Prenatal Care and Pregnancy

Foundations of Maternal and Child Health HSC 4579

Confirming Pregnancy

Early signs of pregnancy often occur within the first 6 weeks

- Pregnancy
 - After conception a woman is in a state of pregnancy, which lasts for the time it takes the fetus to develop
 - · Usually nine calendar months
- Confirming pregnancy
- Presumptive signs
- Probable signs
- Positive signs
- · Pregnancy tests
- · Human chorionic gonadotropin (HCG)

Prenatal Development

- Gestation: the period between conception and birth, an unborn child undergoes dramatic changes in development.
- Gestational age: age of an unborn baby, usually dated from the first day of pregnant mother's last menstrual cycle.

Three stages of prenatal development

1) The Germinal Stage

- · Fertilization to 2 weeks
- Zygote- fertilizes ovum
- Zygote divides (rapid cell division), becomes more complex and implants in the wall of the uterus (pregnancy)



Three stages of prenatal development

2) Embryonic stage

- > 2-8 weeks called an embryo now
- The organs and major body systems-respiratory, digestive, and nervous-develop rapidly
- Critical period –embryo is most vulnerable to destructive influences in the prenatal environment
- The most severely defective embryos usually do not survive beyond the first trimester (1-3 months)
- Spontaneous abortion/miscarriage- natural expulsion from the uterus of a embryo that cannot survive outside the womb

Three stages of prenatal development

3) Fetal Stage

- > 8 weeks to birth called a fetus now
- > Final stage of prenatal development
- Fetus grows rapidly to about 20 times its previous length
- Organs and body system become more complex and fetus puts on layer of fat
- Fingernails, toenails, eyelids continue to develop
- Ultrasound: prenatal medical procedure using high-frequency sounds waves to detect the outline of a fetus and its movements, used to determine whether a pregnancy is progressing normally

Prenatal care

- Initial visits
- About 13 subsequent visits depending on initiation of care
- At first once a month then twice a month then once a week as you approach 40 weeks
- Postpartum visit
- Alternative approach to traditional individual care is group prenatal care

(CenteringPregnancy ®)



First trimester: Weeks 1-12

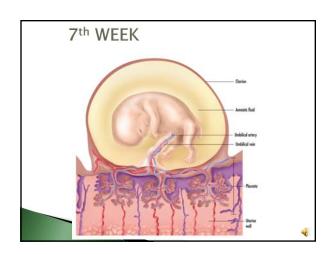
Enlarged and tender breasts Decreased interest in sex

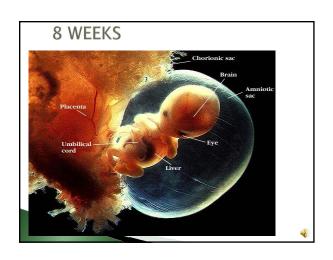
Morning sickness Moodiness and (nausea and/or vomiting)

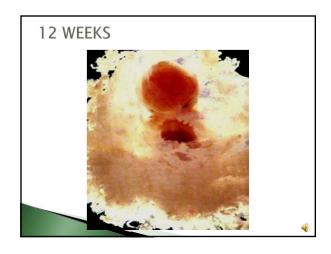
irritability

Darkening of nipple

Extreme fatigue and areola





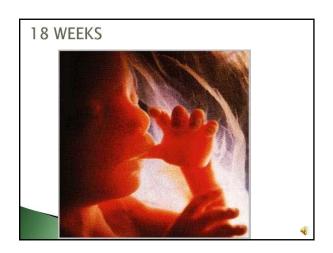


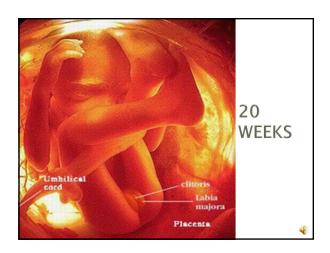
Second trimester: weeks 13 -27

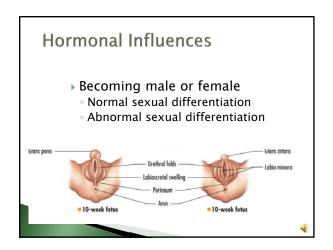
- Morning sickness subsides
- Gastrointestinal problems heartburn, gas, constipation)
- Gain majority of weight (12-14 lbs)
- Breathing problems

- Backache
- Leg cramps and numbness/tingling of hands
- Swollen and bleeding gums
- Swelling of feet, hands, and ankles
- Braxton-Hicks contractions



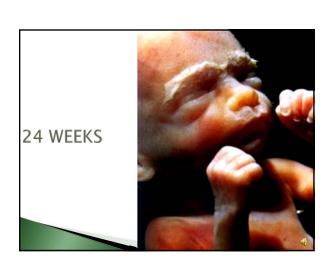


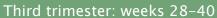




Sexual Differentiation

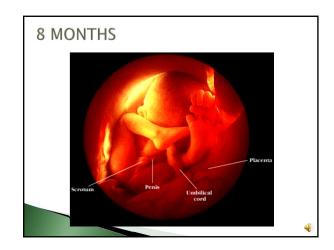
- By default, the fertilized egg will develop as female; the presence of a Y-chromosome causes it to differentiate into a male instead
- Reproductive organs develop in female & male embryos from the same tissue (called "homologous structures"): see table in text
- External genitalia are visibly identifiable by the fourth month





Punce I

- Heartburn and constipation
- ▶ Leg cramps
- Backache
- Breathlessness
- Braxton-Hicks contractions
- ↑ Leukorrhea
- → ↑ Colostrum
- Hemorrhoids
- Pelvic and buttock discomfort
- Itchy abdomen



A Pregnant Woman's Body Changes

Fetal Growth & Development First month: 1/10 to inch length; 1/7 ounce in

Nervous system, urinary system, circulatory system, digestive system, skin, bones, lungs. Arm and leg buds begin to form

Second month: 1.2 inches; 1/6 ounce

Fingers and toes develop. Circulatory system is closed

Third month: 2-3 inches; ounce

weight

Sex of fetus is defined. Kidneys excrete urine, heart beats. Ears and nose develop

Fetal Growth & Development

Fourth month: 4-5 inches; 2-4 ounces

Fetal movements can be felt (quickening), heart sounds can be monitored externally

Fifth month: 6.5-10 inches; .75-1.4 pounds

Eyebrows and fingernails develop. Vernix, a white greasy substance, and lanugo (soft fine hair) cover fetus's skin for protection

Sixth month: 10-11.5 inches; 2.1 pounds

Fetus become active. Coughs, hiccups, responds to noise.

Fetal Growth & Development

Seventh month: 14-15 inches; 2.5-3 pounds

Able to survive outside the body. Eyelids are open, fingerprints are set

Eighth month: 15-17 inches; 4-5.5 pounds

Wrinkled skin, bones harden, baby positions for birth

Ninth month: 16-22 inches; 6-9 pounds

Skin is smooth, skull bones hardened, much of the vernix and lanugo have disappeared

Maternal Factors

- Teratogen: an environmental agent such as a virus, a drug or radiation that can interfere with normal prenatal development and cause developmental abnormalities
 - Nutrition
 - Maternal Weight
 - Strenuous Activity vs healthy physical activity



Maternal Factors

- Drug intake
 - Alcohol
 - · Fetal alcohol syndrome (FAS)
 - Nicotine
 - Low birthweight, miscarriage, still birth, SIDS, log term respiratory problem, cognitive and behavioral problems etc.
 - Caffeine
 - Marijuana, Cocaine and Methamphetamines
 - Miscarriage, preterm birth, low birthweight, birth defects, delayed growth etc.
- Maternal Illnesses
- AIDS, maternal anxiety and stress, maternal age, outside environmental hazards

Paternal Factors

- Quality of sperm may be effected by
- Lead, marijuana, tobacco smoke, excessive alcohol or radiation, pesticides, high ozone levels
- Men who smoke have an increased likelihood of transmitting genetic abnormalities
- Pregnant women's exposure to father's second hand smoke
- Older fathers may be liked to birth defects due to damaged or deteriorated sperm

