* Chapter 4
* Prenatal Care and Adaptations to Pregnancy
* **Key Terms**
* *A*bortion  12. McDonalds sign
* Antepartum 13. Multipara
* Braxton hicks 14. Nageles rule
* Chadwick's sign 15. Para
* Colostrum 16.Postpartum
* Gestational age 17.Primigravida
* Goodells sign 18.Primapara
* Gravida 19. Quickening
* Hegars sign 20. Supine hypotension syndrome
* Lactation 21,Trimesters
* lighting
* Phases of Pregnancy
* Antepartum
* Before birth (prenatal)
* Intrapartum
* During birth
* Postpartum
* After birth
* Prenatal Care Providers
* Obstetricians
* Family practice physicians
* Certified nurse midwives (CNMs)
* Nurse practitioners
* Major Goals of Prenatal Care
* Ensure a safe birth for mother and child by promoting good health habits and reducing risk factors
* Teach health habits that may be continued after pregnancy
* Educate in self-care for pregnancy
* Provide physical care
* Prepare parents for the responsibilities of parenthood
* Prenatal Visits
* Ideally, prenatal care should begin prior to the pregnancy to assist the woman in being in optimal health prior to conception.
* The gestation of the woman at the first prenatal care visit will vary by practitioner.
* Preconception Care
* Identifies risk factors that may be changed *before* conception
* Reduce their negative impact on outcome of pregnancy
* Ensure good nutritional state and immunizations
* Ensure adequate intake of folic acid
* To prevent neural tube defects in developing fetus
* Prenatal Care
* Complete history and physical
* Identify problems that may affect the woman and her developing fetus
* Ensure healthy pregnancy and delivery of healthy infant
* Components of Prenatal
Health History
* Obstetric
* Menstrual
* Contraceptive
* Medical and surgical
* Woman’s family
* Partner’s family
* Woman and partner’s to identify risk factors
* Psychosocial
* Physical Examination Objectives
* Evaluate woman’s general health
* Determine baseline weight and vital signs
* Evaluate nutritional status
* Identify current physical/social problems
* Determines the estimated date of delivery (EDD)
* Pelvic Examination Objectives
* Evaluate the size, adequacy, and condition of the pelvis and reproductive organs
* Assess for signs of pregnancy
* Recommended Schedule of Prenatal Visits—Uncomplicated Pregnancy
* Conception to 28 weeks—every 4 weeks
* 29 to 36 weeks—every 2 to 3 weeks
* 37 weeks to birth—weekly
* Certain laboratory and/or diagnostic tests are performed at various times throughout the pregnancy
* See Table 4-1, page 46 for listing
* Routine Assessments at Each
Prenatal Visit
* Risk factors: review known and assess for new
* Vital signs and weight: determine if gain is normal
* Urinalysis: protein, glucose, and ketone levels
* Blood glucose screening
* Fundal height: fetal growth/amniotic fluid volume
* Leopold’s maneuvers: assess presentation/position
* Fetal heart rate
* Nutrition intake
* Any discomforts or problems since last visit
* Safety Alert
* Early and regular prenatal care is important for reducing the number of low birth weight infants born and for reducing morbidity and mortality for mothers and newborns
* Determining the Estimated
Date of Delivery
* Average pregnancy is 40 weeks (280 days) after first day of LNMP, plus or minus 2 weeks
* Nägele’s rule
* Identify first day of LNMP
* Count backward 3 months
* Add 7 days
* Update year, if applicable
* Trimesters
* Pregnancy divided into three 13-week parts
* Important to know what occurs during each trimester to both woman and fetus
* Helps provide anticipatory guidance
* Identify deviations from the expected pattern of development
* Presumptive Signs of Pregnancy
* Amenorrhea
* Nausea
* Breast tenderness
* Deepening pigmentation
* Urinary frequency
* Fatigue and drowsiness
* Quickening
* Probable and Positive Signs of Pregnancy
* Probable
* Goodell’s sign
* Chadwick’s sign
* Hegar’s sign
* McDonald’s sign
* Abdominal enlargement
* Braxton Hicks contractions
* Ballottement/fetal outline
* Abdominal striae
* Positive pregnancy test
* Positive
* Audible fetal heartbeat
* Fetal movement felt by examiner
* Ultrasound visualization of fetus
* Normal Physiological Changes
in Pregnancy
* Pregnancy causes many changes in body systems:
* Endocrine
* Reproductive
* Respiratory
* Cardiovascular
* Gastrointestinal
* Urinary
* Integumentary and skeletal
* Effects of Pregnancy on the
Reproductive System
* Uterus
* Becomes temporary abdominal organ
* Capacity is 5000 mL (fetus, placenta, amniotic fluid)
* Cervix
* Changes in color and consistency, glands in cervical mucosa increase
* Mucus plug formed to prevent ascent of organisms into uterus
* Ovaries
* Produce progesterone to maintain decidua (uterine lining) during first 6-7 weeks of gestation until placenta can take over task
* Height of Fundus During Gestation
* Effects of Pregnancy on the Cardiovascular System
* Blood volume increases by ~45% than prepregnant state
* Increase provides for
* Exchange of nutrients, oxygen, and waste products within the placenta
* Needs of expanded maternal tissue
* Reserve for blood loss at birth
* Pulse rate increases by 10 to 15 beats/min
* Supine Hypotension Syndrome
* Also called *aortocaval compression* or *vena cava syndrome*
* Occurs if woman lies flat on her back
* Allows heavy uterus to compress inferior vena cava
* Reduces blood returned to her heart
* Can lead to fetal hypoxia
* Symptoms
* Faintness
* Lightheadedness
* Dizziness
* Agitation
* Turning to one side relieves pressure on inferior vena cava, preferably the left side
* Supine Hypotension Syndrome *(cont.)*
* Effects of Pregnancy on the Gastrointestinal System
* Growing uterus displaces stomach and intestines
* Increased salivary secretions
* Oral mucosa may become tender and bleed more easily
* Appetite and thirst may increase
* Gastric acid secretions decrease
* Delayed gastric emptying and intestinal movement
* Progesterone and estrogen relax muscle tone of gallbladder
* Leads to retained bile salts
* Can cause pruritus during pregnancy
* Compression of Abdominal Contents as Uterus Enlarges
* Effects of Pregnancy on the
Urinary System
* Excretes waste products of woman and fetus
* Glomerular filtration rate of kidneys increases
* Glycosuria and proteinuria more common
* Water retention due to increased blood volume and dissolving nutrients provided for fetus
* Progesterone causes renal pelvis and ureters to lose tone, leads to urinary stasis
* Woman more susceptible to UTIs
* 99% of sodium is reabsorbed, leads to fluid retention
* Effects of Pregnancy on the Integumentary and Skeletal Systems
* Striae
* Spider nevi
* Sweat and sebaceous glands become more active
* To dissipate heat from woman and fetus
* Posture changes
* Low back aches
* Relaxation of pelvic joints
* Waddling gait
* Change in center of gravity
* Balance may become an issue
* Safety Alert
* A change in the center of gravity and joint instability because of the softening of the ligaments predispose the pregnant woman to problems with balance.
* Interventions concerning safety should be part of prenatal education.
* Nutrition for Pregnancy and Lactation
* Women must be educated that they are not “eating for two.”
* The intake must be evaluated for both caloric content and value to the growing fetus.
* Nutrition Education
* Read food labels
* Eat foods that are nutrient-dense rather than empty
* Protein versus sugary foods
* Maternal Diet and Fetal Health
* High correlation between maternal diet and fetal health
* Ensure that deficiencies do not occur during the critical first weeks of pregnancy
* The nurse explains the value of eating well-balanced meals
* Weight Gain
* Women of normal weight: 25 to 35 pounds (11.5 to 16 kg)
* Obese women: 11 to 20 pounds (5 to 9 kg)
* Overweight women: 31 to 50 pounds (14 to 22.7 kg)
* Multifetal pregnancy: twins—woman should gain 4 to 6 pounds in first trimester, 1½ pounds per week in second and third trimesters, for a total of 37 to 54 pounds
* Nutrition Requirements for
Pregnant Women
* Increase kCal by 300 per day, and should include
* Protein—60 g/day
* Calcium—1200 mg/day
* Iron—30 mg/day
* Folic acid—400 mcg (0.4mg)/day
* Special Nutrition Considerations
* Pregnant adolescent
* Sodium intake
* Vegetarian
* Pica
* Lactose intolerance
* Cultural preferences
* Gestational diabetes mellitus
* Nutrition During Lactation
* Caloric intake during lactation should be about 500 calories more than the nonpregnant woman’s RDA
* Protein intake should be 65 mg/day
* Calcium and iron intake is the same as during pregnancy
* Vitamin supplements are often continued during lactation
* Limit intake of caffeine and alcohol
* Drugs should only be taken upon the advice of the health care provider
* Exercise During Pregnancy
* Maternal cardiac status and fetoplacental reserve should be the basis for determining exercise levels during all trimesters of pregnancy
* It is important to assess the exercise practices of the woman
* Goal of exercise during pregnancy should be *maintenance* of fitness, not improvement of fitness or weight loss
* Travel During Pregnancy
* Air travel generally safe
* Avoid sitting for extended periods of time
* Avoid locations that increase the risk of exposure to infectious diseases
* Bring a copy of obstetric records
* Obtain information about nearest health care facility
* Encourage hand hygiene and dietary precautions
* Provide the “recipe” for oral rehydration formula
* Common Discomforts in Pregnancy
* Fatigue
* Nasal stuffiness
* Nausea
* Heartburn
* Constipation
* Hemorrhoids
* Vaginal discharge
* Backache
* Varicose veins
* Leg cramps
* Edema of the lower extremities
* Impact on Mother
* According to Reva Rubin, four maternal tasks the woman accomplishes during pregnancy include
* Seeing safe passage for herself and her fetus
* Securing acceptance of herself as a mother and for her fetus
* Learning to give of self and to receive the care and concern of others
* Committing herself to the child as she progresses through pregnancy
* Development Stage of Fatherhood
* Announcement when pregnancy is confirmed
* Acceptance results in strengthening of family
* Adjustment
* Focus
* Active plans for participation in labor, birth process
* Impact on the Father
* Cultural values influence the role of fathers because pregnancy and birth are viewed exclusively as women’s work in some cultures
* The nurse should not assume that a father is uninterested if he takes a less active role in pregnancy and birth
* Acceptance of the pregnancy results in strengthening of the family support system and expansion of the social network
* Impact on the Adolescent
* The nurse must assess the girl’s developmental and educational level as well as her support system to best provide care for her
* Consider her developmental level and the priorities typical of her age
* Must cope with two of life’s most stress-laden transitions at the same time: adolescence and parenthood
* Impact on the Older Couple
* Tend to adjust to the pregnancy because they are well-educated, have achieved life experiences that enable them to better cope with realities of parenthood
* Postponement of Pregnancy until after Age 35
* Effective birth control alternatives
* Increasing career options for women
* High cost of living
* Development of fertilization techniques to enable later pregnancy
* Impact on the Single Mother
* May be an adolescent or a mature woman
* May have unique emotional needs
* Single women who plan pregnancies often prepare for the financial and lifestyle changes
* Impact on the Single Father
* May take an active interest in and financial responsibility for the child
* May want to participate in plans for the child and take part in the care of the infant after it is born
* His participation is sometimes rejected by the woman
* Impact on the Grandparents
* May eagerly anticipate the woman’s pregnancy
* Some will take a more active role in the care of the grandchild
* If grandparents and expectant couple have similar views of their roles, little conflict is likely
* The nurse may be able to help the new parents to understand their own parents’ reactions and help them to negotiate solutions to conflicts that are satisfactory to both generations
* FDA Pregnancy Risk Category for Drugs
* Category A: no risk demonstrated to the fetus in any trimester
* Category B: no adverse effects in animals; no human studies available
* Category C: Only prescribed after risks to the fetus are considered. Animal studies have shown adverse reaction; no human studies available
* Category D: Definite fetal risks, but may be given in spite of risks in life-threatening situations
* Category X: Absolute fetal abnormalities. Not to be used anytime during pregnancy
* Immunizations and Pregnancy
* Live virus vaccines are contraindicated during pregnancy
* Thimerosal should not be given during pregnancy due to risk of mercury poisoning
* Avoid pregnancy for at least 1 month after receiving an MMR vaccine
* Select immunizations are allowable during pregnancy, such as influenza vaccine and H1N1 vaccine