

First Trimester

NURSING PRIORITIES

1. Encourage client to adopt health-promoting behaviors.
2. Detect actual or potential risk factors.
3. Prevent/treat complications.
4. Foster client's/couple's positive adaptation to pregnancy.

NURSING DIAGNOSIS:**Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION
CRITERIA—CLIENT WILL:****Nutrition: altered, risk for less than body requirements**

Changes in appetite, presence of nausea/vomiting, insufficient finances, unfamiliarity with increasing metabolic/nutritional needs

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

Explain the components of a well-balanced prenatal diet, giving food sources of vitamins, minerals, protein, and iron.

Follow recommended diet.

Take iron/vitamin supplement as prescribed.

Demonstrate individually appropriate weight gain (usually a minimum of 3 lb by the end of the first trimester).

ACTIONS/INTERVENTIONS**RATIONALE**

Independent

Determine adequacy of past/present nutritional habits using 24-hr recall. Note condition of hair, nails, and skin.

Obtain health history; note age (especially less than 17 yr, more than 35 yr).

Fetal/maternal well-being depends on maternal nutrition during pregnancy as well as during the 2 yr preceding pregnancy.

Adolescents may be prone to malnutrition, eating disorders, anemia; and older clients may be prone to obesity/gestational diabetes. (Refer to CPs: The Pregnant Adolescent; Diabetes Mellitus: Prepregnancy/Gestational.)

Ascertain knowledge level of dietary needs.

Provide appropriate oral/written information about prenatal diet, food choices, and daily vitamin/iron supplements.

Review food preparation techniques to preserve nutrients and reduce risk of exposure to contaminants.

Evaluate motivation/attitude by listening to client's comments and asking for feedback about information given.

Elicit beliefs regarding culturally proscribed diet and taboos during pregnancy. Provide alternative choices to meet dietary needs.

Note presence of pica (craving for nonfood substances). Assess choices of substances and degree of motivation for eating them.

Weigh client; ascertain usual pregravid weight. Provide information about optimal prenatal gain.

Review frequency and severity of nausea/vomiting. Rule out pernicious vomiting (hyperemesis gravidarum). (Refer to CP: The High-Risk Pregnancy; ND: Nutrition: altered, risk for less than body requirements.)

Determines specific learning needs. In the prenatal period, the basal metabolic rate (BMR) increases by 20%–25% (especially in late pregnancy), owing to increased thyroid activity associated with the growth of fetal and maternal tissues, creating a potential risk for the client with poor nutrition. An additional 800 mg of iron is necessary during pregnancy for developing maternal/fetal tissue and fetal storage. During the first trimester, the demand for iron is minimal, and a balanced diet meeting increased caloric needs is usually adequate. (Note: Iron preparations are not commonly prescribed in the first trimester because they may potentiate nausea.) Folic acid is crucial to fetal development requiring daily supplement of 0.4 mg of folate to prevent maternal deficiencies.

Reference material can be reviewed at home, increasing the likelihood that the client will select a well-balanced diet.

Cooking vegetables in large volume of water may cause vitamins to be lost. Microwaving food destroys more folic acid than conventional cooking. Inadequate cooking of meats/eggs increases risk of bacterial/parasitic infection.

If client is not motivated to improve diet, further evaluation or other interventions may be indicated.

May affect motivation to follow recommendations of healthcare provider. For example, some cultures refuse iron, believing that it hardens maternal bones and makes delivery difficult.

The ingestion of nonfood substances in pregnancy may be based on a psychological need, cultural phenomenon, response to hunger, and/or a bodily response to the need for nutrients (e.g., chewing on ice may indicate anemia). Note: Ingestion of laundry starch may potentiate iron deficiency anemia, and ingestion of clay may lead to fecal impaction.

Inadequate prenatal weight gain and/or below normal prepregnancy weight increases the risk of intrauterine growth retardation (IUGR)/restriction in the fetus and delivery of low-birth-weight (LBW) infant. Research studies have found a positive correlation between pregravid maternal obesity and increased perinatal morbidity rates (e.g., hypertension and gestational diabetes) associated with preterm births and macrosomia.

First-trimester nausea/vomiting can have a negative impact on prenatal nutritional status, especially at critical periods in fetal development.

Test urine for acetone, albumin, and glucose.

Establishes baseline, is performed routinely to detect potential high-risk situations such as inadequate carbohydrate ingestion, diabetic ketoacidosis, and pregnancy-induced hypertension (PIH).

Measure uterine growth.

Maternal malnutrition may negatively affect fetal growth and contribute to reduced complement of brain cells in the fetus, which results in developmental lags in infancy and possibly beyond.

Collaborative

Obtain baseline Hb/Hct levels.

Identifies presence of anemia and potential for reduced maternal oxygen-carrying capacity. Clients with Hb levels less than 12 g/dL or Hct levels less than or equal to 37% are considered anemic in the first trimester.

Make necessary referrals as indicated (e.g., dietitian, social services).

May need additional assistance with nutritional choices; may have budget/financial constraints.

Refer to Women, Infants, Children (WIC) food program as appropriate.

Supplemental federally funded food program helps promote optimal maternal/fetal nutrition.

NURSING DIAGNOSIS:

[Discomfort]

May Be Related To:

Physical changes and hormonal influences

Possibly Evidenced By:

Verbalizations, restlessness, alteration in muscle tone

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Identify measures that provide relief.

Assume responsibility for alleviation of discomfort.

Report absence/successful management of discomfort.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Note presence/degree of minor discomfort.

Provides information for selection of interventions; is clue to client's response to discomfort and pain.

Evaluate degree of discomfort during internal examination. Use extreme gentleness and pictures or models, especially for the client with infibulation, female circumcision, or adolescents, those with history of sexual abuse.

Recommend wearing of supportive bra. Review nipple care (e.g., expose to air for 20 min daily; avoid soaps).

Stress importance of avoiding excessive nipple manipulation.

Recommend wearing of hard plastic cup (e.g., Woolrich breast shields) in bra for flat/inverted nipples.

Assess for hemorrhoids: note reports of itching, swelling, bleeding.

Instruct in use of ice packs, heat, or topical anesthetics; teach how to reinsert hemorrhoid with lubricated finger; encourage diet high in fiber, fruits/vegetables, noncaffeinated fluids; suggest periodically elevating buttocks on pillow. (Refer to ND: Constipation.)

Instruct client to dorsiflex foot with leg extended and to reduce amount of cheese, yogurt, and milk ingested if leg cramps develop.

Encourage frequent bathing and perineal care, use of cotton underwear, and a dusting of cornstarch to absorb discharge (leukorrhea). Tell client to avoid the use of talcum powder.

Recommend increasing carbohydrate intake on arising (e.g., eating dry toast), eating small and frequent meals, and avoiding strong odors if nausea/vomiting is a recurrent problem. (Refer to ND: Fluid Volume, risk for deficit.)

Suggest humidification of air and avoidance of nasal sprays and decongestants to treat nasal congestion.

Discomfort during internal examination may occur, especially in the foreign client who has had a female circumcision or infibulation (whereby, after removal of the clitoris, labia minora, and medial aspect of the labia majora, the raw areas are drawn over the vagina to heal closed). Although many foreign women are intimidated by the American healthcare system and male physicians, it is important to anticipate the discomfort experienced by these clients because they may not ask questions or express discomfort/pain, especially when the husband is present at the procedure. Adolescents may be self-conscious during an examination, which may further increase discomfort. In addition, women with a history of childhood or adult sexual abuse may experience a variety of physical and emotional discomforts with vaginal examination.

Provides proper support for enlarging breast tissues; toughens areolar tissue.

Stimulation may contribute to preterm labor through the release of oxytocin.

Use of specially designed breast shields helps to break adhesions and cause flat/inverted nipple to evert and to become more erect.

Reduced gastrointestinal (GI) motility and displacement of bowel and pressure on vasculature by enlarging uterus can predispose client to the development of hemorrhoids.

Reduces discomfort and swelling; promotes GI motility.

Increases blood supply to the leg. Excess intake of dairy products results in greater levels of phosphorus than calcium, creating an imbalance that may result in muscle cramping.

Promotes hygiene by removing/absorbing excess vaginal secretions. Application of talcum powder in the genital area is believed to contribute to development of cervical cancers.

Reduces likelihood of gastric disturbances that may be caused by the effects of hydrochloric acid on the empty stomach or by increased sensitivity/aversion to odors, spices, or certain foods.

Increased estrogen levels contribute to nasal congestion. Although humidification of air may be of limited benefit, sprays/decongestants absorbed systemically can be harmful to the fetus.

Review physiological changes resulting in urinary frequency. Recommend avoidance of caffeinated beverages.

Assess fatigue level and nature of family/work commitments. (Refer to NDs: Fatigue and Family Coping; potential for growth.)

Collaborative

Substitute daily calcium supplements if intake of dairy products is reduced.

Although normal, urinary frequency caused by pressure of the enlarging uterus on the bladder can be a cause of irritation. Caffeine has diuretic properties that can further aggravate the problem of frequency.

Encourages client to set priorities and include time for rest.

Assists in restoring calcium/phosphorus balance and reducing muscle cramping.

NURSING DIAGNOSIS:

Risk Factors May Include:

Possibly Evidenced By:

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Fluid Volume risk for deficit

Impaired intake and/or excessive losses (vomiting), increased fluid needs

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

Identify and practice measures to reduce frequency and severity of episodes of nausea/vomiting.

Ingest individually appropriate amounts of fluid daily.

Identify signs and symptoms of dehydration necessitating treatment.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Auscultate FHT.

Presence of a fetal heart tones confirms presence of a fetus and rules out gestational trophoblastic disease (hydatidiform mole).

Determine frequency/severity of nausea/vomiting.

Provides data regarding extent of condition. Increased levels of HCG, changes in carbohydrate metabolism, and reduced gastric motility contribute to first-trimester nausea and vomiting.

Review history for other possible medical problems (e.g., peptic ulcer, gastritis, cholecystitis).

Assists in ruling out other causes and in identifying interventions to address specific problems.

Recommend that client maintain diary of intake/output, urine testing, and weight loss. (Refer to CP: The High-Risk Pregnancy; ND: Nutrition: altered, risk for less than body requirements.)

Helpful in determining presence of pernicious vomiting (hyperemesis gravidarum). Initially, vomiting may result in alkalosis, dehydration, and electrolyte imbalance. Untreated or severe vomiting may lead to acidosis, necessitating further intervention.

Assess skin temperature and turgor, mucous membranes, blood pressure (BP), temperature, intake/output, and urine specific gravity. Obtain client weight and compare with pregravid weight.

Indicators assisting in evaluation of hydration level/needs.

Encourage increased intake of noncaffeinated carbonated beverages, six small meals per day, and foods high in carbohydrates (e.g., plain popcorn, dry toast before arising).

Helpful in minimizing nausea/vomiting by reducing gastric acidity.

NURSING DIAGNOSIS:

Knowledge deficit [Learning Need] regarding natural progression of pregnancy, self care needs

May Be Related To:

Lack of understanding of normal physiological/psychological changes and their impact on the client/family

Possibly Evidenced By:

Request for information, statement of misconceptions

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Explain normal physiological/psychological changes associated with the first trimester.

Display self-care behaviors that promote wellness.

Identify danger signs of pregnancy.

ACTIONS/INTERVENTIONS

RATIONALE**Independent**

Establish an ongoing and supportive nurse-client relationship.

The role of teacher/counselor can provide anticipatory guidance and promote individual responsibility for wellness.

Evaluate current knowledge and cultural beliefs regarding normal physical/psychological changes of pregnancy, as well as beliefs about activities, self-care, and so forth.

Provides information to assist in identifying needs and creating a plan of care.

Clarify misconceptions.

Fears usually arise out of misinformation and may interfere with further learning.

Determine degree of motivation for learning.

Client may have difficulty learning unless the need for it is clear.

Identify who provides support/instruction within the client's culture (e.g., grandmother/other family member, cuerandero/Doula, other healer). Work with support person(s) when possible, using interpreter as needed.

Helps ensure quality/continuity of care because support person(s) may be more successful than the healthcare provider in communicating information.

Maintain open attitude toward beliefs of client/couple.

Acceptance is important to developing and maintaining relationship, supporting independence.

Determine attitude of client toward care given by male provider versus Certified Nurse-Midwife (CNM) or female practitioner.

Some cultures view the medical doctor as someone seen for illness and use midwives/cueranderos for healthy state of childbirth. Modesty or cultural demands may prohibit care by males and/or may require that husband remain in room when care is being given.

Explain office visit routine and rationale for interventions (e.g., urine testing, BP monitoring, weight). Reinforce importance of keeping regular appointments.

Provide anticipatory guidance, including discussion of nutrition, exercise, comfort measures, rest, employment, breast care, sexual activity, and health habits/lifestyle.

Review need for prenatal vitamins, ferrous sulfate, and folic acid.

Using pictures, discuss fetal development.

Elicit/answer questions about infant care and feeding.

Identify danger signals of pregnancy, such as bleeding, cramping, acute abdominal pain, backache, edema, visual disturbance, headaches, and pelvic pressure.

Identify agents harmful to the fetus. Assess client's use of drugs (nicotine, alcohol, cocaine, marijuana, and so forth). Stress the need to avoid all medications until the healthcare provider is consulted.

Refer client/couple to childbirth preparation class. Provide a list of suggested readings.

Reinforces relationship between health assessment and positive outcome for mother/baby. Different cultures put emphasis on different phases of pregnancy (e.g., prenatal, delivery, or postnatal), and the client's cultural group may not consider prenatal visits as important.

Information encourages acceptance of responsibility and promotes willingness to assume self-care.

Helps maintain normal Hb levels. Folic acid deficiency contributes to megaloblastic anemia, possible abruptio placentae, abortion, and fetal malformation. Research indicates that iron supplements may not be necessary until the second and third trimester, when fetal demand is great. Note: Because of the possibility of overload, iron may be contraindicated in the presence of sickle cell anemia; however, client may require increased folic acid during and after sickle cell crisis.

Visualization enhances reality of child and strengthens learning process.

Provides information that can be useful for making choices.

Helps client to distinguish normal from abnormal findings, thus assisting her in seeking timely, appropriate healthcare. (Adverse signs and symptoms may be viewed as "normal" occurrences in pregnancy, and assistance may not be sought.)

The fetus is most vulnerable in the first 3–8 wk, which is the period of organogenesis.

Knowledge gained helps reduce fear of unknown and increases confidence that couple can manage their preparation for the birth of their child.

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

Injury, risk for fetal

Maternal malnutrition, exposure to teratogens/infectious agents, presence of genetic disorders

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

Initiate behaviors that promote health for self and fetus.

Refrain from self-medication without first contacting the obstetric health practitioner.

Abstain from smoking and use of alcohol or illicit drugs.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Discuss importance of maternal well-being.

Fetal well-being is directly related to maternal well-being, especially during the first trimester, when developing organ systems are most vulnerable to injury from environmental/hereditary factors.

Discuss normal activity level and exercise practices. Encourage client to engage in moderate, non-weight-bearing exercise (e.g., swimming, bicycling).

Blood flow to the uterus can decrease by 70% with strenuous exercises, producing transient bradycardia, possible fetal hyperthermia, and IUGR. Yet nonendurance antepartal exercise regimens tend to shorten labor, increase likelihood of a spontaneous vaginal delivery, and decrease need for oxytocin augmentation.

Encourage client to engage in safer sex practices, proper use of condoms. (Refer to CP: Prenatal Infection.)

Failure to use condoms during intercourse may increase risk of transmission of STDs, especially HIV, if client does not know sexual history or contacts of partner.

Review dietary habits and cultural practices. Weigh client. Discuss normal weight gain curve for each trimester.

Malnutrition in the mother is associated with IUGR in fetus and low-birth-weight infants. Pregravid maternal obesity has been linked to preterm births.

Note protein intake. Monitor Hb and Hct. (Refer to ND: Nutrition: altered, risk for less than body requirements.)

Protein intake is essential to development of fetal brain tissue; Hb is essential for oxygen transport.

Review obstetric/medical history for high-risk factors (e.g., lifestyle, abusive relationship, altitude, culture, emotional stressors, use of medications, potential teratogens such as alcohol or nicotine or environmental toxins, or exposure to STDs, including HIV and other viruses).

Identifies physical and psychological risk factors and need for additional evaluation and/or intervention.

Assess for possible high-risk situation associated with genetic disorders (e.g., advanced maternal age for Down syndrome, Jewish background for Tay-Sachs disease). Discuss options, including CVS in first trimester or amniocentesis in second trimester. (Refer to CP: Genetic Counseling.)

Clients at risk for certain genetic disorders may desire testing to determine whether fetus is affected.

Provide information about potential teratogens, such as x-rays, alcohol, nicotine, live attenuated viruses, TORCH group of viruses (syphilis, toxoplasmosis, other, rubella, cytomegalovirus, herpes simplex), and HIV.

Helps client make decisions/choices about behaviors/environment that can promote healthy offspring.

Discuss mode of transmission of certain infections. Stress need to wash hands after animal contact. Advise against changing cat's litter box or eating improperly cooked meat. Recommend wearing gloves while gardening. Determine history of *Listeria monocytogenes* infection. (Refer to CP: Prenatal Infection.)

Provide information about avoiding contact with persons known to have rubella infection if client is not immune, and about the need to be immunized following delivery. (Refer to CP: Prenatal Infection.)

Encourage cessation of tobacco usage.

Collaborative

Perform internal examination, and assess uterine growth.

Obtain vaginal/rectal culture to rule out beta streptococcus, STDs, and *Listeria*; serum should be obtained for HIV testing.

Do serological testing.

Treat client appropriately when herpes culture is positive; i.e., for active infection, medication such as acyclovir may be ordered; if inactive, information for self-care is provided.

Evaluate rubella titer for immunity (0.1:10). Note need for postpartum immunization.

Refer to appropriate resources if substance abuse exists. (Refer to CP: Prenatal Substance Dependence/Abuse.)

Refer to CVS/other testing as indicated if client is over age 35 or is at risk for a specific genetic disorder. (Refer to CP: Genetic Counseling.)

In the United States, *Toxoplasma gondii* is most frequently transmitted in cat feces; other cultures may acquire it through ingestion of raw or improperly cooked meat. Therapeutic abortion may be considered if disease is diagnosed before 20 weeks' gestation. *Listeria monocytogenes* is thought to be transmitted via animal contact. Vaginal culture should be obtained from client with fever of nonspecific origin or with history of *Listeria* infection.

Approximately 5%–15% of women of childbearing age are still susceptible to rubella, which is spread by droplet infection. Exposure may have negative effects on fetal development, especially in first trimester. Immunization after delivery results in immunity during subsequent pregnancies.

Smoking negatively affects placental circulation. Low Apgar scores at birth (below 7 at 5 min) are associated with smoking, along with lower-birth-weight and premature delivery. Even smoking fewer than 10 cigarettes per day carries an increased risk of fetal death, damage in utero, abruptio placentae, and placenta previa.

Provides information about gestation of fetus; screens for IUGR; identifies multiple pregnancies.

Appropriate treatment may be instituted based on culture report.

Positive diagnosis of conditions such as toxoplasmosis can be made.

In cases of herpes simplex virus type II, the client should be free of lesions at the time of labor or rupture of membranes. In the presence of visible lesions, a cesarean birth is indicated.

Screening for susceptibility allows client to take appropriate precautions, thereby reducing likelihood of prenatal exposure.

More help may be needed to deal with resolution of problem and ensure well-being of pregnancy and fetus.

CVS can detect abnormalities or genetic defects between 9 and 12 weeks' gestation. CVS is an earlier alternative to amniocentesis, which cannot be performed until 14–16 weeks' gestation. Triple screen (MSAFP₃), a maternal blood test, can be done at about 16–22 wk to measure AFP, unconjugated estriol, and HCG, to detect problems, such as open spine or ventral wall defects, Down syndrome, and trisomy 18.

Refer to genetic counseling if appropriate.

Prepare for/discuss transvaginal sonography.

Discuss possible treatment options, such as abortion.

Additional information may be necessary.

Can be carried out as early as 4½ weeks' gestation as a diagnostic tool for suspected fetal abnormalities or for prompt detection of tubal gestation.

Therapeutic abortion may be considered if disease is diagnosed before 20 weeks' gestation.

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

Increased carbohydrate metabolism, altered body chemistry, increased energy requirements to perform activities of daily living

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

Identify basis of fatigue and individual areas of control.

Modify lifestyle to meet changing needs/energy level.

Report improved sense of energy.

ACTIONS/INTERVENTIONS

RATIONALE**Independent**

Determine normal sleep-wake cycle and commitments to work, family, community, and self.

Helps in setting realistic priorities and examining time commitments. Client may need to make adjustments, such as changing work shift to accommodate early-morning nausea (changing to a later morning shift) or provide more rest (changing from night shift to day shift), shifting of household chores/responsibilities, prioritizing and curtailing some outside commitments, and so forth.

Encourage regular exercise in moderation, avoidance of foods/fluids containing caffeine; drinking warm milk/eating a light snack at bedtime, keeping crackers at bedside.

Enhances ability to fall asleep and obtain adequate rest. Fluctuating hormone levels (cortisol, progesterone, estrogen) may limit restful sleep. L-Tryptophan in milk seems to have a sedative effect. A bedtime snack may prevent awakening because of hunger, and crackers may help reduce feelings of nausea on awakening.

Suggest client limit fluid intake 1 or 2 hr before bedtime.

May decrease frequency of nighttime voiding.

Encourage a 1- to 2-hr nap each day, 8 hr of sleep each night in a dark/cool room.

Provides rest to meet metabolic needs associated with growth of maternal/fetal tissues.

Monitor Hb level. Explain role of iron in the body; encourage daily iron supplement to be taken between meals, as indicated.

Low Hb levels result in greater fatigue due to decreased oxygen-carrying capacity. Note: Iron may need to be restricted in the presence of sickle cell anemia.

Recommend use of comfortable bra/jogging top.

Provides support for tender breasts during sleep.

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

Smooth muscle relaxation, increased absorption of water from GI tract, presence of hemorrhoids, ingestion of iron supplements

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

Maintain normal pattern of bowel function.

Identify individual contributing factors/risk behaviors.

Report adoption of individually appropriate behaviors to promote elimination.

ACTIONS/INTERVENTIONS

RATIONALE**Independent**

Determine pregravid elimination habits, noting alteration with pregnancy.

Usual elimination patterns need to be maintained, when possible. Increasing progesterone level relaxes smooth muscle within the GI tract, resulting in reduced peristalsis and increased reabsorption of water and electrolytes. Iron supplements also contribute to problems of constipation.

Assess for hemorrhoids. (Refer to ND: [Discomfort].)

Varicosities of the rectum frequently develop as a result of prolonged constipation, increased efforts at bearing down, or increased circulating volume and hormonal relaxation of blood vessels. The presence of hemorrhoids can cause pain with defecation, resulting in reluctance of the client to evacuate her bowels.

Provide dietary information about fresh fruits, vegetables, grains, fiber, roughage, and adequate fluid intake (preferably decaffeinated).

Adequate bulk and consistency in diet choices help promote effective bowel pattern.

Encourage regular, nonstrenuous exercise program, such as walking. Tell client to avoid strenuous, prolonged exercise. Note cultural beliefs about exercise.

Promotes peristalsis and assists in prevention of constipation. Strenuous exercise is thought to reduce uteroplacental circulation, possibly resulting in fetal bradycardia, hyperthermia, or growth restriction/retardation. In some cultures, inactivity may be viewed as a protection for mother/child.

Collaborative

Discuss cautious use of stool softener or bulk-producing agent if diet/exercise is not effective.

May be necessary to assist in combatting persistent constipation and establishing a regular routine.

NURSING DIAGNOSIS:**Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION
CRITERIA—CLIENT WILL:****Infection, risk for urinary tract infection (UTI)**

Urinary stasis, poor hygienic practices, insufficient knowledge to avoid exposure to pathogens

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

Identify behaviors to reduce urinary stasis/risk of infection.

List signs and symptoms requiring evaluation/interventions.

Be free of signs and symptoms of infection.

ACTIONS/INTERVENTIONS**RATIONALE**

Independent

Provide information about signs/symptoms of UTI. Stress need to report signs of infection to healthcare provider and to avoid self-medication until after such notification.

Stress need for frequent/thorough hand washing before meals and food handling, and after toileting.

Provide information about other hygiene measures, including wiping vulva from front to back after urinating and voiding after intercourse.

Recommend that client drink 6–8 glasses of noncaffeinated liquid daily. Discuss role of acid residue in diet and addition of cranberry/orange juice.

Encourage practice of Kegel exercise (tightening of the perineum) throughout the day.

Suggest use of cotton underwear and showers instead of tub baths if client has a history of UTI.

Maternal UTIs respond well to treatment and may not be serious; however, they are associated with preterm labor/birth.

Many viruses, such as cytomegalovirus (CMV), can be excreted in the urine for up to 4 yr after exposure and can possibly be transmitted through poor hygienic practices.

Helps prevent rectal *Escherichia coli* contaminants from reaching the vagina. May help to prevent transmission of STDs, especially CMV and nongonococcal urethritis.

Helps prevent stasis in the urinary tract; may acidify urine and help prevent UTI.

Improves support to the pelvic organs, strengthening and increasing elasticity of the pubococcygeus muscle; provides more control over urination.

Urinary stasis and glycosuria can predispose the prenatal client to UTI, especially if history includes urinary/kidney problems. Contributory factors, such as wearing manmade fabrics and sitting in bath water, can add to potential for exposure to infection.

Collaborative

Obtain routine urine sample for microscopic examination, pH, presence of white blood cells, and culture and sensitivity, as indicated. Report colony counts of greater than 100,000/ml.

Alkaline urine predisposes client to a possible *Proteus vulgaris* infection. As many as 2%–10% of pregnant women have asymptomatic bacteriuria (colony count greater than 100,000/ml), which increases risk of premature rupture of membranes, preterm labor, and chorioamnionitis.

Administer antibiotics (e.g., ampicillin, erythromycin) as appropriate.

Treats infection as indicated. Care must be taken in prescribing antibiotics prenatally, owing to potentially negative effects on the fetus.

NURSING DIAGNOSIS:**Cardiac Output [maximally compensated]****May Be Related To:**

Increased fluid volume (preload), ventricular hypertrophy, changes in peripheral resistance (afterload)

Possibly Evidenced By:

Variations in blood pressure and pulse, syncopal episodes, presence of pathological edema

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Differentiate normal and abnormal changes.

Remain normotensive.

Be free of pathological edema.

Display no more than 1+ albumin in urinalysis.

ACTIONS/INTERVENTIONS**RATIONALE**

Independent

Review physiological process and normal or abnormal changes and signs/symptoms.

Prenatally, circulating blood volume in the form of plasma and red blood cells increases 30%–50% to meet maternal/fetal nutritional and oxygen needs and to act as a safeguard against blood loss during delivery. The body compensates for the increase in fluid volume by increasing cardiac output through ventricular hypertrophy. Hormonal effects of progesterone and relaxin reduce resistance to cardiac output by relaxing smooth muscle within the blood vessel walls. Although this is a normal process, the client is maximally compensated and could be at risk for hypertension and/or circulatory failure as the pregnancy progresses. Prompt recognition and intervention reduce risk of adverse outcome.

Obtain baseline BP and pulse measurement.
Report systolic increase of greater than 30 mm Hg or diastolic increase greater than 15 mm Hg. (Refer to CP: Pregnancy-Induced Hypertension, as appropriate.)

An increase in BP may indicate PIH. Pulse increase above 10–15 bpm may indicate cardiac stress.

Auscultate heart sounds; note any murmurs.
Review contributory history of cardiac problems or rheumatic fever.
blood viscosity, displacement of the

Cardiac ventricles undergo slight hypertrophy to compensate for increase in circulating volume and to maximize output. Systolic murmur may be created by decreased heart, or torsion of great vessels.

Assess for location/degree of edema. Distinguish between physiological and potentially harmful edema. (Refer to CP: Pregnancy-Induced Hypertension, ND: Fluid Volume risk for deficit).

Dependent edema of the lower extremities (physiological edema) often occurs, owing to venous stasis caused by uterine pressure and hormonal effects of progesterone and relaxin, which relax blood vessel walls. Edema of facies and/or upper extremities may indicate PIH.

Assess for varicosities of legs, vulva, rectum.

Increased fluid load and hormonal relaxation of blood vessel walls potentiates risk for vascular engorgement and venous stasis, especially in client whose lifestyle requires prolonged sitting/standing.

Discuss the need to avoid rapid position changes from sitting or lying to standing.

Client may be prone to postural hypotension caused by reduced venous return.

Collaborative

Monitor Hb and Hct levels.

Low Hb may indicate anemia, which can increase heart rate and cardiac workload; elevated Hct may indicate dehydration with PIH fluid shifts.

Test urine for albumin as indicated.

Proteinuria with elevation of albumin above 1+ suggests glomerular edema or spasm (developing PIH), requiring prompt intervention.

NURSING DIAGNOSIS:

Body Image, risk for disturbance

Risk Factors May Include:

Perception of biophysical changes; psychosocial, cultural, and spiritual beliefs

Possibly Evidenced By:

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

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Verbalize understanding/acceptance of body changes.

Verbalize acceptance of self in situation.

Demonstrate a positive self-image by maintaining an overall satisfactory appearance.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Determine attitude toward pregnancy, changing body image, and job situation, and how these issues are viewed by significant other(s).

The client's feelings toward the pregnancy affect her ability to develop positive feelings about her changing body contours, as well as her ability to adapt positively to her parenting roles.

Identify basic sense of client's self-esteem in relation to the changes of pregnancy and responsibilities related to this new role.

Because of a changing body shape, alterations in body image occur normally in pregnancy and may create a crisis situation that negatively affects both the pregnancy and parenting abilities in clients with poor self-esteem and a weak ego identity.

Assess support systems such as aunt, grandmother, cultural healer, and so on.

Adequate support can help client to cope positively with her changing body shape and maintain positive self-esteem.

Review physiological changes of pregnancy; assure client that mixed feelings are normal. Provide environment in which couple can discuss feelings.

Helps decrease stress associated with pregnancy. Verbalizing helps sort out feelings, attitudes, and past experiences.

Collaborative

Refer to other resources as indicated (e.g., counseling/therapy).

Client may require more intensive intervention to facilitate acceptance of self/pregnancy.

NURSING DIAGNOSIS:

Role Performance, risk for altered

Risk Factors May Include:

Maturation crisis, developmental level (immaturity on the part of the client and/or significant other), history of maladaptive coping, absence of support systems

Possibly Evidenced By:

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

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT WILL:

Identify perceived stressors.

Verbalize realistic perception and acceptance of self in changing role.

Talk with family/significant other about situation and changes that have occurred or may occur.

Develop realistic plans for adapting to new role/role changes.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Evaluate the client's/couple's response to pregnancy, individual and family stressors, and cultural implications of pregnancy/childbirth.

Identifies needs to assist in planning interventions. The client's/couple's ability to adapt positively to this "crisis" depends on support systems, cultural beliefs, resources, and effective coping mechanisms developed in dealing with past stressors. Initially, even if the pregnancy is planned, the expectant mother may feel ambivalent toward the pregnancy because of personal/professional goals, financial concerns, and possible role changes that a child will necessitate.

Ascertain from client/couple how stressors have been dealt with in the past.

Provides information regarding client's/couple's ability to deal positively with stress. Learned coping methods, either positive or negative, tend to be used in subsequent crises.

Assess economic situation and financial needs. Make necessary referrals.

Impact of pregnancy on family without adequate resources can create added stress. Members of some cultures may view healthcare as unaffordable and, as a result, may seek abortion or may not seek prenatal care.

Elicit information about preparations or lack of preparations being made for this infant.

May have fears that visible preparations may result in child's death or that planning ahead has the potential of "defying God's will."

Explain emotional lability as characteristic of pregnancy. Discuss normalcy of ambivalence.

Helps client/couple understand mood swings. Partner realizes the need to offer support/affection at these times.

Provide information about, and encourage attendance at, childbirth classes.

Assess for maladaptive behaviors (e.g., withdrawal, inappropriate anger/reactions, lack of or inappropriate self-care).

Collaborative

Refer for psychological counseling, as necessary.

Provides an opportunity for formal/informal sharing of problems, feelings, and peer support.

Provides information about client's ability to deal with stress and the need for intervention.

Further assistance in developing problem-solving skills may be helpful. By the end of the first trimester, the client/couple should have successfully achieved the task of accepting the pregnancy.

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT/COUPLE WILL:

Family Coping: potential for growth

Client and family needs are sufficiently met; adaptive tasks are effectively addressed to enable goals of self-actualization to surface

Family member/individual makes realistic appraisal of growth impact of pregnancy on own values, priorities, goals, or relationships; moving in direction of health-promoting and enriching lifestyle; chooses experiences that optimize wellness

Explore anticipated role changes.

Undertake appropriate tasks in preparation for the birth.

Report feelings of self-confidence and satisfaction with progress being made.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Identify relationship of family members to one another. Note strengths/stressors (e.g., communication styles, interactions among members).

Determine roles/responsibilities within family unit and use of supportive resources. Identify anticipated adaptations necessitated by pregnancy.

Assess relationship of client/couple to own parents.

Determine availability/involvement of grandparents.

Pregnancy is a crisis situation for client/couple and family members, resulting in a disequilibrium that necessitates adaptation to new roles and responsibilities.

Family members will need to be flexible in adjusting own roles/responsibilities in order to assist client to meet her needs related to the demands of pregnancy both expected and unplanned, such as prolonged nausea, fatigue, emotional lability.

May provide insight for assisting couple in assuming parenting role. New parents tend to use their own parents as role models and may thus adopt positive or negative parenting behaviors.

May be invaluable in providing support to client/couple although adjustment to role changes may require mutual support.

Evaluate sibling responses to pregnancy and upcoming change in family structure.

Provide information about father/sibling or grandparent attendance at childbirth classes and participation in delivery, as client desires.

Encourage father/siblings to attend prenatal office visits and listen to FHT.

Provide list of appropriate reading materials for client, couple, siblings regarding adjusting to newborn.

Collaborative

Provide information/referral about community resources if client/couple is having concerns about parenting abilities. (Refer to ND: Role Performance, risk for altered.)

In the first trimester, young siblings may not be aware of the reality and long-term consequences of pregnancy. Older children may not manifest negative feelings outwardly, yet internally they may begin to fear a change in the security of their relationship with their parent(s). Family members may be concerned about anticipated changes and may express a desire to prepare themselves and siblings for role/life change(s).

Helps family members to realize they are an integral part of the pregnancy and delivery.

Promotes a sense of involvement; helps make baby a reality for family members.

Information helps individual realistically analyze changes in family structure, roles, and behaviors.

Reducing stressors in the home allows the expectant couple to devote emotional energy to the pregnancy.

NURSING DIAGNOSIS:

May Be Related To:

Possibly Evidenced By:

DESIRED OUTCOMES/EVALUATION CRITERIA—CLIENT/PARTNER WILL:

Sexuality Patterns, altered

Knowledge/skill deficit about altered body function/structure, changes in comfort level

Reported difficulties, limitations, or changes in sexual response/activities

Share feelings related to changes in sexual desire.

Take desired steps to remedy situation.

Report satisfaction with/acceptance of changes or modifications required by pregnancy.

ACTIONS/INTERVENTIONS

RATIONALE

Independent

Determine the couple's usual pattern of sexual activity using a sexual assessment tool. Determine the impact of pregnancy on the pattern and the couple's response to the changes.

Review information about the normalcy of these changes; correct misconceptions.

Assess couple's relationship to one another and ability to cope with decrease in frequency of sexual intercourse.

Note client's/couple's response to changing body shape. Create a teaching plan to discuss sexual changes for prenatal client in the second and third trimester. (Refer to ND: Body Image, risk for disturbance.)

Review obstetric history with couple. Assess for vaginal bleeding/spotting.

Collaborative

Refer the couple for counseling if sexual concerns are not resolved.

How the couple copes with changes in sexuality and sexual patterns during pregnancy may affect the relationship. Client/couple may be helped when they know that desire may be diminished because the woman is not feeling well owing to breast tenderness, fatigue, nausea, vomiting, and a changing body image. However, they should know it is all right to continue sexual activity/alternatives as the couple desires.

Helps the couple understand the changes from a physiological viewpoint. Reduced libidinal urges in the first trimester are common for the prenatal client. This decreased desire may be difficult for the couple, and especially for the male partner, to understand.

The nature of the relationship before pregnancy affects how well the couple copes during pregnancy.

Acceptance of sexuality issues is directly related to a positive self-concept and individual's sense of identity.

Intercourse is not usually contraindicated in the first trimester unless the client has experienced complications such as bleeding during this pregnancy or in past pregnancies.

Professional counseling may be necessary to help couples to cope positively with sexuality issues in pregnancy.