz or 1000 ml per day.
2. **Meat group**-4 servings per day to include:
   a. Beef, veal, pork, poultry, or fish.
   b. Eggs each day.
   c. Liver once a week.
3. **Vegetable and fruit group.**
   a. 2 servings daily of dark green or yellow vegetables.
   b. 2 servings daily of fruit.
4. **Bread and cereal group**-4 servings per day.
9-5. CRAVINGS DURING PREGNANCY

a. Craving. This is a strong desire for a certain type of food, usually carbohydrates.

b. Pica. This is an intense craving for and ingestion of nonnutritive substances such as clay, laundry starch, raw flour, and rice. This type of craving is characteristic of but is not limited to lower socioeconomic groups, ethnic groups, and regional areas, which prefer certain substances. Even though the cause is unknown, it interferes with good nutrition. Pica appears to be related to iron deficiency anemia as either a cause or an effect.

c. Treatment or Counseling.

(1) Anything that depresses good nutritional intake should be evaluated. This type of depression may be caused by nausea or vomiting, food fads or lack of finances, smoking or alcoholism, or personal or social problems. If a problem is identified, it should be reported to the charge nurse or physician for appropriate referral to the correct people who can relieve or eliminate the problem.

(2) Total dietary intake on a daily basis may need to be assessed.

(3) Dietary needs of pregnancy should be reinforced at every visit to the doctor.

9-6. OBESITY

a. Obesity is common and frequently a serious problem among Americans. The patient is considered overweight if she is 10 percent over her desirable weight for their height and age group. If the patient is 20 percent over her desirable weight at the beginning of the pregnancy, she is considered at risk.

b. These patients require close observation and additional education. The most frequently prescribed diet is 1500 to 1800 calories per day. The patient must be advised that this is not the time to diet to lose weight. Encouragement is greatly needed during the pregnancy.

9-7. TERATOGENS

a. A teratogen is an agent or factor that causes the production of physical defects in the developing fetus.

b. Many drugs are known to have teratogenic effects on the fetus if taken during pregnancy. Drugs are the most widely recognized cause of structural defects in the developing fetus. Patients need to be cautioned about taking any medication without a physician's approval. Over-the-counter medicines such as nose drops, cold remedies, and sleep medications may cause problems.
(1) Examples of known effects:

(a) Physical abnormalities - no arms or legs.

(b) Hemorrhage or jaundice.

(c) Neurologic symptoms.

(d) Abnormal dental pigmentation.

(e) Addiction.

(f) Vaginal malignancy or altered sperm causing infertility.

(2) The effects of many drugs may not be known until later years during the growth and development of the child.

c. Teratogenic drug examples.

(1) Thalidomide-used in England in the 1950's and 1960's as a sedative.

(2) Phenytoin (Dilantin)®-used for seizures.

(3) Methotrexate®-used to treat neoplastic diseases.

(4) Diethylstilbestrol®-used for vasomotor symptoms during menopause.

(5) Accutane®--used to treat cystic acne.

d. Teratogenic viruses and parasites.

(1) Herpes simplex.

(2) Rubella (German measles).

(3) Toxoplasmosis. This is transmitted by cat feces and raw meat.

(4) Influenza or viral infections in the early weeks of pregnancy.

e. Other teratogenic conditions.

(1) Hyperthermia.

(2) Maternal disease (diabetes).

(3) Maternal malnutrition.
(4) X-rays should be avoided. Radiation from the x-rays can cause deformity of the fetuses if exposed in the first trimester.

(5) Environmental pollutants.

(6) Lead.

(7) Increase in maternal age.

(8) Tobacco and alcohol.

f. Patients need to be reminded of the potential dangers of the things they may do or take. The worst damage to the fetus is done in the early weeks of the pregnancy before she even knows she is pregnant.

9-8. PREPARATION FOR LABOR AND DELIVERY

a. Relaxation and Psychological Control of Pain. Several methods of relaxation and psychological control of pain during labor are listed below:

(1) Lamaze method (Psychoprophylactic method-PPM). This method is the most widely taught. It deals with combating the fears associated with pregnancy by teaching relaxation and breathing techniques.

   (a) The patient is taught to replace responses of restlessness and loss of control with more useful activity.

   (b) The patient is taught to respond to pain with respiratory activity and relaxation of uninvolved muscles.

   (c) The patient is taught controlled breathing and mind-focusing techniques.

   (d) The partner is taught to help the patient stay in control.

(2) Bradley method (husband-coached childbirth). This is similar to the Lamaze method. Emphasis is placed on slow, deep breathing along with complete relaxation. Women using this practice often appear to be asleep during labor. However, they are not asleep, but are simply in a state of deep mental relaxation.

(3) Hypnosis. This is an induced state of extreme suggestibility in which the patient is insensible to outside impressions except the suggestion of her attendant.

b. Signs of Approaching Labor. These signs of approaching labor are taught to all patients. When the patient notices them, she is aware that labor will be forthcoming. The signs are:
1. **Lightening.** This is the descent of the fetus into the brim of the pelvis (dropping). Lightening occurs in the last 10 to 14 days of pregnancy in a primigravida. It may not occur until actual onset of labor in multigravidas. The patient identifies it as being able to breathe easier.

2. **False labor (Braxton-Hicks Contractions).** This is intermittent uterine contractions occurring at irregular intervals, which serve to tone the uterus.

3. **"Show."** This is when the blood-tinged mucoid vaginal discharge becomes more pronounced and red as cervical dilatation increases during labor.

4. **"Burst of energy."** This is an increase in energy level. It occurs approximately 24 hours before onset of labor. The patient should be advised to relax during this time since labor will be starting soon.

5. **Rupture of membranes.** This occasionally may be the first sign. Due to the risk of the prolapse cord, the patient needs to be aware that she should come to the hospital immediately even if she is not having contractions. If the membranes rupture prematurely, it then becomes a complication.

6. **Frequent urination.** This, again, becomes a problem in the last stages of pregnancy. Pressure on the bladder is due to the enlarging uterus and the head settling back into the pelvis.

*Continue with Exercises*

*Return to Table of Contents*
EXERCISES, LESSON 9

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the exercise, by completing the incomplete statement, or by writing the answer in the space(s) provided.

After you have completed all of these exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the material referenced with the solution.

1. List the four types of education for prenatal patients who are preparing for parenthood.

__________________ ______________.
__________________ ______________.
__________________ ______________.
__________________ ______________.

2. The clothing and supplies needed to care for the infant following birth is known as:

_____________________

3. Good nutrition during pregnancy is essential for the well-being of the mother and the developing fetus, and for the development of:

__________________ ______________.
__________________ ______________.
__________________ ______________.
__________________ ______________.
__________________ ______________.
__________________ ______________.
__________________ ______________.
4. List the nutritional risk factors that requires observation at the onset of pregnancy.

_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________

5. Nutritional risk factors that are identified during pregnancy includes anemia of pregnancy, pregnancy-induced hypertension, __________________________ and ____________________________.

6. Craving is an intense desire for and ingestion of nonnutritive substances.
   a. True.
   b. False.

7. An obese pregnant patient requires close observation and additional education.
   a. True.
   b. False.
8. The recommended daily intake of liver is once a week.
   a. True.
   b. False.

9. The period during pregnancy is a good time for the patient to diet.
   a. True.
   b. False.

10. Counseling entails an interchange of opinions and giving advice.
    a. True.
    b. False.

11. A minimum of 1500 calories a day is good for fetal development during pregnancy.
    a. True.
    b. False.

12. Pica is having a strong desire for a certain type of food, usually carbohydrates.
    a. True.
    b. False.

13. Neurologic symptoms and addiction are known effects of teratogenic drugs.
    a. True.
    b. False.
14. List the signs of approaching labor.

__________________________________

__________________________________

__________________________________

__________________________________

15. What methods are used for relaxation and psychological control of pain?

__________________________________

__________________________________

__________________________________

16. ___________________ is an agent or factor that causes the production of physical defects in the developing fetus.

17. Foods, which are rich in ______________, _________, and ________________________________ should be eaten on a daily basis.

*Check Your Answers on Next Page*
SOLUTIONS TO EXERCISES, LESSON 9

1. individual teaching and counseling.
   information groups.
   discussion or counseling groups.
   prepared childbirth groups  (para 9-2).

2. layette  (para 9-3a).

3. effective uterine musculature.
   breast tissue.
   adequate functioning placenta.
   infant's weight, length, bones, and brain.
   infant after birth  (para 9-4a).

4. an adolescent.
   frequent pregnancies.
   poor reproductive history.
   economic deprivation.
   bizarre food patterns.
   vegetarian diets.
   smoking, drug addiction, alcoholism.
   chronic systemic disease.
   pre-pregnant weight.  (para 9-4c(1))

5. inadequate weight gain.
   excessive weight gain.  (para 9-4c(2))

6. b  (para 9-5a).

7. a  (para 9-6b).

8. a  (para 9-4e(2)(c)).

9. b  (para 9-4d(2)).

10. a  (para 9-2a(2)).

11. a  (para 9-4d(2)).

12. b  (para 9-5b).

13. a  (para 9-7b(1)).
14. lightening. 
   false labor (Braxton-Hicks Contractions). 
   "Show". 
   "Burst of energy". 
   rupture of membranes. 
   frequent urination (para 9-8b).

15. Lamaze method. 
    Bradley method. 
    Hypnosis (para 9-8a).

16. teratogen (para 9-7a).

17. protein. 
    Iron. 
    essential nutrients (para 9-4d(3)).

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