MIDWIFERY TEXT BOOK AND PROMETRIC EXAMS

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CHAPTER 1

Reprductive System

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PRIORITY CONCEPTS Reproduction, Sexuality

I. Reproductive Structures and Functions

A. Ovaries
  1. Form and expel ova
  2. Secrete estrogen and progesterone

B. Fallopian tubes
  1. Muscular tubes (oviducts) lying near the ovaries and connected to the uterus
  2. Tubes that propel the ova from the ovaries to the uterus

C. Uterus
  1. Muscular, pear-shaped cavity in which the fetus develops
  2. Cavity from which menstruation occurs

D. Cervix
  1. The internal os of the cervix opens into the body of the uterine cavity.
  2. The cervical canal is located between the internal os and the external os.
  3. The external cervical os opens into the vagina.
  4. It is a passageway sperm can travel through to fertilize eggs.

E. Vagina
  1. Muscular tube that extends from the cervix to the vaginal opening in the perineum that is approximately 3 to 4 in (7.6 to 10 cm) long
  2. Known as the *birth canal*
  3. Passageway for menstrual blood flow, for penis for intercourse, and for the fetus

F. Penis
  1. Structures include the body or shaft, glans penis, and urethra.
  2. Primary functions include pathway for urination, ejaculation, and the organ used for intercourse.

G. Scrotum
  1. Houses structures including the testes, epididymis, and vas deferens
  2. Normal temperature is slightly cooler than body temperature.

H. Prostate gland
  1. Secretes a milky alkaline fluid that forms part of semen
  2. This milky alkaline fluid enhances sperm movement and neutralizes acidic vaginal secretions.

II. Menstrual Cycle (Box 21.1)

A. Ovarian hormones
  1. Ovarian hormones, released by the anterior pituitary gland, include follicle-stimulating hormone (FSH) and luteinizing hormone (LH).
  2. The hormones produce changes in the ovaries and in the endometrium.
  3. The menstrual cycle, the regularly recurring physiological changes in the endometrium that culminate in its shedding, may vary in length, with the average length being about 28 days.

B. Ovarian and uterine phases (Box 21.1)

III. Pelvis and Measurements

A. True pelvis
  1. Lies below the pelvic brim
  2. Consists of the pelvic inlet, midpelvis, and pelvic outlet

B. False pelvis
  1. The shallow portion above the pelvic brim
  2. Supports the abdominal viscera

C. Types of pelvis
  1. Gynecoid
    a. Normal pelvis
    b. Transversely rounded or blunt

⚠ The gynecoid pelvis is most favorable for successful labor and birth. If cephalopelvic disproportion (CPD) exists, the normal labor process cannot progress and will most likely result in a cesarean delivery.

Reproductive System: سیستم تولید مثلی, Ovaries: تخمدان ها, Expel: بیرون انداختن, Ova: تخمک, Uterus: رحم, Propel: به جلو راندن, Pear-shaped: گلابی شکل
Cavity: حفره, Cervix: گردن رحم – دهانه رحم, Os: دهانه, Fertilize: بارور کردن, Intercourse: مقاربت, Penis: آلت تناسلی مردانه, Shaft: بدنه – تنه, Viscera: احشاء
Urethra: مجرای ادرار, Ejaculation: انزال, Scrotum: کیسه بیضه, House: جایگاه – جا دادن - منزل دادن, Testes: بیضه ها, Slightly: کمی – اندکی, Semen: منی,
Neutralizes: خنثی کردن, Enhance: بهتر کردن – بهبود دادن, Menstrual Cycle: چرخه قاعدگی, Pituitary: هیپوفیز, Endometrium: لایه ی داخلی رحم
Culminate: به حد اکثر ارتفاع رسیدن, Shedding: ریختن – ریزش, True pelvis: لگن حقیقی, Brim: حاشیه – لبه, Consists of: شامل, Pelvic inlet: ورودی لگن
Pelvic outlet: خروجی لگن, Midpelvis: لگن میانی, False pelvis: لگن کاذب, Transversely: عرضی, Rounded: گرد – گرد شده, Blunt: بدون لبه و زاویه تیز – کند
Dephalopelvic disproportion: عدم تناسب سر جنین و لگن مادر

BOX 21.1 Menstrual Cycle

Ovarian Changes

Preovulatory Phase

Hypothalamus releases gonadotropin-releasing hormone through the portal system to the anterior pituitary system.
Secretion of follicle-stimulating hormone (FSH) by the anterior lobe of the pituitary gland stimulates growth of follicles.
Most follicles die, leaving one to mature into a large graafian follicle.
Estrogen produced by the follicle stimulates increased secretions of luteinizing hormone (LH) by the anterior lobe of the pituitary gland.
The follicle ruptures and releases an ovum into the peritoneal cavity.

Luteal Phase

Begins with ovulation
Body temperature decreases and then increases by 0.5° F to 1° F around the time of ovulation.
Corpus luteum is formed from follicle cells that remain in the ovary after ovulation.
Corpus luteum secretes estrogen and progesterone during the remaining 12 to 14 days of the cycle.
Corpus luteum degenerates if the ovum is not fertilized, and secretion of estrogen and progesterone declines.
Decline of estrogen and progesterone stimulates the anterior pituitary to secrete more FSH and LH, initiating a new reproductive cycle.

Uterine Changes

Menstrual Phase

Consists of 4 to 6 days of bleeding as the endometrium breaks down because of the decreased levels of estrogen and progesterone
The level of FSH increases, enabling the beginning of a new cycle.

Proliferative Phase

Lasts about 9 days
Estrogen stimulates proliferation and growth of the endometrium.
As estrogen increases, it suppresses secretion of FSH and increases secretion of LH.
Secretion of LH stimulates ovulation and the development of the corpus luteum.
Ovulation occurs between days 12 and 16.
Estrogen level is high, and progesterone level is low.

Secretory Phase

Lasts about 12 days and follows ovulation
This phase is initiated in response to the increase in LH level.
The graafian follicle is replaced by the corpus luteum.
The corpus luteum secretes progesterone and estrogen.
Progesterone prepares the endometrium for pregnancy if a fertilized ovum is implanted.

Data from Lewis, S., Harding, M., Kwong, J., Roberts, D., Hagler, D., & Reinisch, C. (2020). *Medical-surgical nursing: Assessment and management of clinical problems.* (11th ed.). St. Louis: Mosby. pp. 1176-1177; Murray, S., McKinney, E., Holub, K., & Jones, R. (2019). *Foundations of maternal-newborn and women's health nursing.* (7th ed.). St. Louis: Elsevier. p. 55.

2. Anthropoid
   a. Oval shape
   b. Adequate outlet, with a narrow pubic arch
3. Android
   a. Heart-shaped or angulated
   b. Not favorable for labor and vaginal birth
   c. Narrow pelvic planes can cause slow descent and midpelvic arrest.
4. Platypelloid
   a. Flat with an oval inlet
   b. Wide transverse diameter, but short anteroposterior diameter, making labor and vaginal birth difficult

D. Pelvic inlet diameters
1. Anteroposterior diameters
   a. Diagonal conjugate: Distance from the lower margin of the symphysis pubis to the sacral promontory
   b. True conjugate or conjugate vera: Distance from the upper margin of the symphysis pubis to the sacral promontory
   c. Obstetric conjugate: Extends from the sacral promontory to the top of the symphysis pubis. It is the smallest front-to-back distance through which the fetal head must pass in moving through the pelvic inlet.
2. Transverse diameter: The largest of the pelvic inlet diameters; located at right angles to the true conjugate
3. Oblique (diagonal) diameter: Not clinically measurable
4. Posterior sagittal diameter: Distance from the point where the anteroposterior and transverse diameters cross each other to the middle of the sacral promontory

E. Pelvic midplane diameters
1. Transverse (interspinous diameter)
2. Midplane normally is the largest plane and has the longest diameter.

F. Pelvic outlet diameters
1. Transverse (intertuberous diameter)
2. Outlet presents the smallest plane of the pelvic canal.

IV. Fertilization and Implantation

A. Fertilization

1. Fertilization occurs in the ampulla of the fallopian (uterine) tube when sperm and ovum unite.
2. Fertilization usually takes place within the outer third of the fallopian tubes. An ovum can be fertilized up to 72 hours after its release.

Preovulatory: قبل از تخمک گذاری, Ovum: تخمک, Peritoneal cavity: فضای صفاقی (حفره شکم), Ovulation: تخمک گذاری, Corpus luteum: جسم زرد
Degenerate: رو به انحطاط رفتن – از بین رفتن, Stimulate: تحریک کردن, Menstrual Phase: فاز قاعدگی, Proliferative Phase: فاز تکثیری, Lasts: طول کشیدن
Suppress: سرکوب کردن, Secretory Phase: فاز ترشحی, Oval shape: بیضی شکل, Adequate outlet: خروجی کافی, Narrow pubic arch: قوس پوبیس باریک
Heart-shaped: به شکل قلب, Angulated: زاویه دار, Favorable: مناسب – مطلوب, Descent: نزول, Arrest: سکته – توقف, Diameter: قطر, Conjugate: مزدوج
Anteroposterior: قدامی خلفی, Diagonal: قطری – مورب

2. The birthing parent first accepts the biological fact of being pregnant.
3. The birthing parent next accepts the growing fetus as distinct from self and a person to nurture.
4. Finally, the birthing parent prepares realistically for the birth and parenting of the child.

VII. Discomforts of Pregnancy (see Clinical Judgment: Evaluate Outcomes Box)

A. Nausea and vomiting
1. Occurs in the first trimester and usually subsides by the third month
2. Caused by elevated levels of human chorionic gonadotropin and other pregnancy hormones, as well as changes in carbohydrate metabolism

3. Interventions
   a. Eating dry crackers before arising
   b. Avoiding brushing teeth immediately after arising
   c. Eating small, frequent, low-fat meals during the day
   d. Drinking liquids between meals rather than at meals
   e. Avoiding fried foods and spicy foods
   f. Eating a protein snack at bedtime
   g. Sucking on hard candy
   h. Asking the primary health care provider (PHCP) about acupressure (some types may require a prescription) or other complementary and alternative medicine (CAM) modalities
   i. Asking the PHCP about the use of herbal remedies
   j. Taking antiemetic medications as prescribed

Pregnant individuals need to be asked about the use of complementary and alternative modalities, including over-the-counter products such as vitamins and herbal preparations.

B. Syncope
1. Usually occurs in the first trimester; supine hypotension occurs particularly in the second and third trimesters.
2. May be triggered hormonally or caused by the increased blood volume, anemia, fatigue, sudden position changes, or lying supine

3. Interventions
   a. Sitting with the feet elevated
   b. Risk for falls; teach to change positions slowly

The nurse needs to instruct the pregnant individual to avoid lying in the supine position, particularly in the second and third trimesters. The supine position places the individual at risk for supine hypotension, which occurs as a result of pressure of the uterus on the inferior vena cava.

CLINICAL JUDGMENT: EVALUATE OUTCOMES

A client who is 6 weeks pregnant is having episodes of morning sickness. The clinic nurse provides information to the client about measures to take to alleviate the episodes of nausea and vomiting. The nurse determines that the client understands these measures when the client makes the following statements:

- "I should keep dry crackers at my bedside and eat them before I get up in the morning."
- "It would be best to eat small, frequent meals through the day."
- "I need to try to eat low-fat foods and especially avoid any fried foods or spicy foods."
- "Eating a protein snack at bedtime may help me."
- "I should try to drink fluids between meals. Drinking liquids at meals may fill my stomach too much and make me sick."
- "I know that I can try sucking on hard candy. That might help."
- "If I feel I need to, I can ask my doctor about some medication that might help or other herbal remedies."

C. Urinary urgency and frequency
1. Usually occurs in the first and third trimesters
2. Caused by pressure of the uterus on the bladder
3. Interventions
   a. Drinking no less than 2000 mL of fluid during the day
   b. Limiting fluid intake in the evening
   c. Limiting intake of natural diuretics such as coffee, tea, watermelon, lemons
   d. Voiding at regular intervals
   e. Sleeping side-lying at night
   f. Wearing perineal pads, if necessary
   g. Performing Kegel exercises

D. Breast tenderness
1. Can occur in the first through the third trimesters
2. Caused by increased levels of estrogen and progesterone
3. Interventions
   a. Wearing a supportive bra
   b. Avoiding the use of soap on the nipples and areolar area to prevent drying of skin

E. Increased vaginal discharge
1. Can occur in the first through the third trimesters
2. Caused by hypertrophy and thickening of the vaginal mucosa and increased mucus production

3. Interventions
   a. Using proper cleansing and hygiene techniques

Nurture: پروردن – پرورش دادن، Realistically: واقع بینانه، Arising: برخاستن، Spicy foods: غذاهای ادویه دار، Sucking: مکیدن، Candy: آب نبات، Fill: پر کردن
Complementary: مکمل، Alternative: جایگزین، Modality: روش، herbal remedies: داروهای گیاهی، antiemetic: ضد استفراغ، Watermelon: هندوانه، Lemons: لیمو
Trigger: باعث ایجاد یا شروع چیزی شدن، Urinary urgency: زمانی رخ می دهد که فشار در مثانه به طور ناگهانی افزایش می یابد و نگه داشتن آن در ادرار دشوار می شود
Morning sickness: حالت تهوع که در ماه های اول بارداری رخ می دهد

- **b.** Wearing cotton underwear
- **c.** Avoiding douching
- **d.** Consulting the PHCP if infection is suspected

F. Nasal stuffiness

1. Occurs in the first through third trimesters
2. Results from increased estrogen, which causes edema of the nasal tissues and dryness
3. Interventions
   - **a.** Encouraging the use of a humidifier
   - **b.** Avoiding the use of nasal sprays or antihistamines (the PHCP should be consulted about their use; normal saline nose drops and sprays may be acceptable)

G. Fatigue

1. Occurs usually in the first and third trimesters
2. Usually results from hormonal changes
3. Interventions
   - **a.** Arranging frequent rest periods throughout the day
   - **b.** Using correct posture and body mechanics
   - **c.** Obtaining regular exercise
   - **d.** Performing muscle relaxation and strengthening exercises for the legs and hip joints
   - **e.** Avoiding eating and drinking foods containing stimulants throughout the pregnancy
   - **f.** Eating a well-balanced diet to prevent anemia

H. Heartburn

1. Occurs in the second and third trimesters
2. Results from increased progesterone levels, decreased gastrointestinal motility, esophageal reflux, and displacement of the stomach by the enlarging uterus
3. Interventions
   - **a.** Eating small, frequent meals
   - **b.** Sitting upright for 30 minutes after a meal
   - **c.** Drinking milk between meals
   - **d.** Avoiding fatty and spicy foods
   - **e.** Avoiding bending over or lying flat
   - **f.** Wearing loose-fitting clothes
   - **g.** Taking deep breaths and sipping water to help relieve the burning sensation
   - **h.** Eliminating foods and fluids that stimulate acid formation in the stomach, such as carbonated beverages
   - **i.** Avoiding citrus fruits and juice products, chocolate, and peppermint if they increase symptoms
   - **j.** Consulting with the PHCP about the use of antacids

I. Ankle edema

1. Usually occurs in the second and third trimesters
2. Results from vasodilation, venous stasis, and increased venous pressure below the uterus
3. Interventions
   - **a.** Elevating the legs at least twice a day and when resting
   - **b.** Sleeping in a side-lying position
   - **c.** Wearing supportive stockings or support hose
   - **d.** Avoiding sitting or standing in one position for long periods
   - **e.** Drinking ample amounts of fluid as allowed

J. Varicose veins

1. Usually occur in the second and third trimesters
2. Result from weakening walls of the veins or valves and venous congestion
3. Thrombophlebitis is rare, but it may occur.
4. Interventions

   - **a.** Wearing supportive stockings or support hose
   - **b.** Elevating the feet when sitting
   - **c.** Lying with the feet and hips elevated
   - **d.** Avoiding long periods of standing or sitting
   - **e.** Moving about while standing to improve circulation
   - **f.** Avoiding leg crossing
   - **g.** Avoiding constricting articles of clothing such as knee-high stockings
   - **h.** Teaching leg exercises
   - **i.** Avoiding flying because of sitting position

K. Headaches

1. Usually considered benign in the first trimester. May need further investigation if occurring in the second and third trimesters
2. Result from changes in blood volume and vascular tone
3. Interventions

   - **a.** Changing position slowly
   - **b.** Applying a cool cloth to the forehead or base of neck
   - **c.** Eating a small salty snack
   - **d.** Using acetaminophen only if prescribed by the PHCP

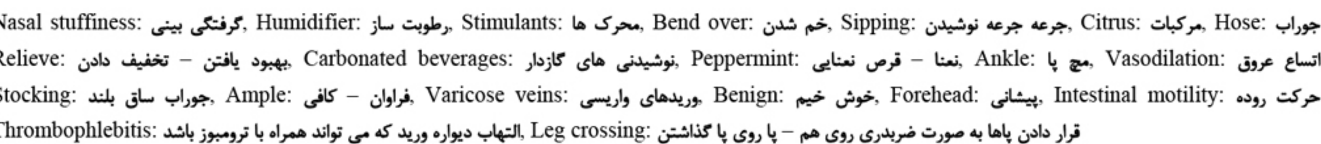
L. Hemorrhoids

1. Usually occur in the second and third trimesters
2. Result from increased venous pressure and constipation
3. Interventions

   - **a.** Soaking in a warm sitz bath
   - **b.** Sitting on a soft pillow or lying on the side with the hips elevated on a pillow
   - **c.** Eating high-fiber foods and drinking sufficient fluids to avoid constipation
   - **d.** Increasing exercise, such as walking
   - **e.** Applying ointments, suppositories, or compresses as prescribed by the PHCP

M. Constipation

1. Usually occurs in the second and third trimesters
2. Results from an increase in progesterone production, decreased intestinal motility, displacement of the intestines, pressure of the uterus, and taking iron supplements
3. Interventions
   - **a.** Eating high-fiber foods such as whole grains, fruits, and vegetables; avoiding constipating foods such as cheese


Nasal stuffiness: گرفتگی بینی, Humidifier: رطوبت ساز, Stimulants: محرک ها, Bend over: خم شدن, Sipping: جرعه جرعه نوشیدن, Citrus: مرکبات, Hose: جوراب
Relieve: بهبود یافتن – تخفیف دادن, Carbonated beverages: نوشیدنی های گازدار, Peppermint: نعنا – قرص نعنایی, Ankle: مچ پا, Vasodilation: اتساع عروق
Stocking: جوراب ساق بلند, Ample: فراوان – کافی, Varicose veins: وریدهای واریسی, Benign: خوش خیم, Forehead: پیشانی, Intestinal motility: حرکت روده
Thrombophlebitis: التهاب دیواره ورید که می تواند همراه با ترومبوز باشد, Leg crossing: قرار دادن پاها به صورت ضربدری روی هم – پا روی پا گذاشتن

b. Drinking no less than 2000 mL per day
c. Exercising regularly, such as a daily 20-minute walk
d. Consulting with the PHCP about interventions such as the use of stool softeners, laxatives, or enemas
e. Using a footrest during elimination to provide comfort and decrease straining

N. Backache
1. Usually occurs in the second and third trimesters
2. Caused by an exaggerated lumbosacral curve, resulting from an enlarged uterus
3. Risk for falls; teach to move about slowly
4. Interventions
a. Obtaining rest
b. Using correct posture and body mechanics
c. Avoiding the lifting of heavy objects
d. Squatting rather than bending from the waist to pick up objects
e. When sitting, using foot supports, arm rests, and pillows behind the back
f. Wearing low-heeled, comfortable, and supportive shoes
g. Performing pelvic tilt (rock) exercises and conscious relaxation exercises
h. Sleeping on a firm mattress
i. Performing tailor-sitting exercises

O. Leg cramps
1. Usually occur in the second and third trimesters
2. Result from an altered calcium-phosphorus balance and pressure of the uterus on nerves or from fatigue

3. Interventions
a. Getting regular exercise, especially walking
b. Dorsiflexing the foot of the affected leg
c. Increasing calcium intake

P. Shortness of breath
1. Can occur in the second and third trimesters
2. Results from pressure on the diaphragm from the enlarged uterus

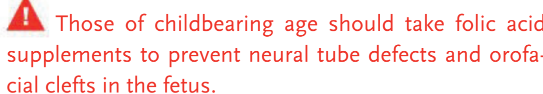
3. Interventions
a. Taking frequent rest periods
b. Sitting and sleeping with the head elevated or on the side
c. Avoiding overexertion

VIII. Pregnancy Risk Factors

A. Age: Those younger than 20 years and older than 35 years are at risk for adverse perinatal outcomes.

B. Adolescent pregnancy
1. Factors that result in adolescent pregnancy include the early onset of menarche, sexual behaviors in this age-group, problems with family relationships, poverty, and lack of knowledge of reproduction and birth control.
2. Major concerns related to adolescent pregnancy include poor nutritional status; emotional and behavioral difficulties; lack of support systems; increased risk of stillbirth; low-birth-weight infants; fetal mortality; cephalopelvic disproportion; and increased risk of birthing parent complications, such as hypertension, anemia, prolonged labor, and infections.
3. The role of the nurse in reducing risks and consequences of adolescent pregnancy is twofold: first, to encourage early and continued prenatal care; and second, to refer the adolescent, if necessary, for appropriate assistance, which can help counter the effects of a negative socioeconomic environment on the pregnancy.
4. Adolescents may experience loneliness related to body image changes, and may have a potential for interruption of school progress related to nonattendance at school.

C. Nutrition: Adequate nutrition is necessary for normal fetal growth and development. Nutritional needs are determined by the stage of pregnancy, and nutrition should support recommended weight gain during the various stages; referral to a dietitian may be needed.



Those of childbearing age should take folic acid supplements to prevent neural tube defects and orofacial clefts in the fetus.

D. Genetic considerations: Genetic abnormalities such as defective genes or transmissible inherited disorders can result in congenital anomalies; the nurse should perform a genetic risk assessment to determine an inheritable risk.

E. Health care: Failure to seek and obtain prenatal care, including dental care, increases the risk for preterm birth and low birth weight.

F. Abuse and violence: Physical abuse and violence can increase the risk for abruptio placentae, preterm birth, and infections from unwanted and forced sex. On assessment, the nurse should ask the partner, if present, to leave the room because the client may want to disclose experiences of abuse and may fear doing it in the partner's presence. The nurse should assess for injuries to the breasts, the abdomen, and the genitals.

G. Medical conditions: Concurrent medical conditions, such as, but not limited to, diabetes mellitus, hypertensive disorder, or cardiac disease, increase the risk of complications during pregnancy.

H. German measles (rubella): Infection in the birthing parent during the first 8 weeks of gestation carries the highest rate of fetal infection and anomalies.

I. Sexually transmitted infections (refer to Chapter 23)

J. Human immunodeficiency virus (HIV)
1. HIV is transmitted through blood; blood products; and other bodily fluids such as urine, semen,

Straining: زور زدن, Exaggerated: بیش از حد – اغراق آمیز, Conscious: آگاهانه – هوشیارانه, Mattress: تشک, Firm: سفت – محکم, Menarche: اولین وقوع قاعدگی
Poverty: فقر, Stillbirth: مرگ جنین بعد از هفته 20 بارداری – مرده زایی, Cephalopelvic disproportion: عدم تناسب سر جنین با لگن مادر, Interruption: وقفه
Twofold: دوقسمتی – دوگانه – دو برابر, Counter: تاثیر عکس ایجاد کردن – مقابله کردن, Nonattendance: عدم شرکت – عدم حضور, Referral: ارجاع, Dietitian: متخصص تغذیه
Childbearing age: سن باروری, Defect: نقص, Orofacial: دهان و صورت, Cleft: شکاف, Transmissible: قابل انتقال, Inherit: به ارث بردن, Congenital: مادرزادی
Anomaly: چیزی که از استاندارد عادی یا مورد انتظار منحرف می شود - ناهنجاری, Abuse: بدرفتاری – سوء استفاده, Violence: خشونت, Abruptio placentae: دکولمان جفت
Disclose: آشکار کردن - فاش کردن, Concurrent: هم زمان, Rubella: سرخجه

and vaginal secretions; the virus is also transmitted through exposure to infected secretions during birth and through breast milk.

2. Repeated exposure to the virus during pregnancy through unsafe sex practices or intravenous drug use can increase the risk of transmission to the fetus.
3. Perinatal administration of zidovudine may be recommended to decrease the risk of transmission of HIV from birthing parent to fetus.

K. Substance abuse

1. Substance abuse threatens normal fetal growth and successful term completion of the pregnancy.
2. Substance abuse places the pregnancy at risk for fetal growth restriction, abruptio placentae, and fetal bradycardia.
3. Many substances cross the placenta and can be teratogenic (drugs, tobacco, alcohol, medications, certain foods such as raw fish). No over-the-counter medications should be taken and no other substances (such as psychoactive bath salts) should be used unless prescribed by the PHCP.
4. Smoking (tobacco) can result in low birth weight, a higher incidence of birth defects, and stillbirths.
5. Physical signs of drug abuse may include dilated or contracted pupils, fatigue, track (needle) marks, skin abscesses, inflamed nasal mucosa, and inappropriate behavior by the individual.
6. Consumption of alcohol during pregnancy may lead to fetal alcohol syndrome and can cause jitteriness, physical abnormalities, congenital anomalies, and growth deficits in the **newborn.**

L. Viral **hepatitis** (see Chapters 23, 34, and 49 for information regarding hepatitis B infection)

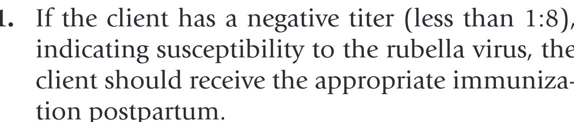
IX. Antepartum Diagnostic Testing

The usual schedule for antepartum health care visits is every 4 weeks for the first 28 to 32 weeks, every 2 weeks from 32 to 36 weeks, and every week from 36 to 40 weeks.

A. Blood type and **Rh factor**

1. ABO typing is performed to determine the woman's blood type in the ABO antigen system.
2. Rh typing is done to determine the woman's blood type in the rhesus antigen system. (*Rh positive* indicates the presence of the antigen; *Rh negative* indicates the absence of the antigen.)
3. If the client is Rh negative and has a negative antibody screen, the client will need repeat antibody screens and should receive Rh_o(D) immune globulin (RhoGAM) at 28 weeks of gestation.
4. The client will also require RhoGAM within 72 hours after delivery if the infant is Rh positive.
5. RhoGAM may also be prescribed following termination of pregnancy, such as following a miscarriage.

B. Rubella titer



1. If the client has a negative titer (less than 1:8), indicating susceptibility to the rubella virus, the client should receive the appropriate immunization postpartum.
2. The client must be using effective birth control at the time of the immunization and must be counseled not to become pregnant for 1 to 3 months after immunization (as specified by the PHCP) and to avoid contact with anyone who is immunocompromised.
3. If the rubella **vaccine** is administered at the same time as Rh_o(D) immune globulin, it may not be effective.
4. Rubella vaccine is administered postpartum (before discharge) via the subcutaneous route if the titer is less than 1:8; inquire about sensitivity to eggs.

Rubella vaccine is not given during pregnancy because the live attenuated virus may cross the placenta and present a risk to the developing fetus.

C. Complete blood cell (CBC) count levels

1. White blood cells (WBCs) can be slightly increased during pregnancy.
2. Leukocytosis can be a normal finding in pregnancy.
3. Hemoglobin and hematocrit levels decline during gestation as a result of increased plasma volume.
4. A decrease in the hemoglobin level to less than 10 g/dL (100 mmol/L) or in the hematocrit level to less than 30% indicates anemia.

D. Papanicolaou's smear may be done during the initial prenatal examination to screen for cervical neoplasia if the individual has not had a screening before or is beyond the recommended timeframe since the last screening.

E. Sexually transmitted infections (see Chapter 23)

F. Sickle cell screening

1. Screening is indicated for clients at risk for sickle cell disease.
2. A positive test may indicate a need for further screening.

G. Tuberculin skin test

1. The PHCP may prefer to perform this skin test after **birth**.
2. A positive skin test indicates the need for a chest radiograph (using an abdominal lead shield) to rule out active disease; in a pregnant client, chest radiography would not be performed until after

Breast milk: شیر مادر, Exposure: در معرض چیزی قرار گرفتن, Perinatal: دوره ی قبل بعد از زایمان, Transmission: انتقال, Substance abuse: سوء مصرف مواد
Threaten: تهدید کردن, Restriction: محدودیت, Cross: عبور کردن, Teratogenic: موادی که می توانند باعث اختلالات مادرزادی در جنین شوند, Raw: خام, Pupil: مردمک
Incidence: وقوع – بروز, Inflamed: ملتهب, Jitteriness: بی قراری – لرزش, Abnormalities: ناهنجاری ها, Anomaly: ناهنجاری, Antepartum: قبل از زایمان
Rho(D) immune globulin: آمپول روگام, Termination: خاتمه دادن, Susceptibility to: مستعد – حساسیت به, Immunocompromised: نقص ایمنی
Inquire: جویا شدن – پرسیدن, Attenuated: ضعیف شده, Neoplasia: رشد غیرطبیعی سلول ها (که میتونه مرحله پیش سرطانی باشه), Decline: کاهش یافتن
Papanicolaou's smear: پاپ اسمیر, Further: بعدی – بیشتر, Lead shield: محافظ سربی, Rule out: رد کردن