

# Second Trimester

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**NURSING DIAGNOSIS:**

**Risk Factors May Include:**

**Possibly Evidenced By:**

**DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT WILL:**

**Body Image, risk for disturbance**

Perception of biophysical changes, responses of others

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Verbalize gradual acceptance/adaptation to changing self-concept/body image.

Demonstrate a positive self-image by maintaining an overall satisfactory appearance; dress in appropriately fitting clothes and low-heeled shoes.

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**ACTIONS/INTERVENTIONS**

**RATIONALE**

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**Independent**

Review/assess attitude toward pregnancy, changing body shape, and so forth. (Refer to CP: First Trimester; ND: Body Image disturbance.)

In the second trimester, the changing body contours are readily visible. Negative responses to such changes may occur in the client/couple whose fragile self-concept is based on physical appearance. Other visible effects caused by prenatal hormones such as chloasma, striae gravidarum, telangiectasia (vascular spiders), palmar erythema, acne, and hirsutism can contribute to the client's emotional changes. These feelings may affect how she deals with the changes that are occurring.

Discuss physiological aspects of, and client's response to, changes. Provide information about normalcy of changes.

Individuals react differently to the changes that occur, and information can help the client understand/accept what is happening.

Suggest styles and available sources of maternity clothing.

Individual circumstances dictate needs for clothing that will enhance the client's appearance for work and leisure activities.

Discuss methods of skin care and makeup (to minimize/hide darkened areas of the skin), the use of support hose, maintenance of posture.

Learning about, and being involved in, ways to look and feel better may be helpful for maintaining positive feelings about the self.

**Collaborative**

Refer to other resources, such as classes in childbirth education and parenting or counseling.

May be helpful in providing additional support during this period of change; identifies appropriate role models.

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**NURSING DIAGNOSIS:****May Be Related To:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT WILL:****Breathing Pattern, ineffective**

Impingement of the diaphragm by the enlarging uterus

Complaints of shortness of breath, dyspnea, changes in respiratory depth

Report decrease in frequency/severity of complaints.

Demonstrate behaviors that optimize respiratory function.

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**ACTIONS/INTERVENTIONS**

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**RATIONALE****Independent**

Assess respiratory status (e.g., shortness of breath on exertion, fatigue).

Determines existence/severity of problem, which occurs in approximately 60% of prenatal clients. Even though vital capacity increases, respiratory function is modified as the diaphragm's ability to descend on inspiration is reduced by the enlarging uterus.

Obtain history of and monitor preexisting/developing medical problems (e.g., allergic rhinitis, asthma, sinus problems, tuberculosis). (Refer to CP: The High-Risk Pregnancy; ND: Injury, risk for fetal.)

Other problems may further alter breathing patterns and may compromise maternal/fetal tissue oxygenation.

Note Hb and Hct levels. Stress importance of daily prenatal vitamins/ferrous sulfate intake as appropriate.

Increased plasma levels at 24–32 weeks' gestation further dilute Hb levels, resulting in possible anemia and decreased oxygen-carrying capacity. Note: Iron may be contraindicated for client with sickle cell anemia.

Provide information about rationale for respiratory difficulties and realistic activity/exercise program. Encourage frequent rest periods, providing extra time for certain activities, and participation in mild exercise, such as walking.

Reduces the likelihood of respiratory symptoms caused by overexertion.

Review measures client can take to ease problems; e.g., good posture; avoiding smoking; eating smaller, more frequent meals; using modified semi-Fowler's position for sitting/sleeping if symptoms are severe.

Good posture and small meals help maximize diaphragmatic descent, increasing space available for lung expansion. Smoking reduces oxygen available for maternal-fetal exchange. Semiupright positioning may increase lung expansion as the gravid uterus descends.

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**NURSING DIAGNOSIS:****May Be Related To:****Possibly Evidenced By:****Knowledge deficit [Learning Need], regarding natural progression of pregnancy**

Continued need for information as the changes of the second trimester are experienced

Request for information, statement of concerns or misconceptions

**DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT WILL:**

Verbalize/demonstrate self-care behaviors that promote wellness.

Assume responsibility for her own healthcare.

Recognize and act to minimize and prevent risk factors.

Identify danger signs/seek medical care appropriately.

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**ACTIONS/INTERVENTIONS**

**RATIONALE**

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**Independent**

Review changes to be expected during the second trimester.

Questions continue to arise as new changes occur, regardless of whether changes are expected or unexpected.

Institute/continue a learning program as outlined in CP: First Trimester; ND: Knowledge deficit [Learning Need].

Repetition reinforces learning, and if client has not been seen previously, information is useful at this point. Note: For various reasons (e.g., financial, cultural, denial of condition), many individuals do not seek care until the second or even third trimester.

Provide information about need for ferrous sulfate and folic acid.

Ferrous sulfate and folic acid help maintain normal Hb levels. Folic acid deficiency contributes to megaloblastic anemia, possible abruptio placentae, abortion, and fetal malformation. Note: Clients with sickle cell anemia require increased folic acid during and following crisis episode.

Encourage involvement in a moderate exercise program.

A nonendurance perinatal exercise regimen tends to shorten labor, increase the likelihood of a spontaneous vaginal delivery, and decrease the need for oxytocin augmentation. (Strenuous exercise may result in reduced uterine blood flow/fetal bradycardia.) Note: Exercise may be viewed as inappropriate in some cultures (e.g., Puerto Rican).

Identify possible individual health risks (e.g., spontaneous abortion, hypoxia related to asthma or tuberculosis, heart disease, PIH, kidney disorders, anemia, gestational diabetes mellitus [GDM], STDs). Review danger signs and appropriate actions.

Provides a helpful reminder/information for client about potential high-risk situation requiring closer monitoring and/or intervention. (Refer to CP: High-Risk Pregnancy, as appropriate).

Discuss any medications that may be needed to control or treat medical problem.

Helpful in choosing treatment options because need must be weighed against possible harmful effects on the fetus.

Discuss need for specific laboratory studies, screening, and close monitoring as indicated.

More frequent prenatal visits may be needed to promote maternal well-being. Monitoring Hb and Hct using electrophoresis detects specific anemias and is helpful in determining cause. Screening for GDM at 24–26 weeks' gestation or at 12, 18, and 32 weeks' gestation in high-risk client can detect developing hyperglycemia, which may need treatment with insulin and/or diet. (Refer to CPs: Diabetes Mellitus: Prepregnancy/Gestational; the High-Risk Pregnancy.)

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**NURSING DIAGNOSIS:****Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT WILL:****Injury, risk for fetal**

Maternal health problems, exposure to teratogens/infectious agents

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Verbalize awareness of individual risk factors.

Avoid factors and/or refrain from behaviors that may contribute to fetal injury.

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**ACTIONS/INTERVENTIONS**

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**RATIONALE****Independent**

Determine understanding of information previously provided. (Refer to CP: First Trimester; ND: Injury, risk for fetal.)

Identifies individual needs/concerns and provides opportunity to clarify misconceptions, especially for clients whose initial prenatal visit occurs at this time.

Review maternal health status; e.g., malnutrition, substance use/abuse. (Refer to CP: First Trimester; ND: Nutrition: altered, less than body requirements.)

These factors can have great impact on developing fetal tissues and organs, and early identification and intervention may prevent untoward results.

Assess for other factors existing in the individual situation that may be harmful to the fetus (e.g., exposure to viruses/other STDs, environmental factors). (Refer to CP: Prenatal Infection.)

Identification enables client and nurse to discuss ways to minimize/prevent injury. STDs or other viruses may be only mildly problematic for the client, but often have a great negative impact on fetal well-being.

Note quickening (maternal perception of fetal movements) and fetal heart tones (FHT). Refer to healthcare provider if problem is detected.

Perceivable fetal movements first occur between 16 and 20 weeks' gestation as fetal size increases; lack of movement may indicate an existing problem. Failure to detect FHT may indicate fetal demise or absence of fetus/presence of hydatidiform mole (gestational trophoblastic disease [GTD]).

Assess uterine growth and fundal height at each visit.

Screens for multiple gestation, normal or abnormal fetal growth; may detect problems related to polyhydramnios or oligohydramnios.

Provide information about diagnostic tests or procedure(s). Review risks and potential side effects.

Having information helps client/couple to deal with situation and make informed decisions. Certain genetic problems such as neural tube defects (NTDs) may be detected at this stage.

**Collaborative**

Assist with ultrasonographic procedure, and explain its purpose.

Detects presence of fetus as early as 5–6 weeks' gestation and provides information about fetal growth, to confirm gestational age and rule out intrauterine growth retardation/restriction. Also determines placental size and location and may detect some fetal abnormalities such as fetal heart defects when done between 18 and 20 weeks' gestation.

Obtain maternal serum sample for AFP level between 14 and 16 wk.

Assist with amniocentesis when AFP level is abnormal, especially in high-risk population (e.g., clients with possible genetic disorders/previous child having a chromosomal abnormality, older gravidas over age 35 yr), if client has not already had CVS.

Follow with genetic counseling as appropriate. (Refer to CP: Genetic Counseling.)  
future pregnancies.

Screen client for GDM with glucose tolerance test (GTT) at 24–26 weeks' gestation, as indicated. (Refer to CP: Diabetes Mellitus; Prepregnancy/Gestational.)

With an open NTD (most commonly, spina bifida and anencephaly), AFP, a protein produced by the yolk sac and fetal liver, is present in maternal serum at a level 8 times higher than normal at 15 weeks' gestation. Thereafter, it decreases until term.

Analysis of amniotic fluid detects genetic/chromosomal disorders and NTD.

Client/couple will need information to make informed decisions about course of action in this pregnancy as well as

GDM is associated with macrosomia and problems of dystocia.

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**NURSING DIAGNOSIS:****Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:**

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**Cardiac Output, risk for [decompensation]**

Increased circulatory demand, changes in preload (decreased venous return) and afterload (increased peripheral vascular resistance), ventricular hypertrophy

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Remain normotensive during the prenatal course.

Be free of pathological edema and signs of PIH.

Identify ways to control and reduce cardiovascular problems.

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**ACTIONS/INTERVENTIONS**

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**RATIONALE****Independent**

Review physiological process and normal and abnormal changes, signs, and symptoms. (Refer to CP: Cardiac Conditions.)

During the second trimester, hypertrophy of the cardiac ventricles ensures increased cardiac output, which peaks at 25–27 weeks' gestation to meet maternal/fetal oxygen and nutrient needs. Normally, the cardiovascular system compensates for increased cardiac output with dilation of blood vessels, which reduces resistance to cardiac output. This lowers the systolic pressure readings approximately 8 mm Hg while the diastolic pressure decrease averages 12 mm Hg. Increases in fluid, stress, and/or preexisting cardiac problems, however, can compromise the system.

Note history of preexisting or potential cardiac/kidney/diabetic problems.

These clients face the greatest risk for cardiac involvement during the second trimester, when cardiac output peaks.

Obtain BP and pulse measurement. Report systolic increase greater than 30 mm Hg and diastolic increase greater than 15 mm Hg above baseline.

Auscultate heart sounds; note presence of murmurs.

Assess for presence of ankle edema and varicosities of legs, vulva, and rectum. Distinguish between physiological and potentially harmful edema. (Refer to CP: Pregnancy-Induced Hypertension; ND: Fluid Volume deficit [isotonic].)

Encourage client to avoid crossing legs and sitting/standing for long periods, to put on support hose before arising in the morning, to wear loose, nonconstricting clothing, elevate legs when sitting; elevate legs, hips, and vulva vertical to the wall three times a day for 20 min; and turn feet upward in dorsiflexion if sitting or standing for long periods.

Dorsiflex foot to test for Homans' sign. If present, refer to healthcare provider.

Assess for faintness. Encourage client to avoid changing position rapidly.

An increase in BP may indicate PIH, especially in clients with preexisting cardiac or kidney disease, diabetes, or in the presence of multiple pregnancies or hydatidiform mole.

Systolic murmurs are often benign and may be created by increased volume, decreased blood viscosity, displacement of the heart, or torsion of great vessels. However, a murmur may indicate developing failure.

Dependent edema of the lower extremities (physiologic edema) often occurs because of venous stasis caused by vasodilation from progesterone activity, heredity, excess fluid retention, and uterine pressure on pelvic blood vessels. This increases the risk of venous thrombus formation. Edema of facies and/or upper extremities may indicate PIH.

Promotes venous return and reduces the risk of developing edema, varicosities, or venous thrombosis.

A positive Homans' sign may indicate thrombophlebitis.

Sudden position changes may result in dizziness as blood pools in lower extremities, reducing circulating volume.

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**NURSING DIAGNOSIS:**

**Risk Factors May Include:**

**Possibly Evidenced By:**

**DESIRED OUTCOMES/EVALUATION**

**CRITERIA—CLIENT WILL:**

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**Fluid Volume risk for excess**

Changes in regulatory mechanisms, sodium/water retention

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

List ways to minimize problem.

Identify signs/symptoms requiring medical evaluation/intervention.

Be free of hypertension, albuminuria, excessive fluid retention, and edema of facies.

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## **ACTIONS/INTERVENTIONS**

## **RATIONALE**

### **Independent**

Monitor weight regularly. Have client record weight between visits.

Detects excessive weight gain and invisible fluid retention, which may be potentially pathological. During the second trimester, total body water (plasma and red blood cells) increases by 1000 ml, owing in part to estrogen levels stimulating the adrenal gland to secrete aldosterone, thereby retaining sodium and water. Although up to 5 lb of fluid can be retained with no visible edema, this increase can contribute to cardiac decompensation. Note: Some cultures (e.g., West Indian) believe the more weight gained by the pregnant woman, the healthier the mother and infant will be.

Assess for signs of PIH, noting blood pressure, location/extent of edema, and fluid intake and output. Note reports of visual disturbances, headache, epigastric pain, or presence of hyperreflexia and clonus.

Indicators of pathological edema. Although PIH caused by excessive fluid retention is not usually seen until the last 10 wk of pregnancy, it may develop earlier, especially in the client with predisposing factors, such as diabetes, renal disease, hypertension, multiple gestation, malnutrition (overweight or underweight), or in presence of hydatidiform mole.

Test urine for albumin.

Detects vascular involvement associated with glomerular spasms of the kidney, which reduce resorption of albumin.

Provide information about diet (e.g., increased protein, no added table salt, avoidance of foods and beverages high in sodium).

Adequate nutrition, especially increased protein, reduces likelihood of PIH. Excess sodium may contribute to water retention (too little sodium may result in dehydration.)

Recommend elevating extremities periodically during the day.

Physiological edema of the lower extremities occurring at the end of the day is normal, but it should resolve with simple corrective measures. If it does not resolve, the healthcare provider should be notified.

Review Hct levels. Note effects of variables, such as altitude and race.

In general, Hct levels of 41% (for whites) or 38% (for people of African heritage) indicate intravascular fluid shifts resulting in tissue edema.

### **Collaborative**

Schedule more frequent prenatal visits and institute treatment if PIH exists. (Refer to CP: Pregnancy-Induced Hypertension.)

Treatment helps promote positive maternal/fetal outcomes.

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### **NURSING DIAGNOSIS:**

### **[Discomfort]**

#### **May Be Related To:**

Changes in body mechanics, effects of hormones, electrolyte imbalances

**Possibly Evidenced By:**

Reports of back strain, leg cramps, heartburn

**DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT WILL:**

Identify and demonstrate appropriate self-care measures.

Report discomfort is prevented or minimized.

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## **ACTIONS/INTERVENTIONS**

## **RATIONALE**

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### **Independent**

Note presence of problems related to cardiac output or breathing difficulties and refer to appropriate nursing diagnoses.

Although these conditions are often sources of discomfort, the client usually experiences a sense of physical well-being free of the typical discomforts of the first trimester.

Reassess for changes in bowel elimination and hemorrhoids.

Reduced gastrointestinal motility, the effect of iron supplements, and increasing pressure/displacement from enlarging uterus interfere with normal functioning.

Discuss dietary intake, exercise, and use of stool softener as presented in CP: First Trimester; ND: Constipation, risk for.

Aids in the prevention/management of constipation.

Note presence of heartburn (pyrosis); review dietary history. Explain physiology of problem. Suggest that client avoid fried/fatty foods, chocolate, citrus, spices, or very cold food; refrain from eating immediately before bedtime; eat six small meals per day; assume semi-Fowler's position after meals; and decrease fluid intake with meals.

Fatty foods increase gastric acidity; small, frequent meals neutralize acidity. Semi-Fowler's position, decreased fluid intake, and avoidance of cold food/eating near bedtime help to prevent gastric reflux.

Recommend raising head of mattress or sleeping on a wedge pillow.

Elevating the upper body during sleep helps to reduce incidence of gastric reflux.

Note presence of backache and lower back pressure. Demonstrate exercises (e.g., pelvic tilt, lying flat on back and pressing back to floor). Review proper dress (e.g., low-heeled shoes; loose, comfortable clothing).

Relieves strain on lower back caused by increased curvature of the lumbosacral vertebrae and strengthens back muscles.

Reassess for leg cramps; teach client to extend leg and dorsiflex foot.

Pressure on nerves in the pelvis, as well as low tissue calcium levels, potentiate leg cramps. Extension of the leg and dorsiflexion of the foot increase perfusion/oxygenation of tissue and help relieve pressure on nerves of lower extremities.

Recommend reducing intake of milk products and taking aluminum lactate, or continuing with 1 quart of milk daily and taking aluminum hydroxide, if leg cramps are severe or persist.

Continued intake of calcium-containing foods/products elevates ionized plasma levels. Aluminum hydroxide traps dietary phosphorus in intestinal tract, offsetting calcium-phosphorus imbalances.

Provide information about appropriate choices of OTC antacids. Avoid use of bicarbonate as a neutralizer or calcium products, as appropriate.

Investigate reports of dizziness/lightheadedness or diaphoresis when lying down. Review rest/sleeping position. Recommend use of side-lying position.

### Collaborative

Administer low-sodium antacid.

Give calcium supplements and aluminum gel as appropriate.

May be constipating and/or may contain substances such as sodium, that may be contraindicated in certain situations owing to its water-retaining properties. Frequent use of calcium-containing antacids in addition to intake of high-calcium foods may contribute to calcium-phosphorus imbalance and development of muscle cramps.

Supine position places weight of uterus on major blood vessels interfering with circulation/ lowering blood pressure.

Neutralizes gastric acidity; decreases phosphorus levels.

Substitutes for milk products in presence of dietary intolerance. Can reduce phosphorus levels.

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#### NURSING DIAGNOSIS:

#### Risk Factors May Include:

#### Possibly Evidenced By:

#### DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

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#### Coping, Individual, risk for ineffective

Situational/maturational crisis, personal vulnerability, unrealistic perceptions

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Express feelings freely.

Identify individual strengths.

Display effective problem-solving and coping skills.

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### ACTIONS/INTERVENTIONS

#### Independent

Identify fears/fantasies client/partner may have. Discuss meaning of these thoughts.

Reinforce the normalcy of these fears and fantasies.

Evaluate degree of dysfunction client/partner is experiencing in relation to changes that are occurring and those that are anticipated.

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### RATIONALE

Common female/male fears and fantasies may arise at this time. Women may fear the death of their spouses, and the male partners may fantasize about themselves being pregnant (couvade syndrome.)

May result in difficulties for the individual who does not see the normalcy of this experience.

Clients experiencing difficulty adjusting to the overwhelming tasks associated with pregnancy/parenting may manifest inappropriate follow-through with prenatal healthcare or greater than normal states of emotional lability. The male partner may demonstrate negative coping in preoccupation with work or a new hobby, lack of interest in the pregnancy, or involvement in sexual relations outside the relationship (raising concerns of STDs [including HIV]).

Encourage client/partner to express feelings about pregnancy and parenting.

Acknowledging and expressing feelings can help the individual begin to identify concerns and begin the problem-solving process.

## Collaborative

Refer to classes and counseling, as needed. (Refer to CP: First Trimester; ND: Role Performance, risk for altered.)

May need additional help to solve underlying issues.

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### NURSING DIAGNOSIS:

**May Be Related To:**

**Possibly Evidenced By:**

**DESIRED OUTCOMES/EVALUATION  
CRITERIA—CLIENT/COUPLE WILL:**

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### Sexuality Patterns, altered

Conflict regarding changes in sexual desire and expectations, fear of physical injury to woman and/or fetus

Reported difficulties, limitations or changes in sexual behaviors/activities

Discuss sexual concerns.

Verbalize understanding of possible reasons for changes noted.

Identify acceptable alternatives to meet individual needs.

Verbalize mutual satisfaction or seek counseling, if appropriate.

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## ACTIONS/INTERVENTIONS

## RATIONALE

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### Independent

Discuss impact of pregnancy on normal patterns of sexual intercourse. (Refer to CP: First Trimester; ND: Sexuality Patterns, altered.)

Optimal sexual satisfaction for the prenatal client often occurs in the second trimester as a result of pelvic/perineal vasocongestion increasing orgasmic pleasure. The man may experience mixed feelings in response to his partner's increased arousal and be confused by his own reduced or increased sexual desire in response to his partner's changing body.

Review normalcy of feelings and discuss possible choice of increasing physical contact through hugging and fondling rather than actually engaging in intercourse.

Fear of injuring the fetus during intercourse is another common concern. Reinforcement of the normalcy of these feelings and concerns can help allay anxiety. Other choices are perfectly acceptable if both parties are satisfied.

Review possible alterations in position for coitus, which may be useful as the pregnancy progresses, especially in the third trimester.

Assists couple in considering alternatives/making choices, e.g., side-by-side, female superior, vaginal rear entry. Note: Some cultures (e.g., Puerto Rican) support abstinence for the pregnant woman.

Be alert to indications of possible sexual difficulties or inappropriate behaviors by the man.

There appears to be a higher rate of deviations (such as rape, incest, violent crimes, and extramarital affairs), when mate is pregnant.

**Collaborative**

Refer to clinical nurse specialist/counseling as indicated.

May need additional help to solve underlying problems which may develop as pregnancy progresses, or may be preexisting.