N432 Focus Sheet 1-

Ricci, Kyle & Carman Ch (3) 4,5, 10, 11, & 12

ATI Ch 1-6 and some parts of 8

R,K, & C Ch 3—While this Chapter is technically not on the Exam, you must know these topics as the basis for other processes about which you will learn.

1. Provide a brief description of the external female reproductive organs.
   a. Mons pubis – fat layer that overlays the symphysis pubis
   b. Labia majora – larger lips on the outside that protect the vaginal opening
   c. Labia minora – inner (smaller) folds that protect and surround the vaginal opening, as well as the clitoris and urethra. Very vascular and sensitive
   d. Clitoris – small, full of erectile tissue and nerves, function is purely erogenous
   e. Perineum – area located between the vulva and the anus, made of skin, muscle, and fascia.

2. Provide a brief description of the internal reproductive organs. Know these terms

   a. Ovary – set of paired glands that are organs of gamete production. They are suspended by ligaments, lumpy in texture, and release the ovum and secrete estrogen and progesterone

   b. Fallopian tube – also called oviducts, extend from the upper uterus to the ovaries. The end of the tube opens into a funnel shape for an egg to fall into once released from ovary

   c. Uterus – pear-shaped muscular organ anchored in position by 8 ligaments, behind the bladder and in front of the rectum. Site of menstruation, receiving a fertilized ovum, development of fetus, and contractions during labor

   d. Fundus of uterus – convex portion that lies above the uterine tubes (the top of the uterus)

   e. Cervix – 'neck of uterus', opens into vagina, allows sperm to enter uterus and menstrual discharge to exit

   f. Vagina – canal in front of rectum and behind bladder that connects the external (vulva) to the cervix

3. Menstrual Cycle hormones This helps you understand birth control methods as well as conception.

Hormone	Purpose	
Estrogen	Crucial for the development and maturation of the follicle. Secreted by the ovaries. Estrogen is predominant at the end of the proliferative phase, directly preceding ovulation	
Progesterone	During luteal phase, it induces swelling and increased secretion of the endometrium. Calming effect during pregnancy. Secreted by the corpus luteum. Levels are increased just before ovulation and peak 5 – 7 days after ovulation. Progesterone induces swelling and increased secretion of the endometrium. Often called the hormone of pregnancy because of its calming effects on the uterus, allowing pregnancy to be maintained.	

Prostaglandins	Primary mediators of the body's inflammatory process and important for normal physiological function of the female reproductive system. Prostaglandins increase during follicular maturation and play a key role in ovulation by freeing the ovum inside the graafian follicle. –When we get to the Unit on labor, you will see that exogenous prostaglandins are used to help soften the cervix. The human uterus contracts to prostaglandins at any stage of pregnancy and also during the non-fertile cycle.	

R,K & C Ch 4; ATI Ch 1,2

1. Define infertility. How can you as the nurse educate a couple on infertility causes and treatments?

The inability to conceive a child after 1 year of regular sexual intercourse that is unprotected by contraception. Nurses should teach patients that being overweight or underweight, having hormonal imbalances uterine fibroids, cervical stenosis, uterine fibroids, reduced oocyte quality, chromosomal abnormalities, and congenital abnormalities of the uterus may be causing their infertility. Other factors may include STI's, Turner Syndrome, immune system disorders, ectopic pregnancy, age older than 27, PID history, eating disorders, smoking/alcohol consumption, Cushing Syndrome, multiple miscarriages, stress, and multiple miscarriages. Treatments can include medications or surgery, weight loss, smoking cessation, and other lifestyle changes if necessary. Hormone injections are also an option if needed. Infertility and the subsequent treatments can have physical, emotional, social, and relationship side effects. Therapeutic communication with active listening is called for and not false reassurances.

2. What is IVF?

In vitro fertilization, where oocytes can be fertilized in a lab before being placed into the uterus

4. Birth Control options

Type	action	Side effect	Pro/con	Contraindications	Important Patient Teaching
Coitus interruptus	Withdrawal before ejaculation	No side effect	Pro: always available, nothing needed. Con: Lots of self-control by male. Possibility of sperm in preejaculate resulting in pregnancy	None but the risk of pregnancy is high	Educate regarding the risk of pregnancy. Woman must be very trusting.
Lactational amenorrhea method	Uses lactational amenorrhea for protection	No side effect	Pro: No cost and not coitus linked. Con: only effective for 6 months post birth if woman is exclusively breastfeeding every few hours around the clock.	None	Mother must breast feed for 6 months without supplementation every few hours .
Condom	Think sheeth placed over	No side effect	Pro: Widely available, low cost and safe,	Allergy to polyurethane	Proper use

	erect penis inhibiting sperm crossing		protection from STIs Con: Breakage risk, less sensation for male		
Diaphragm	Shallow latex cup inserted into vagina	Increase in UTI's	Pro: No hormones, protects some against cervical cancer. Con: Requires fitting by professional	Allergy to latex, polyurethane, or spermicide	-Report symptoms of Toxic Shock Syndrome. -Woman must be taught proper insertion and removal. -Must be used with a spermicide to be effective. -Can be inserted up to 6 hr before intercourse & must stay in place 6 hr after intercourse but for no more than 24. - Spermicide must be reapplied with each act of coitus. -Must be replaced (refitted) with a 20% weight loss or gain; after abdominal or pelvic surgery or a pregnancy.
Oral contraceptives combination - estrogen/progestin	A pill that suppresses ovulation, thickens cervical mucus to block semen, alters uterine decidua to prevent implantation.	Irregular bleeding, weight gain, nausea, mood changes, high BP, blood clots	Pros: Protection against female cancers, easy to use, high effectiveness rate. Cons: No protection again STIs Can increase risk of thromboembolism, stroke, heart attack, hypertension, gallbladder disease, liver tumor. Exacerbates	Smoking if > 35, history of blood clots, stroke, heart attack, CAD, gallbladder disease, cirrhosis, headache with focal neurological symptoms, uncontrolled hypertension, diabetes mellitus, breast	No smoking, take at same time each day consistently. Effectiveness decreases when taking medications that affect liver enzymes i.e. anticonvulsants and some antibiotics.

progestin only-mini pill	Same as combination pill but does not suppress ovulation as consistently.		conditions affected by fluid retention. Common side effects of estrogen=headache, nausea, breast tenderness, and breakthrough bleeding. Common side effects of Progestin=increased appetite, tiredness, depression, breast tenderness, oily skin & scalp, and hirsutism.	or estrogen related cancers, pregnancy, lactating, < 6 wks postpartum,	Emphasize taking it at the same time every day i.e. setting an alarm. Can not miss a pill Needs another form of birth control during the first month of use or if a pill is missed.
Natural Family Planning (Fertility Awareness-based methods)	Refrain from intercourse during fertile period Based on assumption that a single ovum is released from the ovary 14 days before the next menstrual period and lives approximately 24 hours.	None	Pros: acceptable to most religions. Cons: high failure rate. It works best if women who use this method have regular menstrual cycles so that the time of ovulation is more predictable since the exact time of ovulation cannot be determined.	None but can't predict exactly when ovulation will occur.	High level of couple commitment. Women must have regular cycles for this method to be effective. Need to take temperature first thing in the morning before getting out of bed. Sperm can live up to 5 days after intercourse so there needs to be a period of abstinence before and after ovulation.
Intrauterine devices	Inserted into uterus to release	Cramps, bleeding, PID,	Pros: 99% effective and thus the most effective method of	PID or infertility	Instruct woman to locate string monthly for

	hormones or copper	infertility, perforation	birth control except abstinence. Immediately effective, can be used during lactation. Cons: Menstrual irregularities, professionally inserted, no protection from STIs. Generally fertility is immediate once the IUD is removed but **may** delay infertility once removed due to disruption of the uterine lining. Can increase the risk of pelvic inflammatory disease (PID) as well as uterine perforation, or extopic pregnancy.		placement after menstruation
Methoxyprogesterone	Injectionable progestin that prevents ovulation	Depression	Pros: Highly effective, 3 month duration, can be used by smokers and during lactation. Cons: Return every 12 weeks, weight gain, headaches, depression, delayed infertility after	Depression	Inform woman that infertility is delayed after stopping injections
Subdermal implant	Time-release implant of levonorgestrel	Heavy bleeding causing anemia	Pros: reversible, long duration of action estrogen -free. Cons: weight gain. Breast tenderness, headaches, irregular bleeding	Anemia	Teach about 3 years of infertility once implanted

5. What does PAINS stand for? (Complications for intrauterine device users)

P – Period late, pregnancy, abnormal spotting

A – Abdominal pain, pain during intercourse.

I – Infection exposure, abnormal vaginal discharge.

N – not feeling well, chills or fever

S – String length shorter, longer, or missing

6. Name the three forms of sterilization and provide a description for each.

Tubal ligation – Carbon dioxide pushes abdominal wall away from fallopian tubes, that are then grasped and sealed with a cauterizing instrument or with either rings, bands, or clips. They can also be clipped and tied.

Essure – A tiny coil is placed into the uterus through the cervix, promoting growth of tissue in the fallopian tubes. Within 3 months, the fallopian tubes are blocked.

Vasectomy – A small incision is made in the scrotum to clip the vas deferens, which carries sperm to the penis.

7. Discuss the differences between surgical and medical abortion.

Surgical abortions include vacuum aspiration or dilation, or evacuation. They are done under local anesthesia, where the cervix is dilated prior to a surgery taking place.

A medical abortion involves medications taken either orally or vaginally.

Surgical abortions take around 10 minutes during the procedure, whereas a medical abortion may take a few office visits to complete, and it must be done within the first trimester.

Infections

RKC Ch 5 & Ch 20 pp 760 -771 ; ATI Ch 8

1. What are the TORCH infections which negatively affect a woman who is pregnant? These are discussed in more detail during the Unit 3 lecture.
    1. Toxoplasmosis
    2. Other (syphilis, varicella zoster, etc)
    3. Rubella
    4. Cytomegalovirus
    5. Herpes infections

2. What is the treatment for Chlamydia? RKC Pg 187 CDC tx options include doxycycline 100 mg BID x 7 days or azithromycin 1 gm orally in a single dose.
   ATI Ch 8 pg 51- 52 During pregnancy: Broad spectrum antibiotic i.e. Azithromycin or amoxicillin with bacteriocidal effects.
   ---Azithromycin, Doxycycline, Erythromycin, Levofloxacin Ofloxacin
   ---Evaluate sexual partners, abstinence, and retesting in 3 months.
   NOTE: Chlamydia is the most commonly reported STI—mucoid or watery uretheral discharge; Females can have dysuria; urinary frequency; spotting or postcoital bleeding.
   Because of this all pregnant women should be screened for this at their first Prenatal visit and again during the third trimester if they are <25 and/or high risk.
3. What is the treatment for Gonorrhea? RKC P188 ATI Ch 8 p 52-53 CDC recommends dual therapy to prevent drug resistance and is also effective against chlamydia. Azithromycin 1 gm po in single dose and ceftriaxone 250mg IM in a single dose. Azithromycin orally and doxycycline should accompany all gonococcal treatment regimes if chlamydial is not ruled out. No quinolones or tetracyclines should be used if a woman is pregnant.
   Abstinence, and retesting in 3 months.
   NOTE: ATI Ch 8 p52-53. ALL pregnant women at risk should be screened at the first prenatal visit and again in the third trimester if they are still at risk. So what makes a woman “at risk”?.

Newborns should receive erythromycin or tetracycline opthalmalic ointment in a single dose application as a preventative measure within 1 hour after birth.<--We will discuss this more in the Newborn lecture but you need to know it for clinical.

4. Why are pregnant women at higher risk for Candidiasis infection? RKC P 183-4 Change in hormones during pregnancy i.e. high estrogen, increased weight, wearing tight restrictive clothing, gestational diabetes, Hormones during pregnancy help bacteria to grow, more moisture and becoming bigger makes bacteria more attracted to the area.
5. Which pregnant women should be screened for Syphilis? ALL
   Those that are on the stages of primary, secondary and early latent stages are considered most contagious.

   When should they be screened? Pregnant women at the first prenatal checkup and needs to be rescreened in the third trimester.

   What is the name of the tests used for screening? RPR and VDRL -- Non-treponemal and treponemal testing.

6. If a pregnant woman is diagnosed with an HIV infection, what treatment would you anticipate for the mother and the infant? RKC P 201 Mother takes an oral Antiretroviral agent at 14 to 34 weeks of gestation and it is continued throughout pregnancy. During labor an ARV agent is administered intravenously until delivery. An ARV syrup is administered to the infant within 12 hours after birth.
   Women should be treated with ART. Oral antiretroviral drugs are given twice daily until birth, IV administration during labor, and oral zidovudine (AZT) if given to the newborn 6-12 hours after birth.

7. Discuss each of the following for cytomegalovirus:

Pathophysiology	Transmitted via bodily fluids, the most common congenital and perinatal viral infection. Pregnant women acquire it from sexual contact, blood transfusions kissing, and contact with children in daycares.
Nursing Assessment	Nurses must educate women on chance of contracting this disease.
Testing	No screening can be performed and no vaccinations available.
Management	Wash hands frequently, do not share cups, eating utensils, towels, do not put a child's pacifier in mouth, clean everything in household.
Patient education needs	CMV during pregnancy can result in abortion, stillbirth, low birth weight, microcephaly, deafness, blindness, and so on.

8. Discuss each of the following for Group B streptococcus: RKC p766

Pathophysiology	Most common cause of sepsis and meningitis in newborns, and a frequent cause of pneumonia. It is a naturally occurring bacterium found near the rectum or vagina.
Nursing Assessment	Review prenatal history, ask about previous infections, determine when the woman's membranes ruptured, monitor vitals, and look for risk factors b=for the bacteria.
Testing	During a prenatal visit, women between **35 and 37** weeks should be screened for Group B.
Management	Look at test results to see if mother is positive for Group B strep, notify provider, administer IV antibiotics **during labor** not during the pregnancy, ideally two doses prior to delivery.
Patient education needs	Educate mother to report any previous infections and talk about her perinatal history.

9. Discuss each of the following for Hepatitis B:

Pathophysiology	Can be transmitted through contaminated blood, illicit drug use, and sexual contact. Can live outside of the body in dried blood for over a week, causes 5,000 deaths annually.
Nursing Assessment	Review history of STIs, employment in healthcare, household contacts with HBV infected people, abuse of IV drugs, prostitution, foreign born, multiple sex partners.
Testing	Blood studies done to test for HbsAg. (Hepatitis Surface Antigen) Done at **first** prenatal visit
Management	If positive, administer HBIG. Newborn will receive HBV vaccine within 12 hours after birth. Women who are not positive may receive the vaccine during pregnancy.
Patient education needs	Abstain from alcohol, avoid IV drug exposure, receive immediate treatment for an STI, use good hand hygiene, avoid sharing personal items, use barrier methods during sex.

R,K,& C Ch 10

1. **Briefly** define the difference between preembryonic, embryonic, and fetal stages of development.
   Preembryonic: Inlcudes fertilization through the second week
   Embryonic: end of the second week through the eighth week
   Fetal: End of eighth week until birth

2. List 5 functions of the placenta. RKC Ch 10 pp 342-3
   a. Makes hormones that control the basic physiology of the mother so that the fetus is supplied with nutrients,
   b. Protects the fetus from immune attack by the mother,
   c. Removes waste products from the fetus,
   d. Induces the mother to bring more food in
   e. Closer to the end of pregnancy, it stimulates the hormones that prepare the fetal organs to function outside the mother's body.

R,K,& C Ch 11; ATI Ch 3, 4, 5

1. What are: See Box 11.1 on page 363

1. Amenorrhea—lack of menses—Presumptive sign of pregnancy

2. Goodell's sign (5 weeks)- softening of the cervix—Probable sign of pregnancy

3. Chadwick's sign (6-8 weeks)- a bluish-purplish coloration of the vaginal mucosa and cervix Probable sign of pregnancy

4. Hegar's sign- (6-12 weeks)softening of the lower uterine segment or isthmus- Probable sign of pregnancy

5. Quickening—(16-20 weeks –4-5 months)—Felt fetal movement-- Presumptive sign of pregnancy

6. Braxton hicks contractions- spontaneous, irregular, and painless contractions that thin out the cervix before birth—start late in the first trimester for some woman but more commonly felt starting in the 2nd trimester and continue until true labor begins-- Probable sign of pregnancy

7. Lightening—(mid-3rd trimester)—infant drops down more into pelvic area rather than in the abdomen. Appears the abdomen protrudes more.

8. Ballotment- Rebound of unengaged fetus.

Presumptive (subjective) signs of pregnancy: Quickening (around 16 to 20 weeks); amenorrhea, fatigue, nausea & vomiting, urinary frequency, breast changes, uterine enlargement

Probable (Objective) signs of pregnancy: abdominal enlargement, Hegar's sign, Chadwick's sign, Goodell's sign, Ballotment, Braxton Hicks contractions, positive pregnancy test

Positive Signs of pregnancy: Fetal heart sounds, visualization of fetus by ultrasound, fetal movement palpated by an experienced examiner

2. What is hCG? Why is it so important to watch during pregnancy?

- Human chorionic gonadotropin. Placental hormone secreted by the cells from the implantation→supports corpus luteum→ supports endometrial lining-→ maintains pregnancy
  It should peak until 8 weeks, and then start to decrease gradually.

Home pregnancy test urine samples should be the first-voided urine to measure the highest concentration of hCG.

The hCG production begins with implantation at about 60-70 days of gestation and then declines until around 100 to 130 days of pregnancy and then gradually increases until term.

Lower blood levels of hCG might suggest a miscarriage or ectopic pregnancy.

Some medications can cause false-positive or false-negative pregnancy test results.

3. What causes supine hypotensive syndrome in a pregnant woman? How can we educate her to prevent this?

A pregnant woman in her final trimester: The enlarged uterus/fetus falls back onto the inferior vena cava, resulting in compression. This reduces venous blood return and decreases cardiac output and blood pressure. Educate the woman to lay in the side-lying position to displace the uterus to the left and off of the vena cava.

4. In your own words, ***BRIEFLY*** summarize the expected changes a woman will see in each of the following: Know how these impact a woman's routine in pregnancy. Be able to identify how they effect the woman during the three different trimesters of pregnancy i.e. 1st -0-13 weeks; 2nd- 14-26 weeks; 3rd 27-40 weeks

Uterus- changes into a globe shape, becomes bigger in capacity, and the weight increases

Cervix- softens, mucous plug forms, and the cervix begins to turn bluish-purple

Vagina- vaginal mucosa will thicken, and vagina overall will start to grow in size. Secretions become thicker as well. Leukorrhea is common.

Ovaries- become larger, no longer palpable

Breasts- become larger, more tender, and veins start to show more. Stretch marks (striae) will likely show, and nipples will become a darker color. Some secretions from sebaceous glands on the breast, nodular tissue on palpation.

Gastrointestinal system- Produce more saliva, takes longer for stomach to empty after eating, heartburn occurs (most common in the 3rd trimester),constipation is common (second & third trimester), and nausea and vomiting are likely. Hea

Cardiovascular system-Blood pressure may decrease initially then a slight rise in systolic and slight decrease in diastolic during the 2nd trimester;

During 2nd trimester the pulse rate will increase and remain elevated through the remainder of the pregnancy;

blood volume will increase; hemoglobin and hematocrit decrease, and women have a higher chance of venous thrombosis;

Higher utilization of oxygen→ can lead to fatigue especially in the 3rd trimester.

Respiratory system- Lung space decreases throughout pregnancy, deeper breathing occurs, and faster breathing occurs

Renal/urinary system- Urination occurs more, kidneys enlarge, and women will most likely feel an urge to urinate more when lying down; urgency occurs in 1st and 3rd trimester.

Musculoskeletal system- joints surrounding the pelvis start to spread out more to prepare for birth, chronic lower back pain will occur due to an increased swayback (Lordosis) on and upper extension of the spine: , and a waddle gait may appear. The chronic backache from the Lordosis can be helped by doing pelvic rock exercises i.e. on hands and knees then lifting back up and rounded and then down. Relieves some pressure on the back muscles.

Integumentary system- Hair loss, stretch marks (usually start to occur in 2nd trimester), and hyperpigmentation of other body parts may occur (usually occurs starting in 2nd trimester), a line through the middle of the abdomen may appear, and a mask appearance may show on dark-haired women (more in 2nd and 3rd trimesters)

Vascular related changes- Varicose veins in various areas or the body, and vascular spiders

Endocrine system-

Thyroid – becomes larger, Thyroid hormone secretes more

Pituitary – Enlarges, releases oxytocin, which stimulates contractions

Pancreas – balances insulin supply between mother and baby, and more insulin is secreted for the mother

Adrenal glands – cortisol secretion will increase, aldosterone increases, and cortisol can help as a base-line during times of stress for a mother, bringing her back to her normal cortisol level

Prostaglandin secretion – Prostaglandins can soften the cervix, and when prostaglandin production occurs, contractions increase

Placental secretion – prevents crossing of blood between mother and fetus, forms hormones, and produces proteins and steroid hormones

Immune system – A process occurs to help the mother's immune system to not reject the fetus, and the body tries to protect against certain infections such as UTI's

5. Why are pregnant women often diagnosed with anemia?

Some women become pregnant and already have a depleted amount of iron stores available. In general, the development of the expanded blood volume in pregnancy (50% more than pre-pregnancy) and the developing fetus utilizes the iron stores and supplemental iron is needed through dietary or vitamin sources to help meet demands of both the mother and baby.

6. What important roles do each of the following placental hormones play in pregnancy?

hCG- Basis for early pregnancy tests and maintains the maternal corpus luteum

hPL- prepares mammary glands for lactation, helps make glucose available for fetus, and is the antagonist of insulin

Relaxin- helps maintain pregnancy, increases flexibility of the pubis symphysis, and dilates the cervix

Progesterone- supports the endometrium, causes thickening of the uterine lining, and assists in the development of breasts for lactation

Estrogen- helps enlarge genitals, uterus, and breasts, aids in relaxing of pelvic ligaments and joints, aids in forming ductal system in breasts, and produces more saliva from salivary glands

8. Why are folic acid, iron and prenatal vitamins important for pregnant women? What are some good sources for folic acid and iron that you can educate pregnant women to consume?

Supplemental Iron and folic-acid are needed because their requirements are too great during pregnancy to be met through diet alone. They are also used to prevent anemia. Prenatal vitamins are prescribed as a safeguard during pregnancy. Women should consume lots of fruits and vegetables, unsaturated fats, whole grains, lots of fiber, nuts or nut butters, at least 2 servings of fish (but no raw or uncooked shellfish and not those with moderate to high mercury levels) weekly, and drink atleast 8-10 cups (64-80 oz; 1,920-2,400 ml) of water daily.

Folic acid can be obtained from fruits such as orange fruits , leafy green vegetables, andcooked dried beans and peas, seeds, and breads fortified with folic acid.

9. After reading over the general guidelines on p 378 and the MyPlate guidelines on p 379, please write out a daily food plan in the table below:

Breakfast	Snack	Lunch	snack	Supper	snack
Low-fat milk in non-artificially sweetened cereal	Carrots	Lean grilled chicken	1 cup strawberries	Spinach salad	1 cup of jello
Whole-grain toast	Broccoli	Cooked turkey sandwich on whole-wheat bread	Yogurt	1 oz poultry	½ cup of dried fruit
Oatmeal	String cheese	2 oz fish or tofu	Cooked dry beans	Baked sweet potato	1 cup of popcorn

Whole-wheat bagel with fat-free cream cheese	1 banana	Salad of deep leafy greens	½ cup of dried fruit	1 oz fish	Cup pf peaches/mixed fruit
1 egg with spinach	Yogurt	Rice cake with peanut butter	Fat-free milk	Chicken taco with vegetables	Yogurt

This should also include 8 to 10 glasses (2-3 Liters) of fluid daily such as water, low sugar fruit juice, milk or milk substitutes. Moderate amounts of caffeine are acceptable. Calcium and vitamin D **doesn't** need to increase during pregnancy unless the woman doesn't consume adequate amounts of dietary calcium i.e.1,000 mg daily for pregnant & non-pregnant women ages 19-50 years of age; 1,300 mg/day for those under 19 years of age.<--This is because adolescents are still growing in height and need more calcium. Calcium in the diet can be gotten from nuts like almonds, broccoli, kale along with dairy products.

10. What would you tell a pregnant woman who asks you what she should avoid eating during her pregnancy? What if she asks how much weight she should gain?

- Women should avoid artificial sweeteners, fish and shellfish high in mercury, processed foods such as hot dogs, luncheon meats, deli meats, soft cheeses, refrigerated steamed seafoods, unpasteurized milk, or salads made in a store such as ham salad.
- Also avoid alcohol as it can cause the fetus to develop brain, craniofacial and heart defects.
- Also avoid Class C or D pregnancy risk over the counter medications. For pain or headaches, Tylenol (acetaminophen) is preferred.
- The amount of weight she should gain isn't as important as the foods consumed.

- Recommended.. Healthy weight BMI: 25 to 35 lb
    - First trimester: 3.5 to 5 lb
    - Second and third trimesters: 1 lb/wk
- BMI <19.8: 28 to 40 lb
    - First trimester: 5 lb
    - Second and third trimesters: 1+ lb/wk
- BMI >25: 15 to 25 lb
    - First trimester: 2 lb
    - Second and third trimesters: 2/3 lb/wk

11. What is pica? What often precedes the identification of pica?

Pica describes the urge to eat something that is not considered food. Signs of anemia often precede these cravings of non-food substances i.e. dirt, clay, corn starch, ice.

12. In your own words explain what each of the following mean in reference to a pregnant woman.

Ambivalence – having mixed emotions about the pregnancy or things occurring at the time. A woman may feel excited and terrified at the same time.

Introversion – A woman prioritizing herself and her fetus.

Acceptance – A woman coming to the realization that all is real, especially after she can hear/see proof of the fetus inside of her.

Mood swings – Differences in emotion within a short time period. A woman may feel happy one moment, and then be crying tears of sadness the next for reasons that she may not be able to explain or understand herself.

13. How can pregnancy change the mother's image of herself? Her sexuality? Her relationship with her partner?

A woman's view on her body, emotions, sexuality, and partner can vary between each individual. Some women may think that their body has now been ruined and find it hard to love oneself again for a while, while others are mesmerized that their body can create such a thing. During pregnancy, many women feel confused and fearful about their sexuality, not knowing how it will be affected after the pregnancy. Expectant partners may not be going through all of the physical, or even emotional changes as the pregnant woman, however they still will experience changes in their life as well. Expectant partners usually share some of the same worries as one another. Partners may feel driven away, when the fetus is the main priority at the time.

R, K, & C CH 12; ATI Ch 4,5, & 6

1. Why is preconception care important? It helps to identify and modify biomedical, behavioral, and social risks to a woman and her health before pregnancy through prevention and management.
2. What types of information should be obtained at the **first** prenatal appointment?
   a. Immunization status,
   b. vital signs,
   c. weight/height,
   d. medical history,
   e. reproductive health data including menstrual cycle history,
   f. sexuality,
   g. sexual practices,
   h. nutrition history,
   i. lifestyle practices,
   j. psychosocial issues,
   k. medication/drug use,
   l. Use of tobacco products (smoking can lead to growth restriction of the fetus)
   m. and discussion of support system including abuse history or risk.
3. What are the thresholds for diagnosis of overt diabetes during pregnancy? Having a fasting plasma glucose of 126 mg/dL, a Hemoglobin A1c level of 6.5% or higher, or a random plasma glucose of 200 mg/dL or higher.
4. Calculate the following estimated due dates using Nagele's Rule:
   a. Last menstrual period (LMP) 7/9/99 – due 4/16/00
   b. Last menstrual period (LMP) 12/24/96 – due 10/1/97
5. State what words GTPAL stand for and what each mean. G – Gravida, T – Term births, P – Preterm births, A – Abortions, L – Living Children.
   Gravida is the total number of pregnancies, including the current one, no matter the outcome.
   Term births involve births delivering between 38-42 weeks gestation.
   Preterm Births are the number of pregnancies ending after 20 weeks (viability) but before 37 weeks (from viability up to 37 weeks.)
   Abortions are the number of pregnancies ending before viability or 20 weeks.
   Living is the number of children that are alive.

6. What is meant by the term para? Para describes the number of pregnancies where a woman has given birth after 20 weeks, whether the fetus was viable or not.
7. What is linea nigra? How does fundal height correlate with gestation? Linea nigra is the brownish black pigmented line running from the umbilicus to the symphysis pubis.
8. Fundal height is palpated at the symphysis pubis at 12 weeks. At 16 weeks the fundus is midway between the umbilicus and symphysis pubis. At 20 weeks the fundus can be palpated at the umbilicus. By 36 weeks the fundus is right below the xiphoid process. See Power Point

9. Fill in the following table: NOTE: Which ones are done at the first prenatal visit

Test	When are these done in Pregnancy?	Evaluation/meaning of results
CBC	First prenatal appointment --later if client shows signs & symptoms of anemia or if patient has gestational hypertension that progresses to preeclampsia --on admission to labor & delivery	Evaluates Hgb, Hct, RBC to identify anemia, and WBC for infection, and Platelets to assess clotting
Blood typing & Rh (often called type and screen)	First prenatal appointment --On admission to labor & delivery	Determines blood type and Rh factor to rule out any blood incompatibility or to determine if she will need RhoGAM.
Rubella titer	First prenatal appointment	Detects antibodies for measles and will determine is she will need the immunization after birth
Hepatitis B	First prenatal appointment	Detects hepatitis antibody surface antigen to see if she has Hepatitis B. HbsAg
HIV	First prenatal visit	Detects HIV antibodies to see if fetus will need protected during birth, and if mother will need antiretroviral meds.
STI screening --syphillis	First prenatal visit	Detects STIs to determine if treatment needs to be done so that transmission to fetus will not occur.
Cervical smears Gonorrhea/Chlamydia	First prenatal visit—repeat during 3rd trimester	Detects abnormalities like cervical cancer, other STIs and infections to start treatment.
Group B strep---------	Sometimes tested in urine early in pregnancy. **Usually tested at 35-37 weeks gestation via vaginal/anal swab**	Means mother will receive antibiotics when she comes in in labor. Preferably at least 2 doses prior to delivery.
Blood Glucose Tolerance test	Identifies hyperglycemia	1 hour GTT: Done at initial visit for at-risk clients and then at 24 to 28 weeks for all. Results greater than 140 mg/dl requires follow up.) 3 hour GTT -Use in clients who have elevated 1-hr GTT as a screening tool for diabetes mellitus. A diagnosis of gestational diabetes requires 2 elevated blood-glucose readings.
MSAFP-Maternal	Blood test-Done between 16-18	Measures the elevated levels of maternal

Serum Alpha Feto-protein	weeks gestation so requires accurate dating of the pregnancy —Serum blood test screening is minimally invasive and is recommended for all women.	serum alpha-fetoprotein which is linked to the occurrence of fetal neural tube defects

10. How often are follow up visits and what things are assessed? Up to 28 weeks, BP weight, and urine (for proteins and glucose) are assed. Fundal height and fetal HR are done as well. Between 29 and 36 weeks, all previous assessments are done, as well as an assessment for edema. Between 36 and 40 weeks, all of the same assessments are done, as well as screening for Group B strep, gonorrhea, and chlamydia. Fetal positioning is also looked at. Review breast-feeding versus bottle feeding.
11. What danger signs are associated with the first trimester? Second? Third?
First – spotting or bleeding, painful urination, persistent vomiting, fever over 100F, lowered abdominal pain with dizziness and shoulder pain.
Second – regular uterine contractions, pain in calf, sudden leakage of fluid from vagina, and absence of fetal movement for 12 hours.
Third – sudden weight gain, facial edema, sever upper abdominal pain, headache, visual changes, and a decrease in fetal movement for 24 hours, regular contractions that do not go away with change in position i.e.laying down if walking; walking if have been laying down.
12. How is fetal well-being assessed?
Ultrasounds: Can measure congenital malformations, multi fetal pregnancies, fetal size, fetal growth, fetal position, fetal heart rate, placenta location,
Doppler Flow studies: Not commonly done but rather for structural abnormalities, rhythm abnormalities, and altered fetal circulation
Maternal serum Alpha-Fetoprotein Analysis (MSAFP): Optimally done between 16-18 weeks. Screening for fetal neural tube defects.
Marker Screening Tests: Maternal serum, QUAD screen- MSAFP, hCG, unconjugated estriol, inhibin A (increases identification of Down syndrome).
Amniocentesis: Invasive procedure which can assess Fetal heart rate (EFR), length, anomalies in fetal chromosomes, neural tube defects, fetal gender. (Can't be done until 14-16 weeks at least)
Tell client to empty bladder prior to the procedure to reduce it its size and reduce the risk of inadvertent puncture.
Must be done guided by ultrasound to avoid puncturing the placenta or the fetus.
Discuss the following amniotic fluid findings and their implications to the fetus. Color – Should be clear with white flecks of vernix caseosa in a mature fetus. Fetal blood may indicate damage to vessels.
    a. Bilirubin – Should be absent at term. A high level would indicate hemolytic disease.
    b. Meconium – Should be absent except in breech position. If present, it indicates hypotension or distress in fetus.
    c. Lecithin to sphingomyelin ratio (L/S ration) – More than 2 generally indicates fetal pulmonary maturity. If less than 2, it indicates immaturity & a risk for the infant to have subsequent respiratory distress.
    d. Alpha-fetoprotein – **(This can be measured in the amniotic fluid from an amniocentesis but is most commonly done as a blood test done around 14-26 weeks**) Can vary. Highest concentration occurs around 13-14 weeks, and is around 18.5 ng/mL. Inappropriate increases indicate neural tube defects, impending death, congenital nephrosis, or contamination of fetal blood.
    e. Bacteria – Should be absent. Presence indicates chorioamnionitis.

f. Acetylcholinesterase – Should be absent, presence indicates neural tube defects, omphalos, or other malformations.

13. Describe the procedure and expected results for a non-stress test, contraction stress test, and biophysical profile (BPP). All involve ultrasound but are non-invasive.

Non-stress test – provides an indirect measurement of uteroplacental function. Before procedure, mother eats a meal to stimulate fetal activity. She is then placed in the left later recumbent position. A fetal monitoring device is placed on her to record uterine activity and heart rate. The mother is given a button to press when she detects fetal movement, and the marks are tracked. If the fetus is quick with no fetal movement a vibroacoustic stimulator (sound source, usually laryngeal stimulator) can be activated for 3 seconds on the maternal abdomen over the fetal head to awaken the sleeping fetus.

It is a non-invasive way to assess for an intact fetal CNS during the third trimester. It can rule out the risk for fetal death in clients who have diabetes mellitus. A reactive non-stress test is indicative of fetal well-being, but a disadvantage of a NST includes a high rate of false nonreactive results with the fetal movement response blunted by sleep cycles of the fetus, fetal immaturity, maternal medications, and nicotine use disorder.

Contraction stress test—determines how well the fetus tolerates the stress of uterine contractions. A fetal heart rate monitor is applies and contractions are stimulated (of if occurring naturally, they are observed via electronic fetal monitoring). A test is negative when there are at least 3 uterine contractions in a 10-minute period with no late or significant variable decelerations during electronic fetal monitoring. Late decelerations are indicative of uteroplacental insufficiency so a negative contraction stress test would rule out uteroplacental insufficiency

A biophysical profile uses a real-time ultrasound to allow assessment of fetal well-being. It includes
1) fetal tone,
2) fetal movements, and
3) fetal breathing movements
4) qualitative amniotic fluid volume
5) fetal heart rate.

It will identify fetus' that may be at risk for poor pregnancy outcomes. A total of 10 points is allowed with all 5 components being worth 2 points each. (Some places use 4 markers of fetal tone, movements, breathing & amniotic fluid volume with 2 points each-8)

14. Choose one of the ten discomforts of pregnancy listed on p 420. Write out a teaching plan that you could use for a mother who is experiencing this discomfort. (While you are only choosing one to write about you will be responsible for knowing education for each of the discomforts.) Fatigue – attempt to get a full night's sleep, without any interruptions. Eat a healthy well-balanced diet. Schedule a nap in the early afternoon each day if possible. Whenever you are feeling tired, take time to rest with legs slightly elevated, preferably on your side to reduce pressure on inferior vena cava and promote blood return/circulation.

15. What are the common discomforts experienced in the third trimester? How can you as the nurse educate women to successfully handle these discomforts?

--maternal supine hypotension in pregnancy: when client lies on their back and the weight of the gravid uterus compresses the vena cava. This reduces blood supply to the fetus. The client might experience

feelings of lightheadedness and faintness. Teach the client to lie in a side-lying or semi-sitting position with the knees slightly flexed.

-- Shortness of breath and dyspnea – explain that this is normal and will resolve once the fetus drops lower. Try moving body positions to allow for maximum expansion of chest and diaphragm. Lay with head elevated if needed.

--Backache-- Teach woman to do pelvic rock (on hands and knees with elevation of the back then lowering of the back to neutral position) exercise to relieve backache. Also you good body mechanics when sitting or standing.

-- Leg cramps are common in the 3rd trimester due to the rises in both progesterone and estrogen. Lay down and relax, warmth on legs but avoid hot tubs or saunas as the heat raises the woman's internal body temperature too high and can be detrimental to the fetus but causing the fetal heart rate to rise too high.

-- Heartburn and Indigestion – suggest patient limit/avoid gas-producing or fatty foods. Encourage her to remain in a sitting position for 1-3 hours after consumption of food. Tell her to eat small, frequent meals instead of large meals.

--Dependent edema – Elevate feet and legs lots throughout the day, change positions frequently, lie on the left side to keep pressure off of the vena cava. Avoid knee-high stockings that compress at the knee, and avoid high intake of fats and sugars.

--Braxton Hicks contractions – Reassure woman that her contractions are normal and not of concern, walking may reduce Braxton Hicks contractions, stay well-hydrated, and lay on left side to help relieve the discomfort.

--Relaxation of the pelvic floor muscles—Teach woman to do Kegel exercises frequently throughout the day.

16. Should pregnant women receive vaccines, if so, which ones & why? They are not indicated. However, Hepatitis B, an inactivated influenza injection, Tdap, meningococcal, and rabies are all okay for women to have. Women **should not receive live, attenuated vaccines during pregnancy** i.e. live Measles, mumps, rubella (MMR), or live influenza nasal spray, or for 1 month before pregnancy or varicella

17. Briefly explain in your own words the value of prenatal/childbirth education classes. Prenatal and childbirth classes can help a woman and her family/support system before going into labor and becoming a caregiver of their infant. These classes can teach valuable lessons about the discomforts of pregnancy and how to deal with them; signs and symptoms for which to call their provider; how to prepare for labor and delivery—including pain management options and how the partner may support them during labor; what to expect when hospitalized; how to prepare for breastfeeding/formula feeding, as well as basic concepts that not everyone is aware of. In general, they will make everyone involved more comfortable.