İSTANBUL GELİŞİM ÜNİVERSİTESİ

Ekolojik, Ekonomik ve Sosyal Sürdürülebilirlik İçin

İstanbul Gelişim Üniversitesi

Department of Nursing (ENG)

Name of Course: WOMEN'S HEALTH AND DISEASES NURSING

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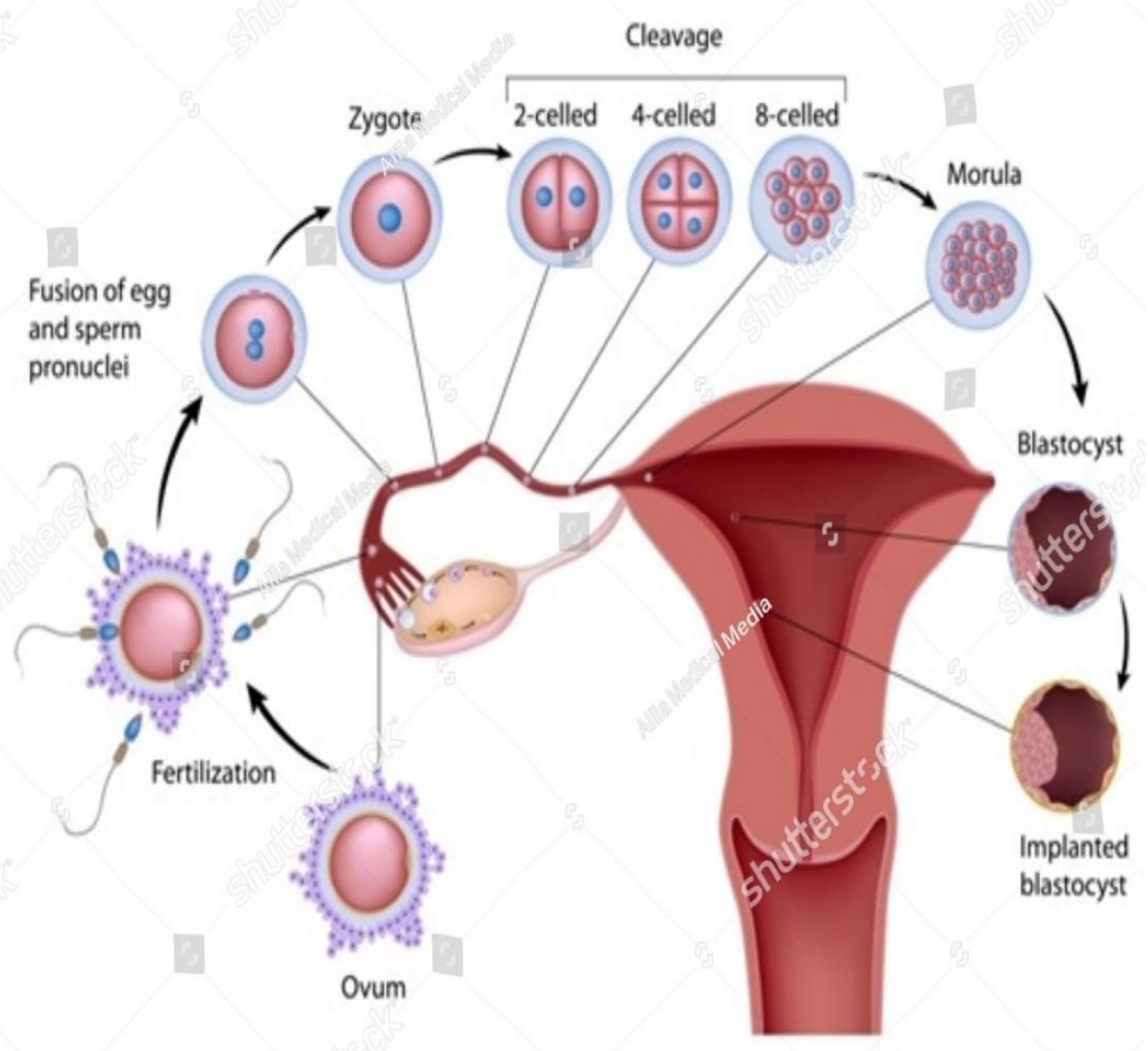
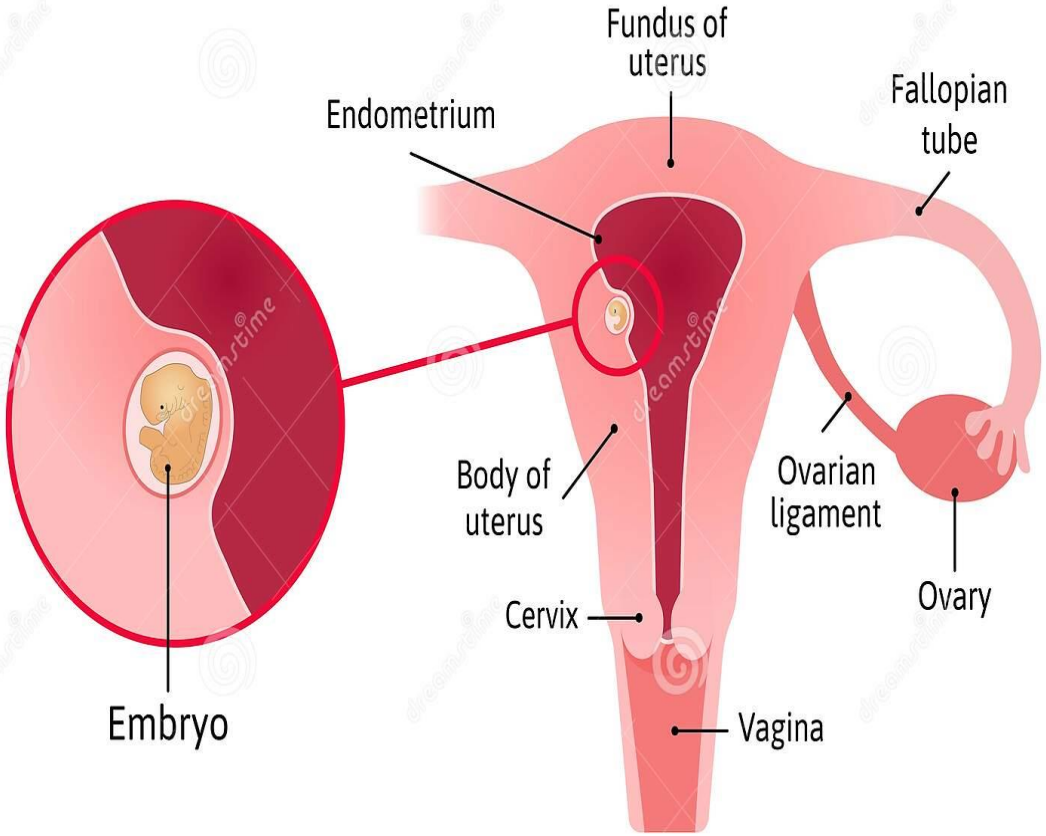
Course Information

Course credit	**8 Credit / 9 ECTS**
GBS Linki	**https://gbs.gelisim.edu.tr/en/lesson-details-17-319-12715-2**
Week	Week 17

What we are going to learn in this week?

- Formation of the human reproductive physiology and pregnancy





Embryo Implantation

EARLY PREGNANCY SIGNS

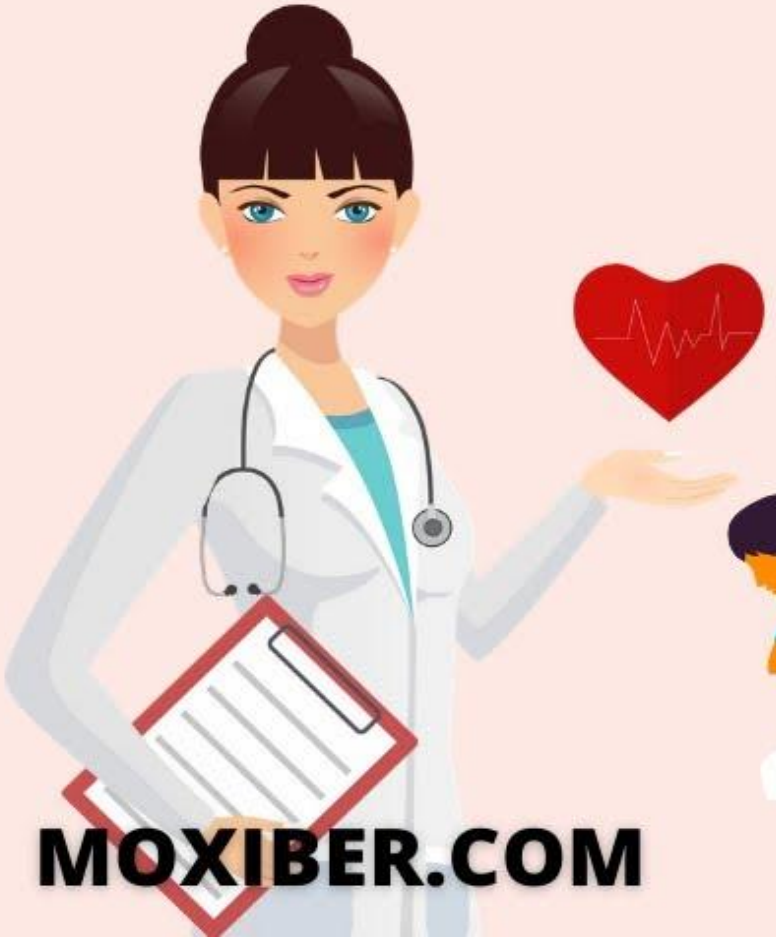
HEADACHE

NAUSEA AND VOMITING

BLOATING

MISSED PERIOD

MILD SPOTTING



ELEVATED TEMPERATURE

SWOLLEN AND TENDER BOOBS

MOOD SWINGS

FLATULENCE

FREQUENT URINATION

FATIGUE

FOOD CRAVINGS

CRYING

LOW BACK PAINS

CONSTIPATION

MOXIBER.COM

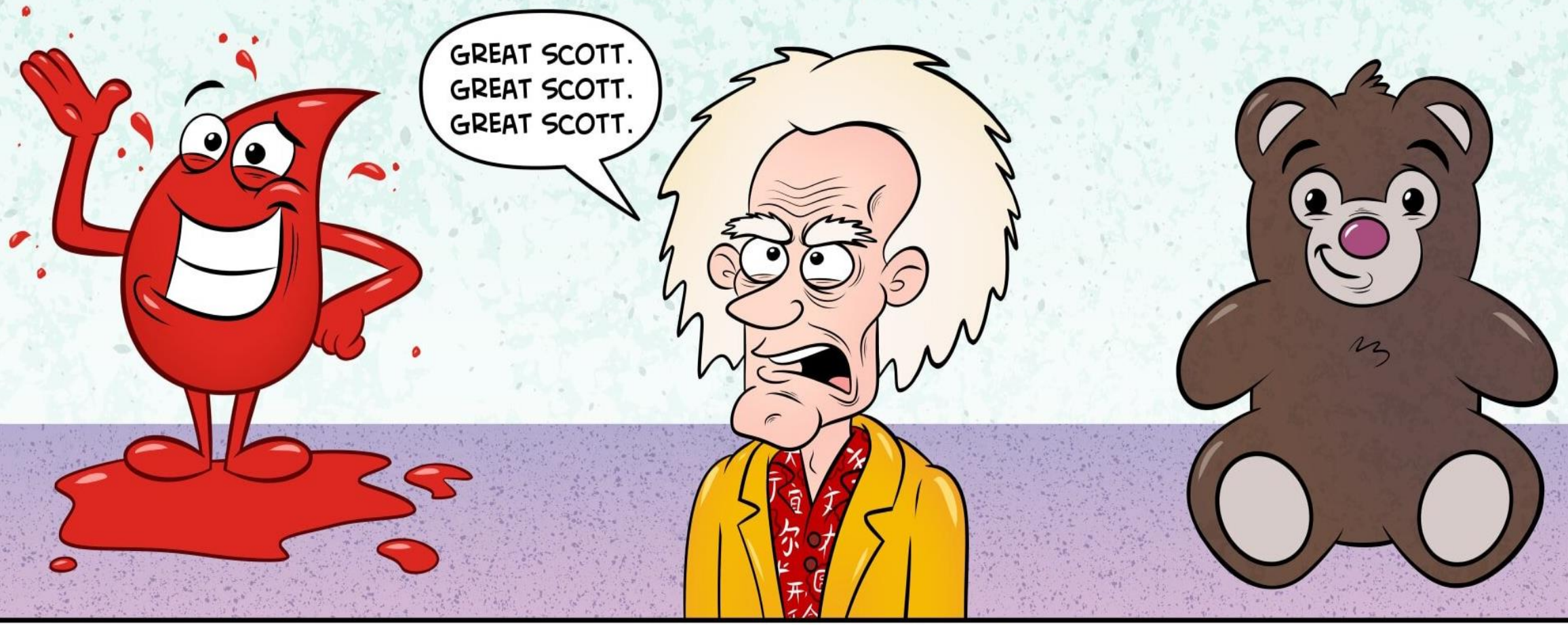
Learning Objectives

- Determine gravidity and parity using the two- and five-digit systems.
- Describe the various types of pregnancy tests, including the timing of tests and interpretation of results.
- Explain the expected maternal anatomic and physiologic adaptations to pregnancy.
- Differentiate among presumptive, probable, and positive signs of pregnancy.
- Identify maternal hormones produced during pregnancy, their target organs, and their major effects on pregnancy.

NAEGELE'S RULE

CALCULATING THE ESTIMATED DATE OF CONFINEMENT (EDC):

BEGIN ON THE FIRST DAY OF THE LAST MENSTRUAL PERIOD → SUBTRACT 3 MONTHS → ADD 7 DAYS **NAEGELE** 1 2 3 4 5 6 7 → ADD 1 BEAR (YEAR)



Naegele’s Rule questions

1. During a prenatal visit a patient tells you her last menstrual period was May 21, 2016. Based on the Naegele's Rule, when is the estimated due date of her baby?

A. February 27, 2016
B. March 19. 2017
C. February 28, 2017
D. April 16, 2016

2. During a prenatal visit a patient tells you her last menstrual period was November 25, 2016. Based on the Naegele's Rule, when is the estimated due date of her baby?

A. October 1, 2017
B. September 10, 2017
C. August 28, 2016
D. September 1, 2017

3. During a prenatal visit a patient tells you her last menstrual period was January 20, 2016. Based on the Naegele's Rule, when is the estimated due date of her baby?

A. October 27, 2016
B. September 5, 2017
C. October 28, 2016
D. November 1, 2016

Important Terms: Gravidity

- *Gravida:* woman who is pregnant
- *Gravidity:* pregnancy
- *Multigravida:* woman who has had two or more pregnancies
- *Multipara:* woman who has completed two or more pregnancies to stage of fetal viability
- *Nulligravida:* woman who has never been pregnant
- Viability - able to survive outside the womb (24+ weeks gestation)

Important Terms: Parity

Parity: number of pregnancies in which fetus or fetuses have reached viability, not the number of fetuses born

Nullipara: woman who has not completed pregnancy with a fetus or fetuses who have reached the stage of fetal viability

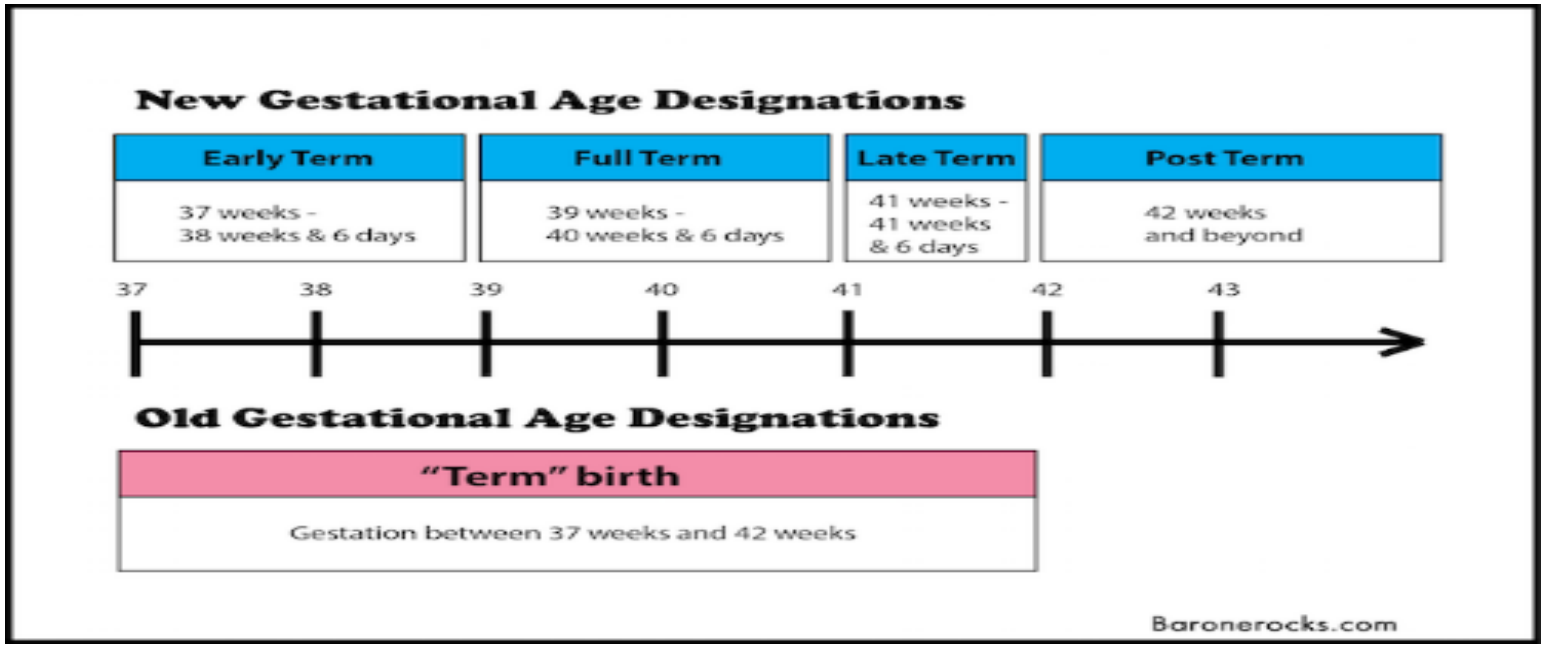
Primipara: A woman who has completed one pregnancy with a fetus or fetuses who have reached 24 weeks of gestation

Multipara: A woman who has completed two or more pregnancies to 24 weeks of gestation or more

Important Terms: Gestational Age of Pregnancy

- *Preterm:* a pregnancy that has reached 24 weeks of gestation but ends before completion of 37 weeks of gestation
- *Late preterm:* a pregnancy that has reached between 34 weeks 0 days and 36 weeks 6 days of gestation
- *Early term:* a pregnancy that has reached between 37 weeks 0 days and 38 weeks 6 days of gestation
- *Full term:* a pregnancy that has reached between 39 weeks 0 days and 40 weeks 6 days of gestation
- *Late term:* a pregnancy that has reached between 41 weeks 0 days and 41 weeks 6 days of gestation
- *Post term:* a pregnancy that has reached between 42 weeks 0 days and beyond of gestation

Important Terms: Gestational Age of Pregnancy



Question

A nurse is reading the history and physical in the chart of a pregnant client admitted to the labor room and notes documentation that the client is a nullipara. The nurse plans care knowing that nullipara indicates that the client has:

1.Had one previous birth

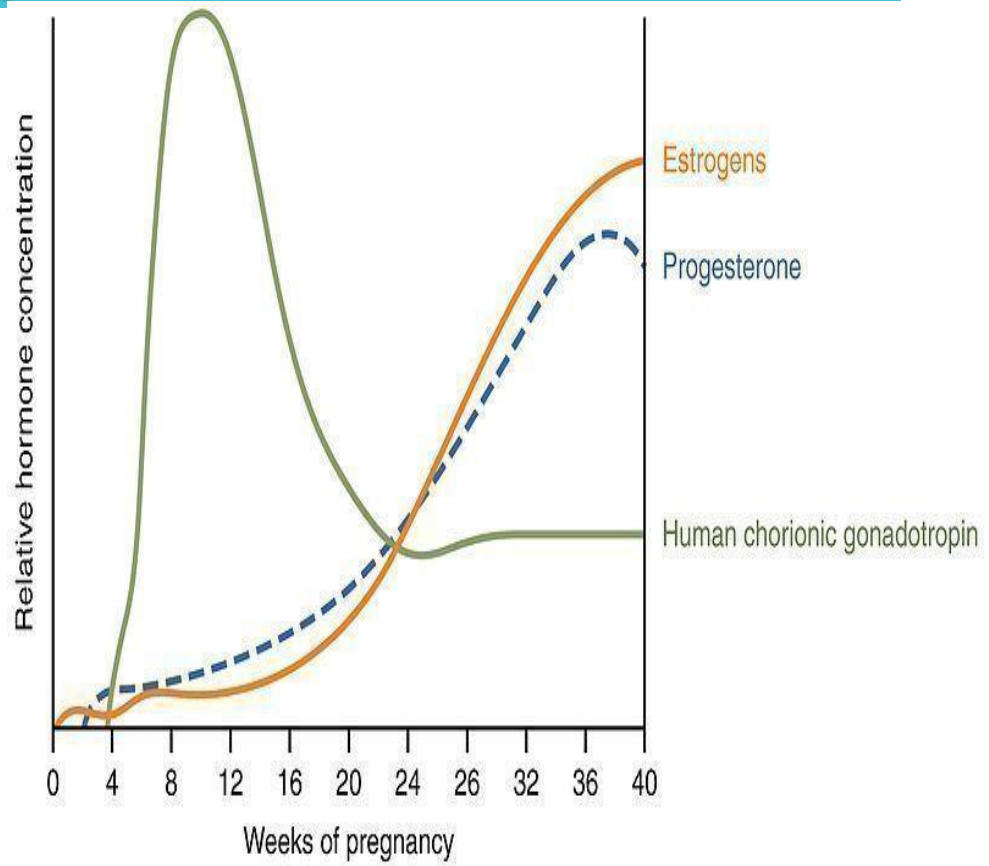
2.Been pregnant once

3.Not completed a pregnancy to at least 24 weeks' gestation

4.Had more that two previous births

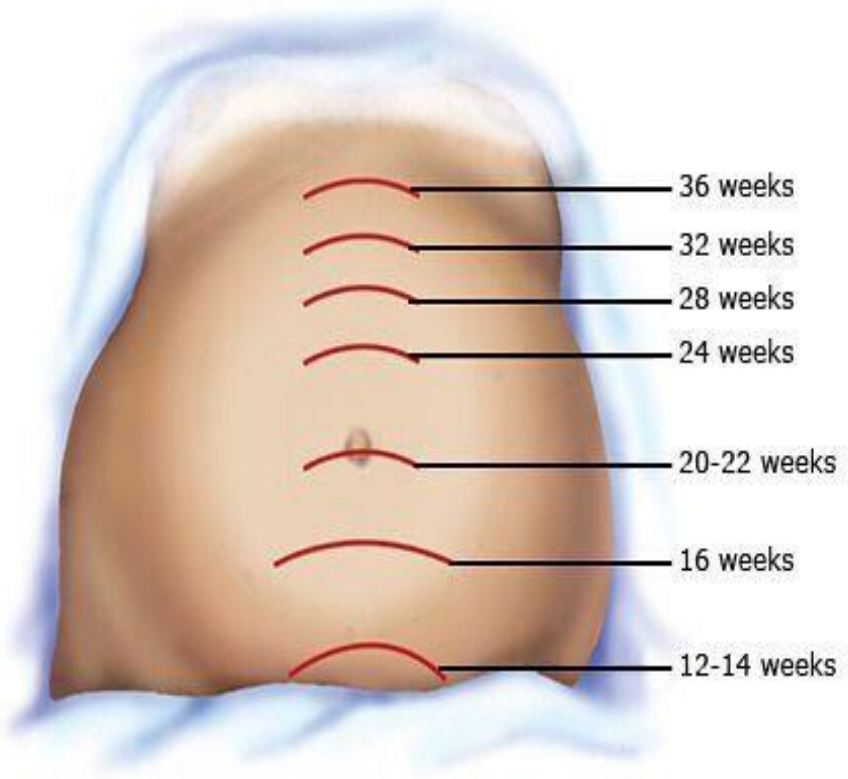
Anatomy and Physiology of Pregnancy

- Pregnancy Tests
- Human chorionic gonadotropin (hCG) –is the earliest biochemical marker for pregnancy
- Production of hCG begins as early as the day of implantation
- In urine, about 26 days after conception
- Level of hCG increases until it peaks at about 60 to 70 days of gestation
- Higher than normal levels of hCG may indicate abnormal gestation (molar pregnancy), or multiple gestation
- Abnormally slow increase or decrease in hCG levels may indicate impending miscarriage and, ectopic pregnancy.



Adaptions to Pregnancy

- Reproduction System and Breasts
  - Uterus
  - Changes in Size, Shape, and Position
    - Phenomenal uterine growth in the first trimester is stimulated by high levels of estrogen and progesterone
    - 7 weeks of gestation- is the size of a large hen's Egg
    - 10 weeks gestation-is the size of an orange (twice nonpregnant size)
    - 12 weeks of gestation-is the size of a grapefruit
    - Pregnancy may "show" after 14 weeks



Adaptions to Pregnancy

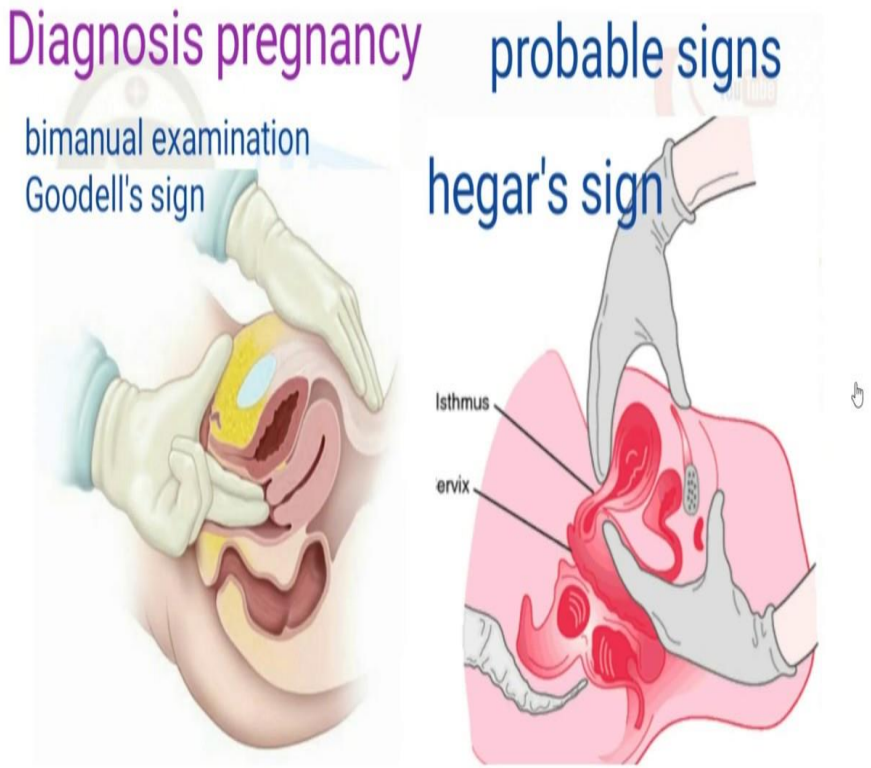
Lightening

Hegar Sign

- At approximately 6-8 weeks of gestation, softening and comprehension of the lower uterine segment
- When the uterine is compressed between examining fingers, the fingertips come close to touch.

Goodell's sign

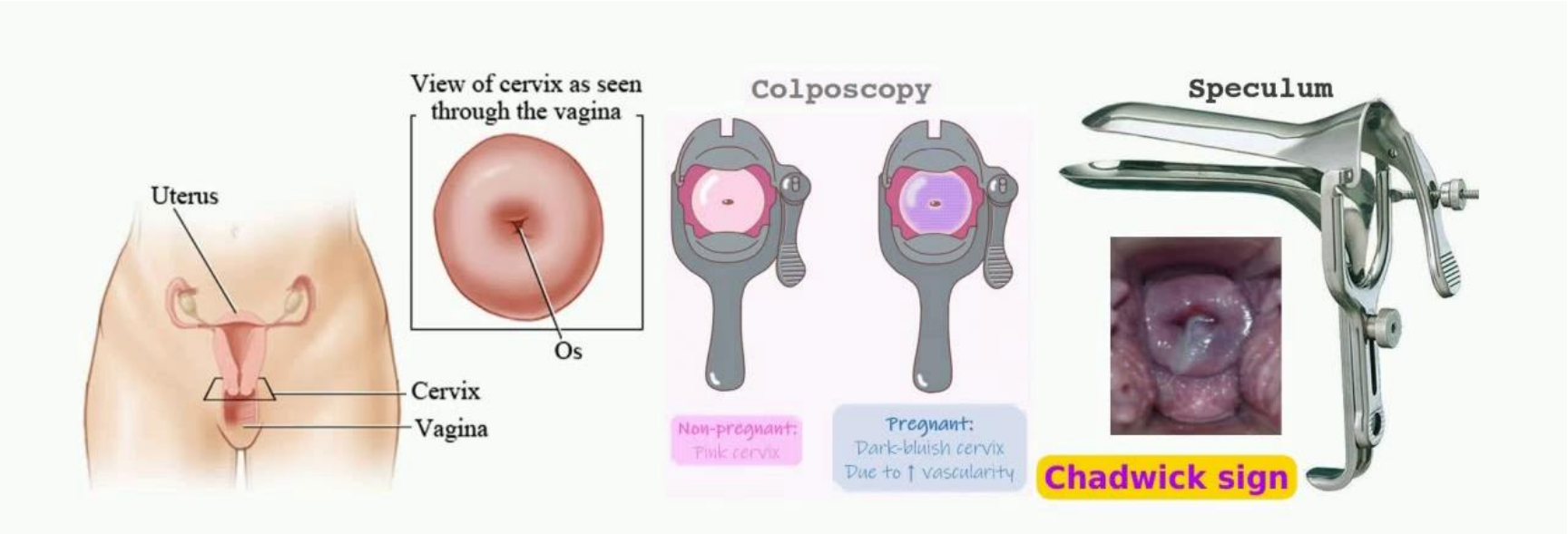
- It is a significant softening of the vaginal portion of the cervix from increased vascularization. Appears on the 4th week of pregnancy.



Adaptions to Pregnancy

Chadwick ‘s sign (Adaptation of vagina)

- Vaginal mucosa becomes congested and violaceous, or bluish to purplish in color



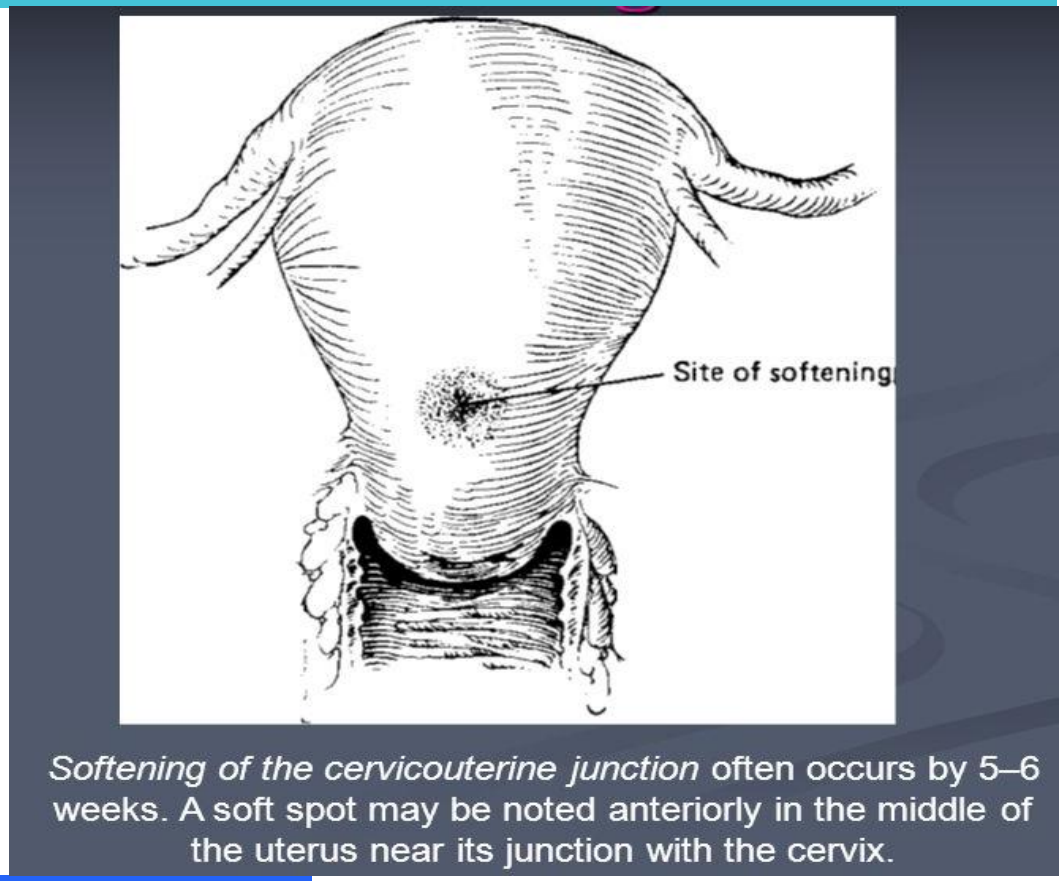
Other vaginal changes

- Leukorrhea- is a white or slightly gray mucoid fluid occurs in response to cervical stimulation by estrogen and progesterone
- pH of vaginal secretions is more acidic during pregnancy

Adaptions to Pregnancy

Ladin's sign

- There is softening in the midline of the uterus anteriorly at the junction of the uterus and cervix. It occurs about 6 week of pregnancy.



Softening of the cervicouterine junction often occurs by 5–6 weeks. A soft spot may be noted anteriorly in the middle of the uterus near its junction with the cervix.

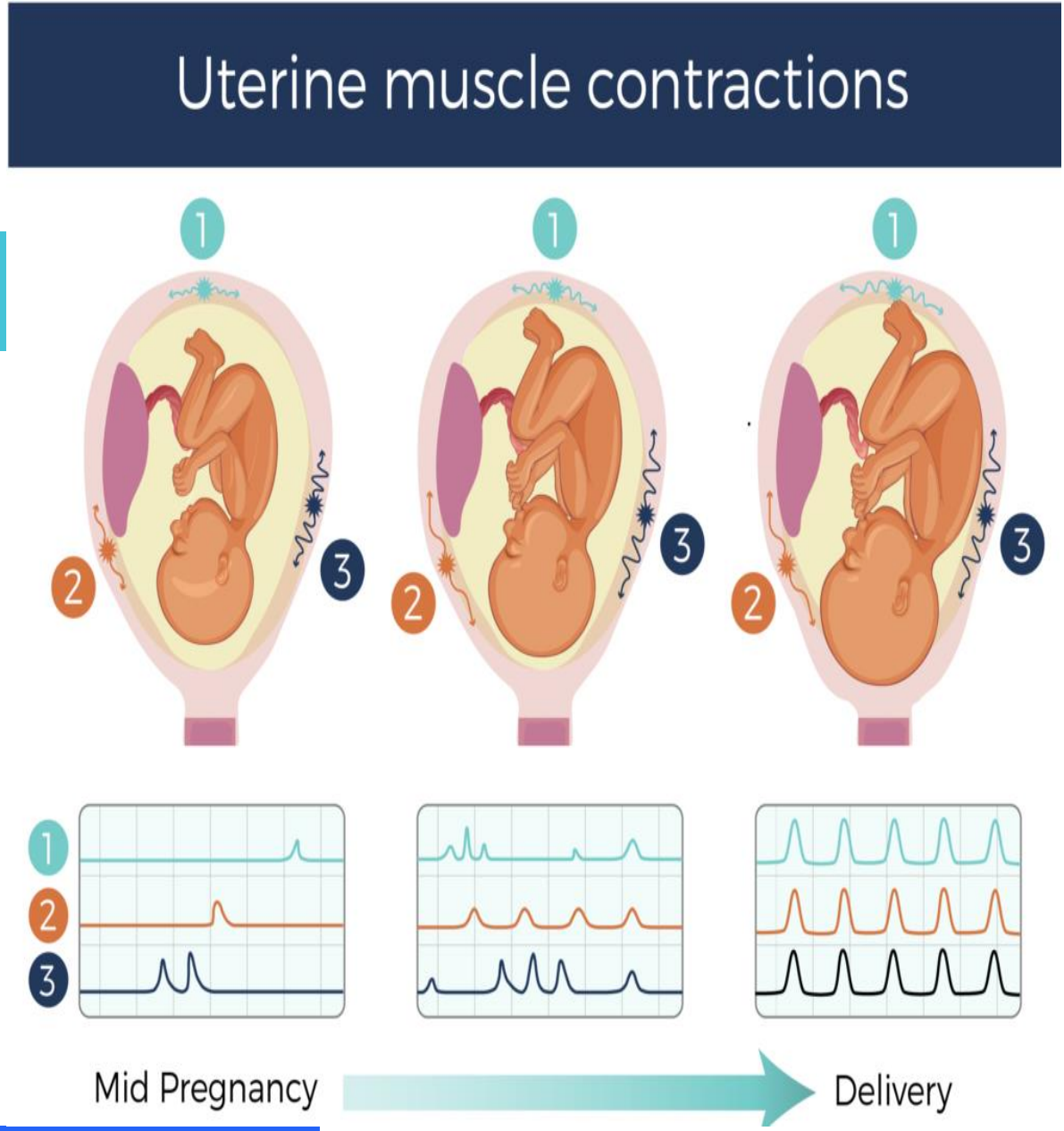
Question

A nurse employed in a prenatal clinic notes physician documentation in a client's chart that indicates the presence of Hegar's sign in the client. The nurse understands that this sign indicates that:

1.The mother is feeling fetal movement
2.The client is complaining of irregular, painless contractions
3.A soft blowing sound was heard when the uterus was auscultated
4.Lower uterine segment thinning is present

Adaptions to Pregnancy

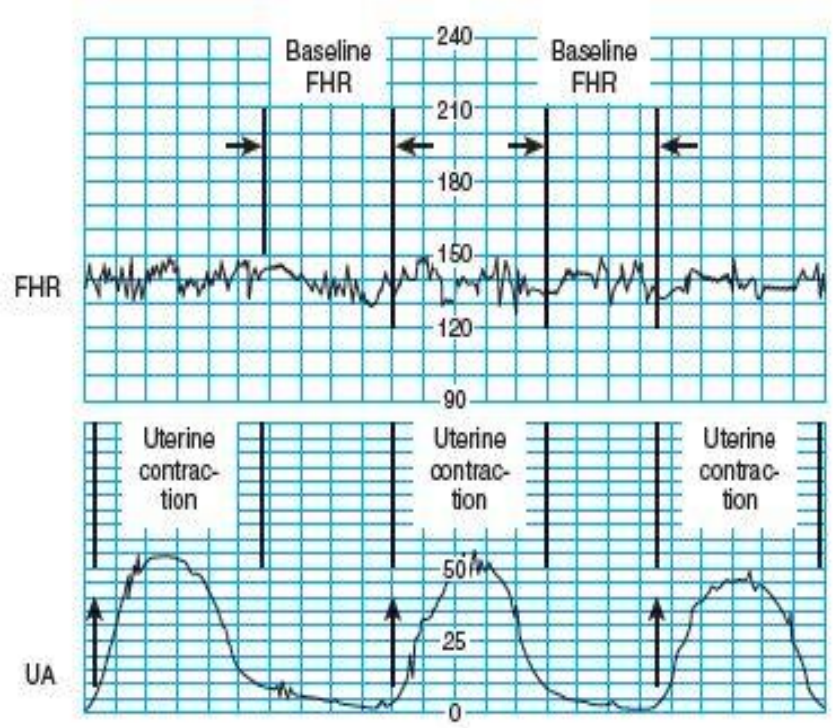
- Changes in Contractility
  - **Braxton Hicks sign-** Soon after the fourth month of pregnancy, uterine contractions can be felt through the abdominal wall
    - Contractions are irregular, painless, and occur intermittently throughout pregnancy
    - Contractions facilitate uterine blood flow through the intervillous space of the placenta
    - Contractions are painless, some women complain that they are annoying
    - After the 28th week, these contractions become more definite
    - Can be mistaken for true labor



Adaptions to Pregnancy

True Labor vs. Braxton Hicks

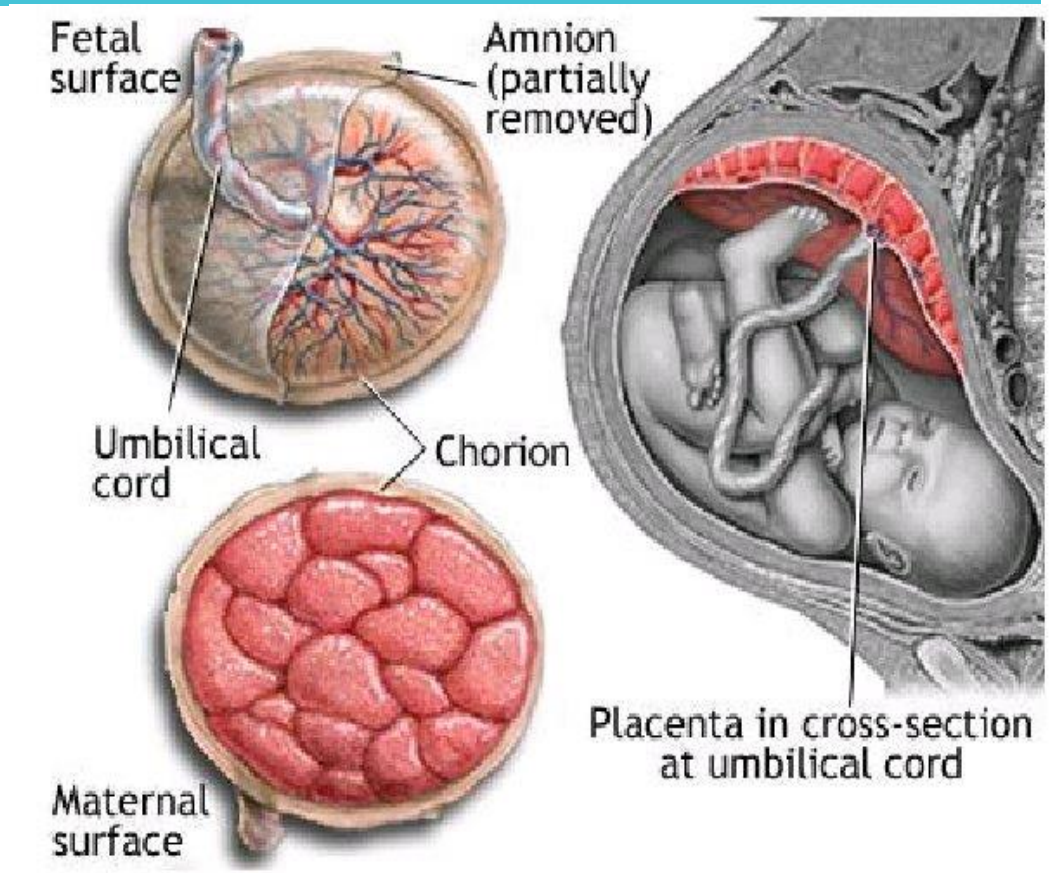
Braxton Hicks	True Labor
Contractions don't get closer together.	Contractions do get closer together.
Contractions don't get stronger.	Contractions do get stronger.
Contractions tend to be felt only in the front.	Contractions tend to be felt all over.
Contractions don't last longer.	Contractions do last longer.
Walking has no effect on the contractions.	Walking makes the contractions stronger.
Cervix doesn't change with contractions.	Cervix opens and thins with contractions.



Non Stress Test (NST)

Adaptions to Pregnancy

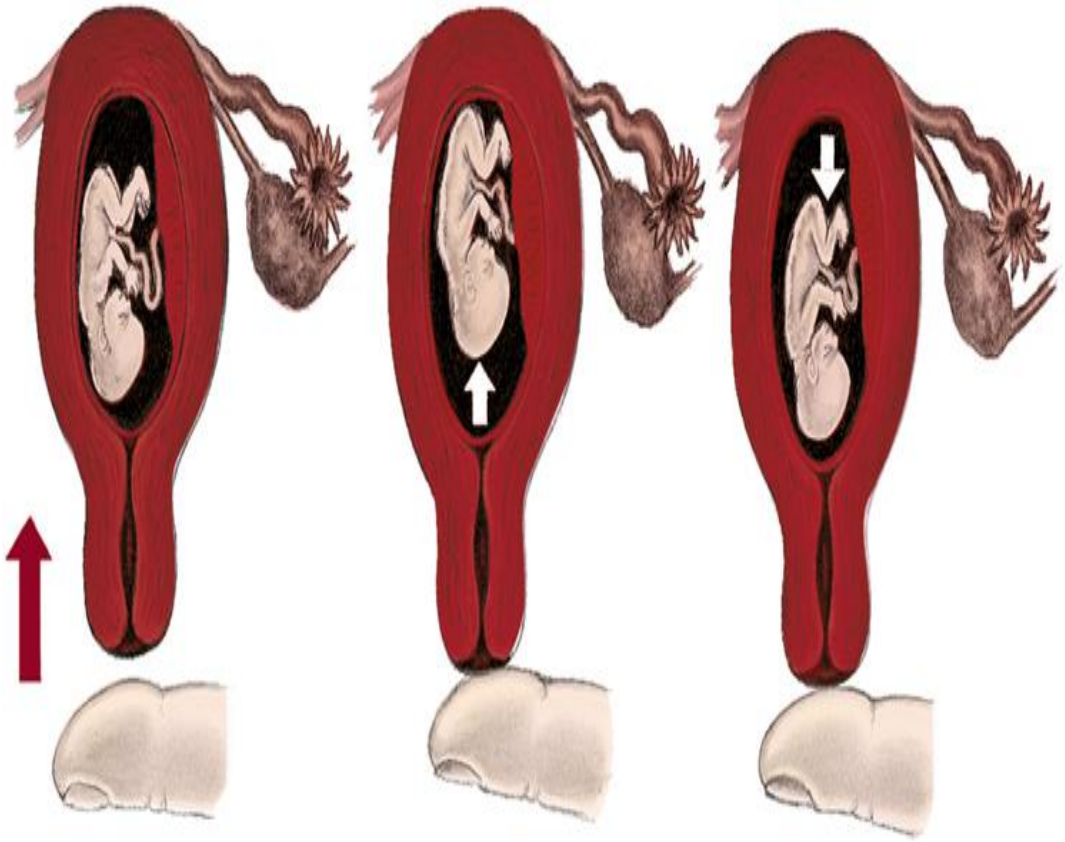
- Uteroplacental Blood Flow
  - Placental perfusion depends on the maternal blood flow to the uterus
  - Blood flow increase rapidly as the uterus increase in size
  - Normal term pregnancy, one sixth of the total blood volume is within the uterine vascular system
  - Rate of blood flow through the uterus average from 450 to 650 ml/min at term



Adaptions to Pregnancy

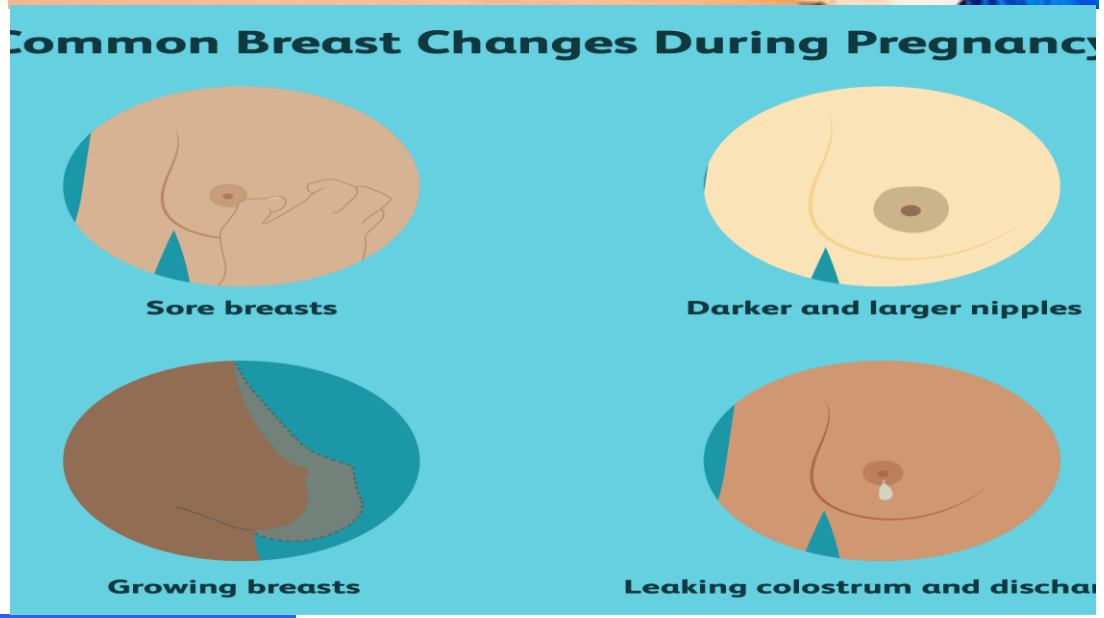
Changes related to the presence of the fetus

- **Ballottement**- passive movement of the unengaged fetus
- Can be identified generally between the sixteenth and eighteenth week
  - Technique of palpating a floating structure by bouncing it gently and feeling it rebound
  - Palpate the fetus
  - Examiner places a finger within the vagina and taps gently upward causing the fetus to rise
  - Fetus sinks,
  - And a gentle tap is felt on the finger



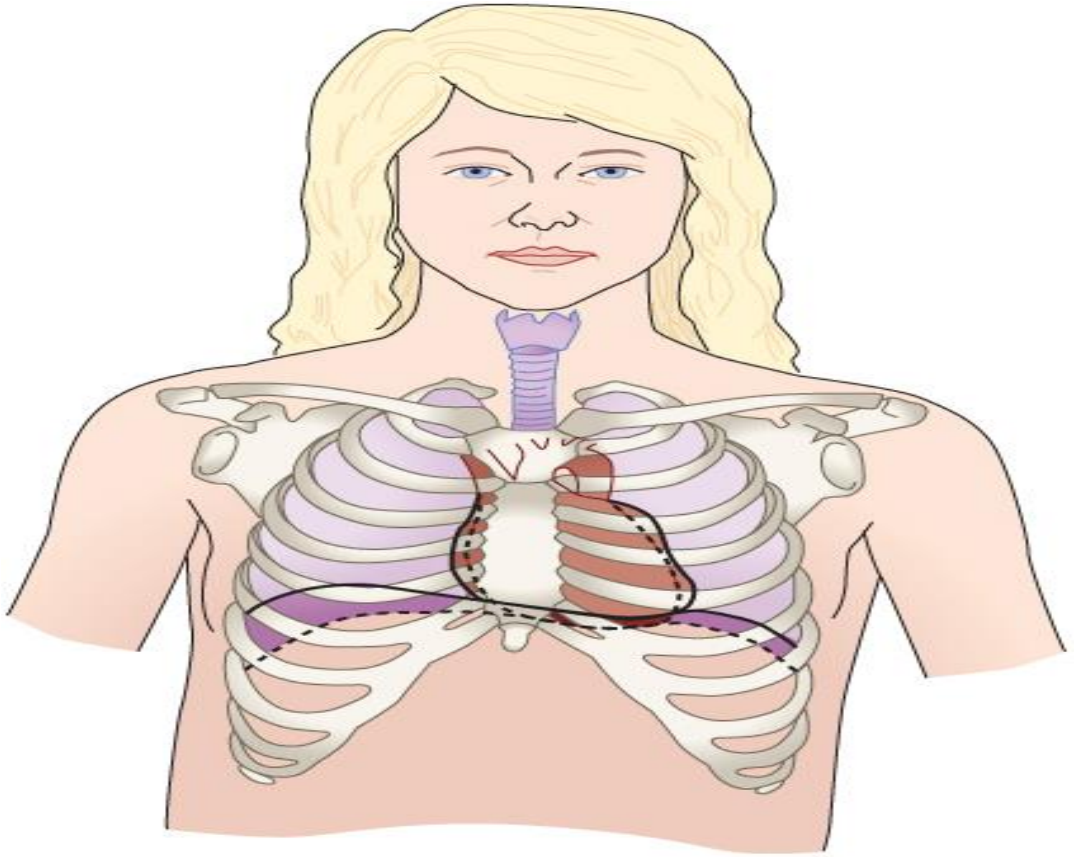
Adaptions to Pregnancy

- Breast
  - Fullness, heightened sensitivity, tingling, and heaviness of the breasts
  - Nipples and areolae become more pigmented, secondary pinkish areolae develop
  - Colostrum- the creamy, white-to-yellowish to orange pre-milk fluid



Adaptions to Pregnancy

- General Body System
- **Cardiovascular System**
  - Slight cardiac hypertrophy (enlargement) Heart returns to normal after childbirth
  - Diaphragm is displaced upward by the enlarging uterus
  - Between 14 and 20 weeks of gestation the pulse increase about 10 to 15 beats/min
  - Palpitations may occur

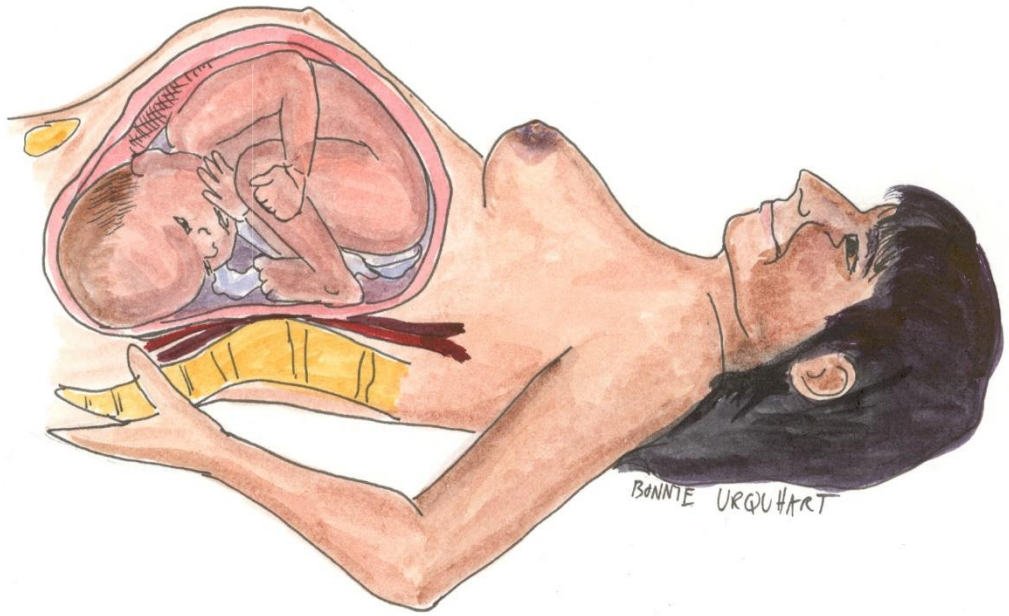


Adaptions to Pregnancy

- **Blood Pressure**
  - Arterial blood pressure (brachial artery) is affected by age, activity level, presence of health problems, and the circadian rhythm
  - Diastolic blood pressure usually remains the same as the prepregnancy level but then gradually decreases until 24 to 32 weeks
  - After 32 weeks, the diastolic blood pressure gradually returns to normal

Adaptions to Pregnancy

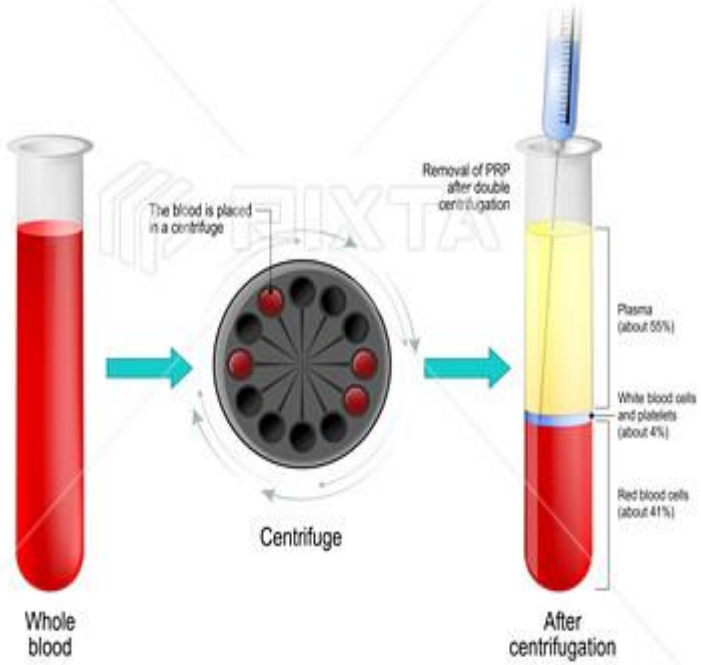
- Some degree of the vena cava occurs in all women who lie flat on their backs during the second half of the pregnancy
- Some women experience a decrease in their systolic blood pressure of more than 30 mm Hg
- **Supine hypotensive syndrome-** after 4 to 5 minutes, a reflex bradycardia is noted
- Compression of the iliac veins and inferior vena cava by the uterus causes increase venous pressure
- Alterations contribute to the dependent edema, varicose veins in the legs and vulva and hemorrhoids that develop in the latter part of term pregnancy



Adaptions to Pregnancy

➢Blood Volume and Composition

- ➢Blood volume increases by approximately 1200 to 1500 ml
- ➢Increase consists of 1000 ml of plasma plus 450 ml red blood cells (RBCs)
- ➢Blood volume starts to increase at about the 10th to 12th week
- ➢Plasma increases exceeds the increase in the RBC production
- ➢Total white cell count increase during the second trimester and peaks during the third trimester

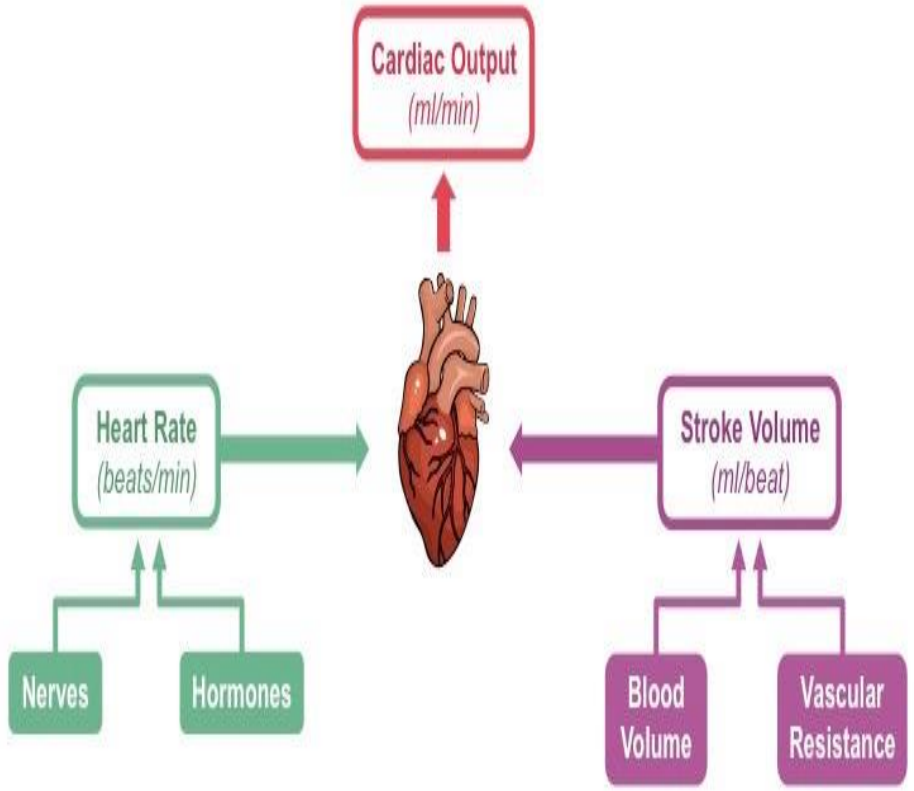


Adaptions to Pregnancy

➢ **Cardiac Output**

- Cardiac output increases from 30% to 50% over the nonpregnant rate by the thirty-second week of pregnancy

- Circulation and Coagulation Times
  - ❑ Circulation time decreases slightly by week 32



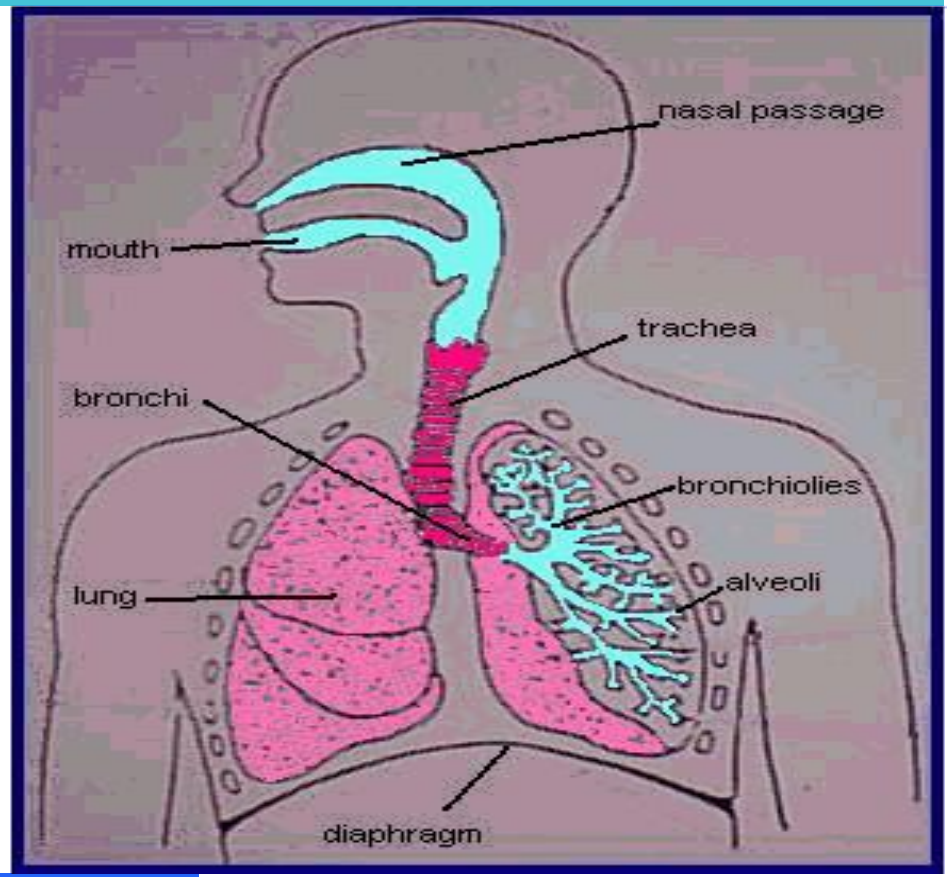
Adaptions to Pregnancy

➢Respiratory System

➢Maternal oxygen requirements increase in response to the acceleration in the metabolic rate and the need to add to the tissue mass in the uterus and breasts

➢Upper respiratory tract becomes more vascular in response to elevated levels of estrogen

➢Congestion within the tissues of the respiratory tract gives rise to several conditions commonly seen during pregnancy

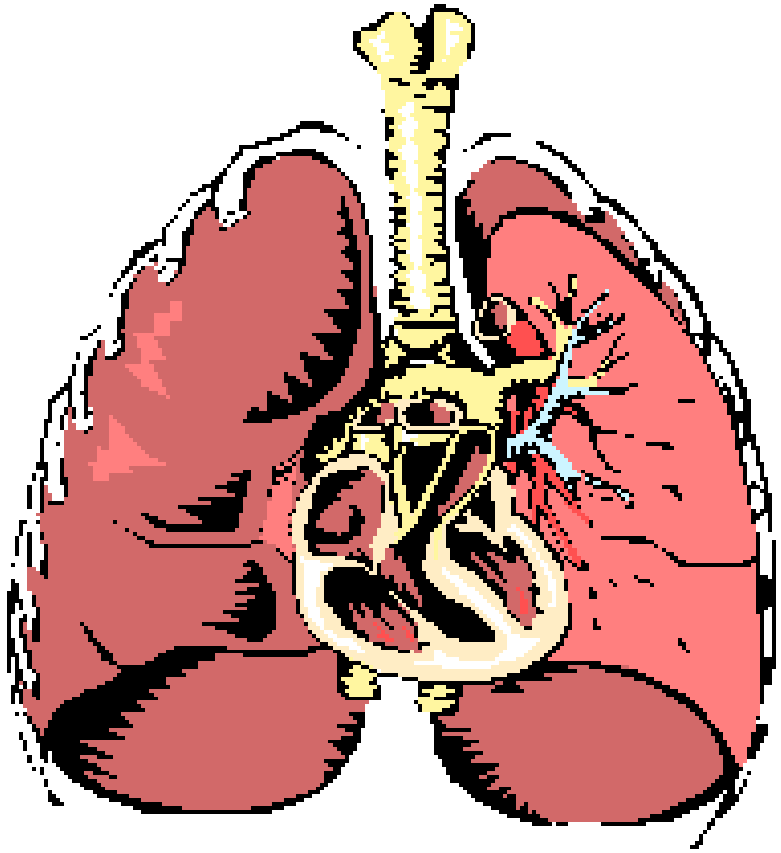


Adaptions to Pregnancy

➢Pulmonary Function

➢Respiratory changes in pregnancy are related to the elevation of the diaphragm and chest wall changes

➢Pregnant women become more aware of the need to breathe; some may even complain of dyspnea at rest, especially in the third trimester



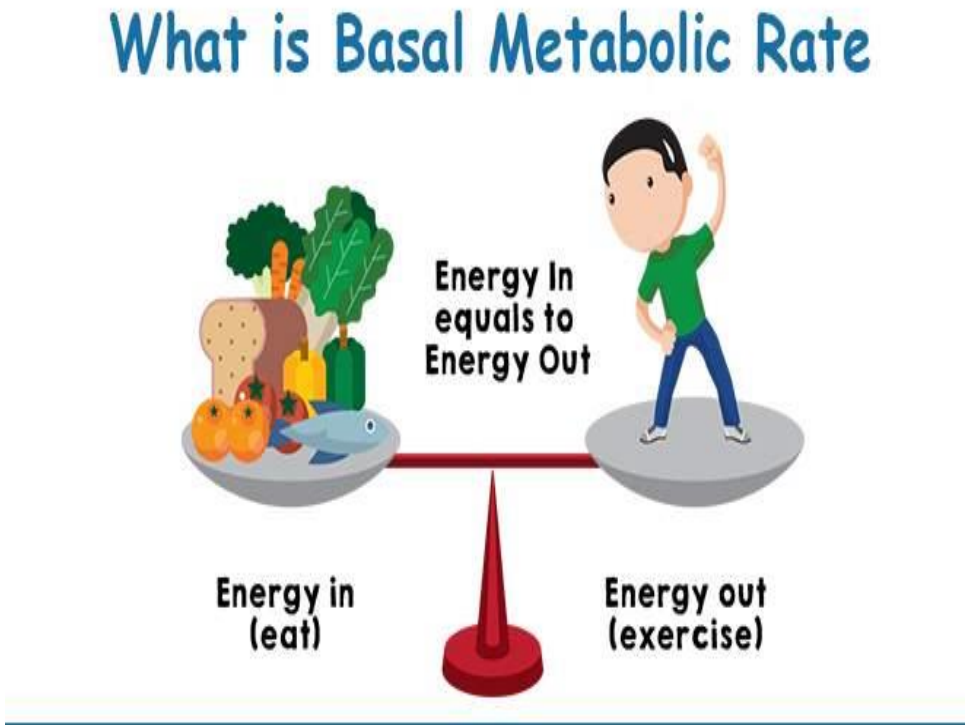
Adaptions to Pregnancy

➢Basal Metabolic Rate

- Basal metabolic rate is the amount of energy per unit of time that a person needs to keep the body functioning at rest

- Breathing, blood circulation, controlling body temperature, cell growth, brain and nerve functions, contracting of muscles

➢BMR varies considerably in women at the beginning of and during pregnancy
➢BMR returns to nonpregnant levels by 5 to 6 days after birth
➢Pregnant women may experience heat intolerance
➢Lassitude and fatigability after only slight exertion are experienced by many women in early pregnancy
➢Greater need to sleep

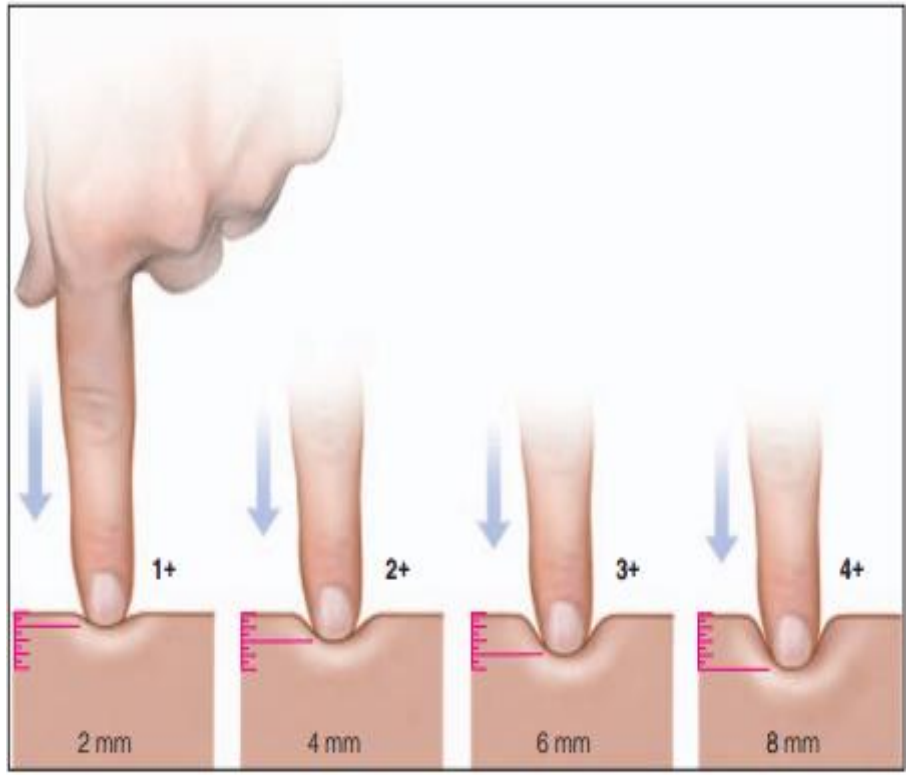


Adaptions to Pregnancy

- **Renal System**
  - Anatomic changes (Dilation of renal pelves and ureters)
  - Urine of pregnancy contains more nutrients, including glucose
  - Bladder irritability, nocturia, and urinary frequency and urgency (without dysuria) are commonly reported in early pregnancy
  - Near term, bladder symptoms may return, especially after lightening occurs
  - Bladder tone may decrease, which increases the bladder capacity to 1500 ml

Adaptions to Pregnancy

- **Fluid and Electrolyte Balance**
  - Pooling of fluid in the legs latter pregnancy decreases renal blood flow
  - Pooling of blood in the lower legs is sometimes referred as to physiologic edema or dependent edema and requires no treatment
  - In pregnant women, however, tubular reabsorption of glucose is impaired
  - *Proteinuria usually does not occur* in normal pregnancy except during labor or birth



Adaptions to Pregnancy

- **Integumentary System (Skin)**
  - *Chloasma gravidarum*- facial melasma (facial mask)
    - Usually fades after birth
  - *Linea nigra-* is a pigmented line extending from the symphysis pubis to the top of the fundus in the midline
  - *Striae gravidarum*- or stretch marks seen over the abdomen
  - After birth they usually fade, although they never disappear completely

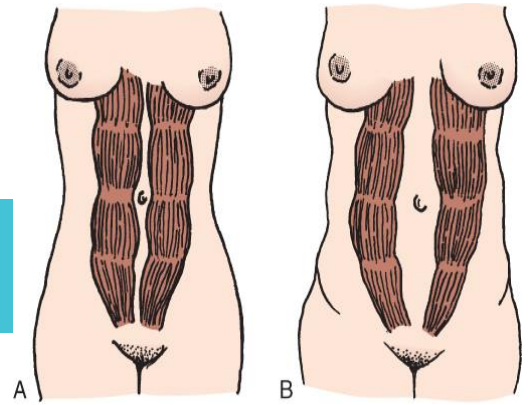
Adaptions to Pregnancy

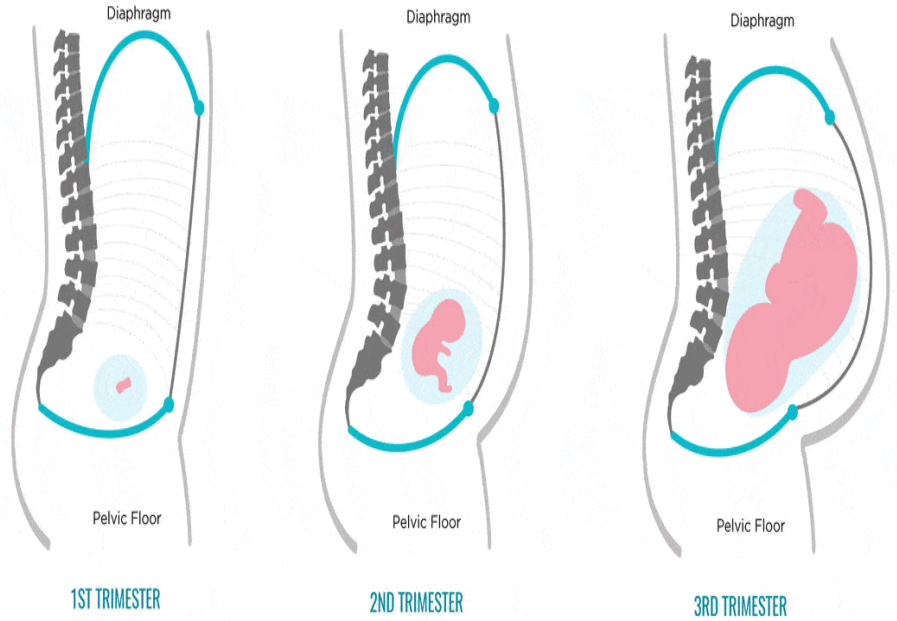
- **Integumentary System (Skin)**
  - Vascular spiders (angiomas)-are tiny, star-shaped or branched
  - Bluish in color and do not blanch with pressure
  - Palmar erythema-pinkish-red, diffuse mottling or well-defined blotches that are seen over the palmar surfaces of the hands
  - Cholestasis of pregnancy-the most common cause of pruritic rash
  - Epulis- a red, raised nodule on the gums that bleeds easily
  - Hirsutism- excessive growth of hair or growth of hair in unusual places

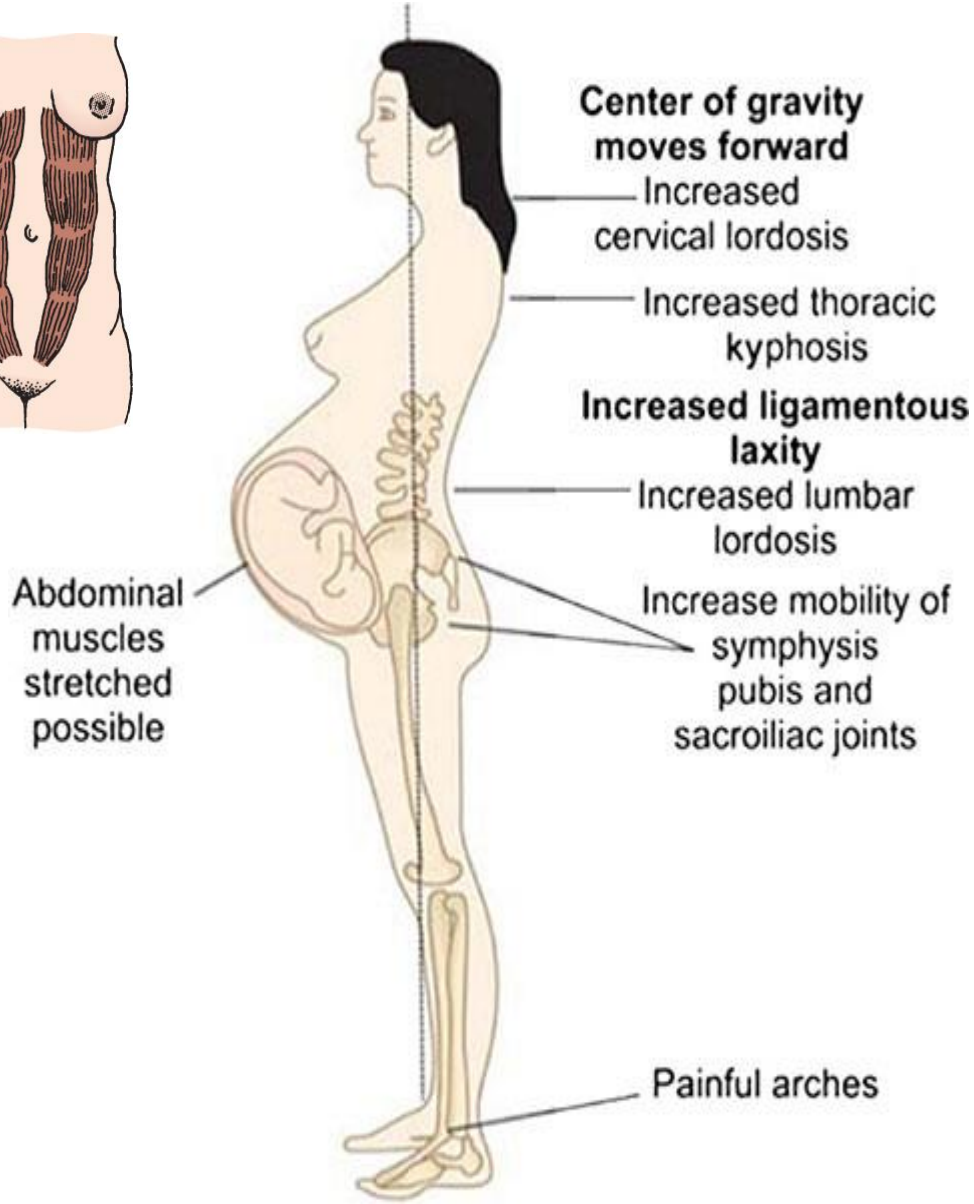
Adaptions to Pregnancy

➢Musculoskeletal System

- Walking is more difficult, and the waddling gait of the pregnant woman called “the proud walk of pregnancy”
- Ligamentous and muscular of the middle and lower spine may be severely stressed



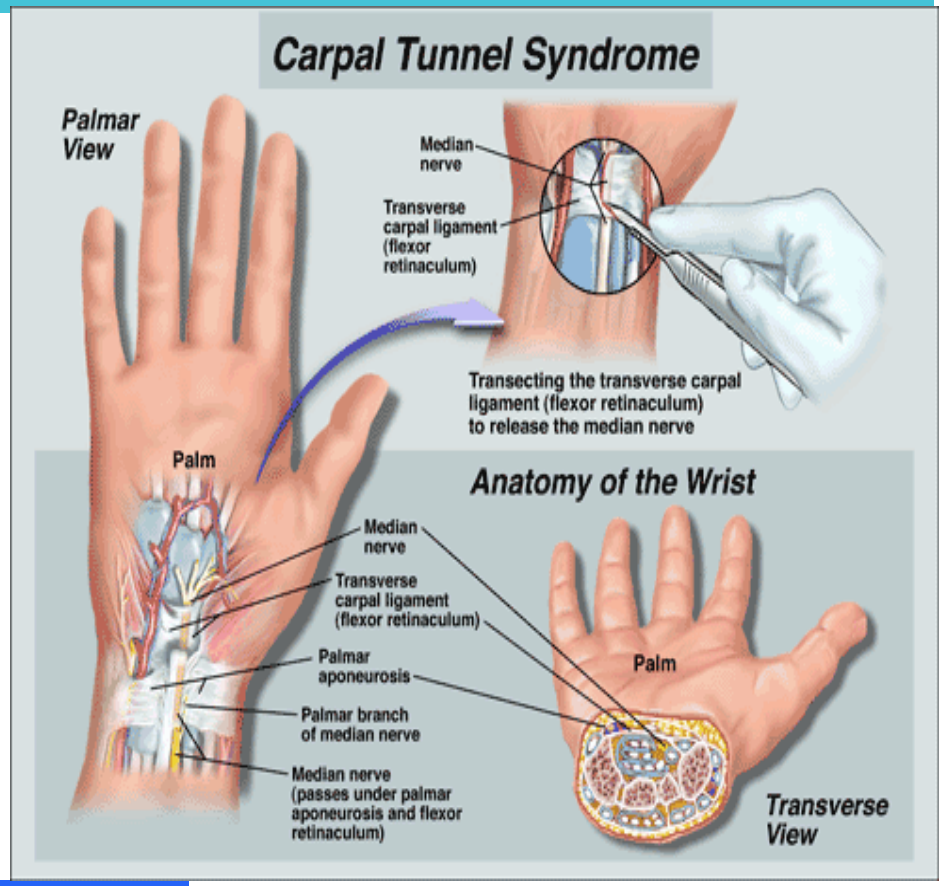




Adaptions to Pregnancy

Neurologic System

- Edema involving the peripheral nerves, which may result in carpal tunnel syndrome
- Tension headache is common when anxiety or uncertainty complicates pregnancy
- “Light-headedness”, faintness, and even syncope are common during early pregnancy
- Hypocalcemia may cause neuromuscular problem such as muscle cramps and tetany

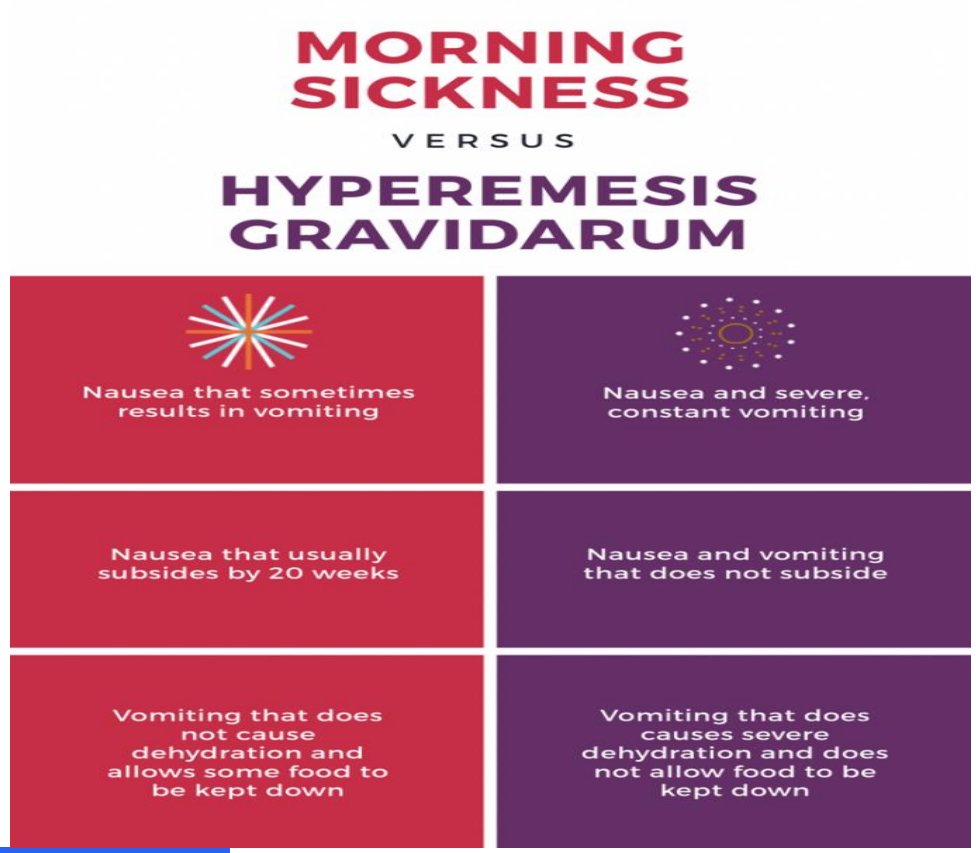


Adaptions to Pregnancy

- Gastrointestinal System ***(Decreased muscle tone)***
  - Appetite
    - Morning sickness or nausea and vomiting of pregnancy appears at about 4 to 6 weeks of gestation and usually subsides by the end of the third month
    - Pica- nonfood cravings, such as for ice, clay, and laundry starch

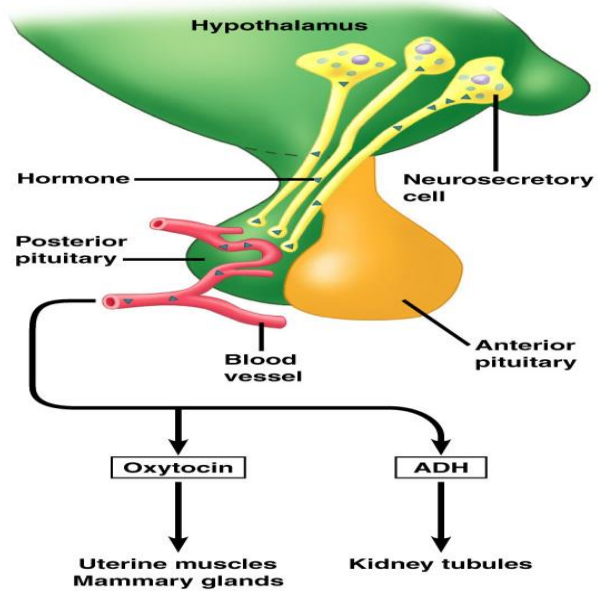
  Mouth
    - Pytalism- excessive salvation, which may be caused by the decrease in unconscious swallowing by the woman when nauseated or from stimulation of salivary glands by eating starch

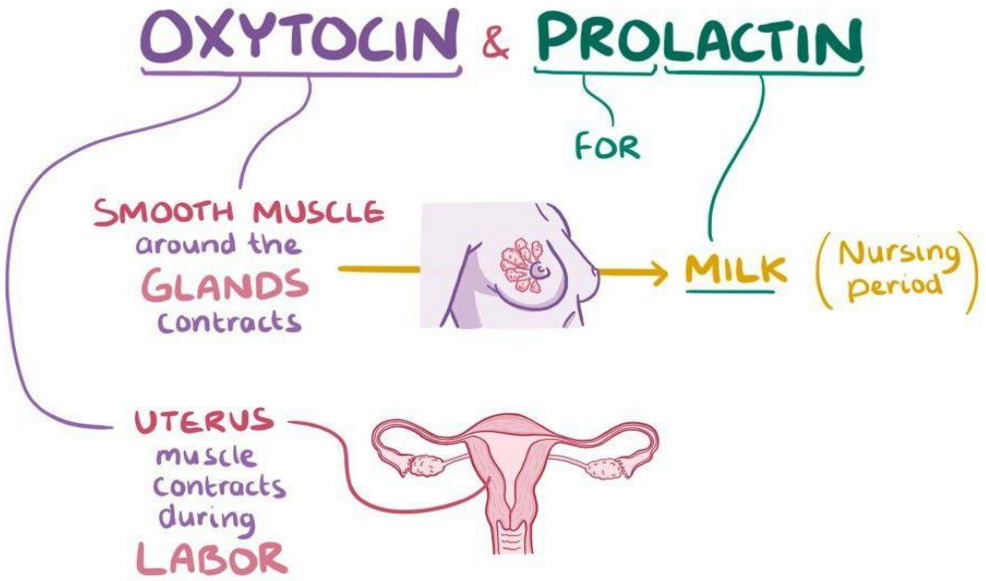
  Esophagus, Stomach, Intestines,
    - Pyrosis- “Acid Indigestion” or heartburn, reflux
    - Constipation
    - Pregnant woman has hemorrhoids and is constipated, the hemorrhoids may become everted or may bleed during straining at stool



Adaptions to Pregnancy

- Pituitary and Placental Hormones
  - Progesterone is essential for maintaining pregnancy by relaxing smooth muscles
  - Progesterone and estrogen cause fat to deposit in subcutaneous tissues over the abdomen, back, and upper thighs
  - Estrogen also promotes the enlargement of the genitals, uterus, and breasts and increase vascularity, causing vasodilatation
  - Oxytocin can stimulate uterine contractions during pregnancy Oxytocin also stimulates the let-down or milk-ejection reflex after birth in response to the infant sucking at the mother's breast





İSTANBUL GELİŞİM ÜNİVERSİTESİ

THANK YOU
for your participation!

Ekolojik, Ekonomik ve Sosyal Sürdürülebilirlik İçin

istanbul Gelişim Üniversitesi