DEDICATED TO······
SCREENING TESTS FOR WOMEN

1) Mammography:

i) If women has risk factors = start screening from 34 years onwards annually. May also do genetic testing for BRCA (after every 1 year)

ii) If no risk factors = Start screening from 40-50 years onwards annually. (v. imp MCQ) (Remember 40-50 year is ambiguous window so question would be clear)

Who are high risk for early screening?

i) 2 1st degree relatives with breast cancer with 1 diagnosed <50 years.
ii) 3 or more 1st or 2nd degree relatives with breast cancer
iii) 1st or 2nd degree relative with breast + ovarian cancer
iv) Breast cancer in any male relative
v) Ashkenazi Jew with any 1st or 2nd degree relative with breast or ovarian cancer

Approach to palpable breast mass or pathological discharge?

If >30 years woman = Do Mammogram \(\rightarrow\) If suspicious for malignancy = core biopsy

If benign looking = do FNAC

If <30 years woman = Do Ultrasound \(\rightarrow\) If suspicious for malignancy = core biopsy

If benign looking = do FNAC

Now lets suppose it was bening looking and you did FNAC:

If bloody = Do mammography + excision

If non bloody but residual mass is there = Mammography + excision

If non bloody and NO residual mass after FNAC = Follow up after 6 weeks

If after 6 weeks cyst again recurs = mammography and excision

2) Pap smear:

q. 5437

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Screening guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &lt;21</td>
<td>No screening</td>
</tr>
<tr>
<td>21-29</td>
<td>Cytology every 3 years</td>
</tr>
<tr>
<td>30-65</td>
<td>Cytology every 3 years OR Cytology + HPV test every 5 yrs</td>
</tr>
<tr>
<td>&gt;65</td>
<td>No screening if negative prior screens and not high risk for cervical cancer</td>
</tr>
<tr>
<td>Hysterectomy (with removed cervix)</td>
<td>No screening if no h/o high grade precancerous lesion, cervical cancer or DES exposure</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Immunocompromised (HIV, SLE/organ transplant pts on immunosuppressents)</td>
<td>Onset of sexual intercourse every 6 months x 2 Then annually</td>
</tr>
</tbody>
</table>

Note: In women <30 yo age, HPV infection is very common and benign so it is not recommended b/c it may lead to un-necessary colposcopies

When to stop using pap smear?: b/w 65-70 years of age if >3 negative pap smears and no abnormal paps in last 10 years.
## VAGINA

Vaginal discharge

<table>
<thead>
<tr>
<th>Nature</th>
<th>Vaginosis (most common)</th>
<th>Trichomoniasis</th>
<th>Candidiasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Thin greyish</td>
<td>Thin green frothy</td>
<td>White curdy</td>
</tr>
<tr>
<td>PH</td>
<td>&gt;4.5</td>
<td>&gt;4.5</td>
<td>&lt;4.5</td>
</tr>
<tr>
<td>Inflammation</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Saline wet KOH mount</td>
<td>Clue cells without WBC</td>
<td>Trichomonias vaginalis (Pear shaped flagellated protozoa)</td>
<td>PseudoHyphae with WBC</td>
</tr>
<tr>
<td>Itching and burning</td>
<td>No</td>
<td>Yes with strawberry cervix</td>
<td>Yes</td>
</tr>
<tr>
<td>Treatment</td>
<td>Oral only... Metronidazole/Clinda</td>
<td>Metronidazole and treat partner</td>
<td>Azole antifungals (topical/oral) No need to treat partner</td>
</tr>
<tr>
<td>Cause</td>
<td>Lactobacilli replaced by anaerobes and facultative aerobes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FIRST TRIMESTER PROTOCOL

A female comes to you with secondary amenorrhea and s/s suggestive of pregnancy..... Next best step = beta HCG........... if positive.... Do pelvic usg to look for gestational sac.... Now we have found that she is pregnant and is in first trimester.... Now what to do? (v.imp ccs case)

Do the First trimester routine tests:

i) Tests on blood (CBC, BLOOD GROUP, RH ANTIBODY)
ii) Tests on genitourinary system (PAP smear, UA, Urine culture)
iii) Tests for immunization (Rubella anibody, HbsAg)
iv) Tests for infections (VDRL-RPR, ELSIA HIV, Cervical culture for chlamydia and gon)

to remember a broad pic........ remember BIGI (as said bi jee in urdu) for these tests....
i) B (tests on Blood)
ii) I (test for Immunization)
iii) G (test on genitourinary system)
iv) I (test for Infections)
MEDICAL DISORDERS IN PREGNANCY

1) No fever + No urgency, frequency or burning + Urine culture are positive (>100K Colony-forming units of single organism) = ASYMPTOMATIC BACTERIURIA.…… Always treat it with single agent antibiotic b/c 30% of untreated women will develop ACUTE PYELONEPHRITIS = and it causes preterm labour, septicemia and low birth weight babies. (v.v.v.v.imp mcq)

2) No fever + Urgency, frequency and burning + Urine culture positive = ACUTE CYSTITIS.…….. always treat as same above coz converts into acute pyelonephritis

3) Fever and CVAT + urgency, frequency and burning + Urine culture positive = ACUTE PYELONEPHRITIS.……. Hospital admission, IV hydration, parenteral antibiotics, tocolytics.

4) When fetus is at risk for Erythroblastosis Fetalis

<table>
<thead>
<tr>
<th>Condition</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Mother must be Rh –ve</td>
<td></td>
</tr>
<tr>
<td>2) Dad must be Rh +ve</td>
<td></td>
</tr>
<tr>
<td>3) Atypical antibodies must be present &gt;1:8 to cross placenta</td>
<td></td>
</tr>
<tr>
<td>4) These antibodies must be associated with HDN</td>
<td></td>
</tr>
<tr>
<td>5) Antibody titre must be &gt;1:8</td>
<td></td>
</tr>
</tbody>
</table>

Erythroblastosis fetalis is type-2 hypersensitivity reaction. If the Fetal Rh+ cells go into the Rh-ve mother; Anti-D antibodies (anti Rh) antibodies will start to form and will accumulate; so mother becomes sensitized.……. In the next pregnancy if the Antibody titre is >1:8; they will cross the placenta as they are IgG and will cause lysis of fetal RBC.……. So our goal is PREVENT THE FORMATION OF ANTI-D ANTIBODIES IN MOTHER SERUM who is pregnant 1st time AND LET THEM NOT TEND TO RAISE >1:8.…… So what can we do?

a) 1st trimester: Do Direct coomb test to find the Rh status of mother = lets suppose Rh-ve.

Do Indirect coomb test to find the level of Atypical antibodies = lets suppose 0 (so baby is not at risk now)

b) 3rd trimester (28 week): Do indirect coomb test to find the level of Atypical antibodies =

- If no antibodies found = Give RhoGam 300ug
- If antibodies found >1:8 = No role of RhoGam as mother has already formed antibodies which are going to destroy fetal RBC (so manage the baby now)

c) After delivery: give again RhoGam 300 ug within 72 hours.……. but if there is Abruptio placenta (i.e high fetomaternal hemorrhage)………… Do Rosette test…….If positive…………Do Kleihauer-Betke test to quantify the amount of bleed and give RhoGam accordingly because if it is not given adequately; Atypical antibodies will form and will harm the baby in next pregnancy.)
d) Whenever there is fetomaternal hemorrhage or small mixing of maternal blood = give RHOGAM within 72 hours........ ie after CVS, Amniocentesis, D&C etc.

5) Suppose mother did not received Rhogam in previous pregnancy and now in this pregnancy she has antibody titre of >1:8 .................. These IgG antibodies will go from mother to Rh+ve baby and will cause lysis of RBC leading to Jaundice and anemia....... How will you manage it now?

i) Do amniocentesis for amniotic fluid bilirubin level by plotting on liley graph

ii) PUBS for fetal hematocrit

iii) Ultrasound of Middle cerebral artery to find peak systolic velocity.

You have to do intervention if there is severe anemia:

i) Bilirubin in Zone III of liley graph

ii) Fetal hematocrit <25%

iii) MCA flow is elevated

now.................

If gestational age <34 weeks = Intrauterine intravascular transfusion

If gestational age >34 weeks = Delivery of baby

Note: anti ABO antibodies are IgM and hence can’t cross placenta, so they are not associated with HDN; whereas Anti-Rh antibodies are IgG and can cross placenta hence they cause HDN .

6) Diabetes can manifest in two ways: i) Patient already diabetic ii) Gestational diabetes (24-28 weeks)

2) If a female is already diabetic :

i) Risks to baby: Antepartum: congenital (Neural tube defects, caudal regression; still-birth, miscarriages); macrosomia, IUGR..........................

Intrapartum( Shoulder dystocia).............

Neonatal (Hypoglycemia, hypocalcemia, polycythemia, hyperbilirubinemia, RDS)

ii) Risk to mother: Antepartum(nutritional, PIH, pre-eclampsia, infections)..............

Intrapartum(obstructed labor)......................... postpartum(pph, hypoglycemia)

7) As gestational diabetes happens only in 24-28 weeks..... Complications include all the above mentioned but the CONGENITAL DISEASES are not associated b/c they will happen if hyperglycemia is in early pregnancy during the period of organogenesis; ...........

8) Women with risk factors ; on 24-28 weeks pregnant should undergo screening tests for Gestational diabetes which include:....... If there is previous history of GDM; 1st test should be done on 16-18 weeks and 2ndly on 24-28 weeks

i) 1 hour 50g Oral glucose challlange test (OGCT)
ii) 2 hour 75g Oral glucose tolerance test (OGTT)
If any of the screening test is positive i.e: >140mg/dl........ Then use CONFIRMATORY test... viz: 3 hour 100g Oral glucose tolerance test (OGTT)

9) Diabetes in 1st trimester risks baby for congenital abnormalities including CNS abnormalities and this risk of congenital abnormalities strongly correlates with maternal level of HbA1c. if HbA1c >10 % = 30% chance of congenital abnormalities.. so glycemic control is mandatory & target HbA1c should be <6.5% and glucose 3.5-5.5 mmol/L... Also due to risk of these congenital abnormalities ALWAYS GIVE A DIABETIC WOMEN HIGH DOSE FOLATE SUPPLEMENTS (5mg) and also screen for Congenital abnormalities.

10) Delivery of baby in diabetic women should not be delayed >39 weeks. i.e: deliver before 39 weeks. 50% ladies would undergo C-section b/c of shoulder dystocia/ CPD.......... Also if there is vaginal candidiasis = Do c-section (not svd)

11) For glucose control during intra-partum period... Insulin infusion with 5%dextrose water is given.

12) Level of HbA1c strongly co-relates with the incidence of congenital abnormalities.

13) Thyroid binding globulins Normally increase during pregnancy so total t3 & t4 level increase but free t3 and free t4 levels are unchanged. So best test for thyroid disorder in pregnancy is FREE T-4.

14) Long acting THYROID STIMULATING ANTIBODIES in grave’s disease can cross placenta after 20 weeks and can cause neonatal hyperthyroidism.... So measure thyroid hormones in cord blood of newborn.

15) For hyperthyroidism: Propylthiouracil in 1st trimester; Carbimazole/ Methimazole in 2nd and 3rd trimester. Very important to remember that Methimazole if used in first trimester can cause CUTIS APLASIA in fetus.

16) Propylthiouracil is highly protein bound so less chance to cross placenta

17) Cyanotic heart diseases are very high risk pregnancy in women with heart diseases.

18) Pregnancy is contra-indicated in a woman with EISSENMENGER SYNDROME. (it is extremely high yield point. If they give you a question with women coming to you with eissemnger syndrome and needs pregnancy counselling. Always say her to use contraception and must avoid pregnancy)

19) Women with Marfan syndrome have >50% mortality rate esp if aortic root is >4cm dilated. So serial Echocardiographic monitoring should be done in Marfan pregnant lady.

20) As cardiac output and plasma volume increase during pregnancy; so heart diseases are more evident during pregnancy and the most important is MITRAL STENOSIS..

21) For pregnant woman with M.S/heart disease give EPIDURAL ANALGESIA during labor; Forceps delivery is best; avoid c-section; Fluid restriction; oxygen inhalation; DO NOT GIVE ERGOMETRINE during 3rd stage of labor ; instead give slow infusion of syntocinon........ also after delivery : vigilantly monitor for PULMONARY EDEMA and PERI-PARTUM CARDIOMYOPATHY.
22) A woman in 3rd trimester with Itching and pruritis esp on palms; worse at night; Bilirubin and Bile salts elevated and liver enzymes mildly elevated = INTRAHEPATIC CHOLESTASIS OF PREGNANCY....it is due to Estrogen and very high recurrence rate in next pregnancy ; there is no risk to mother but child is having great risk of PRETEM LABOR AND STILLBIRTH, Meconium aspiration......... Give ursodeoxycholic acid for pruritis and monitor fetal well being.

Note: DIAGNOSTIC FINDING OF INTRAHEPATIC CHOLESTASIS OF PREGNANCY WHICH WILL HELP YOU TO REACH THE DIAGNOSIS IS INCREASED SERUM BILE ACIDS/ BILE SALTS. It is extremely high yield point that differentiates it from Primary biliary cirrhosis in which bile acids are not raised but cholesterol is raised. Also remember that it is more common in European women/ Hispanic/ South American and it has high recurrence rate in next pregnancy

23) A pregnant woman in 3rd trimester with Altered mental status, Hypertension, Proteinuria and edema (pre-eclampsia like picture), but in addition to it they say that there is HYPOGLYCEMIA and INCREASED SERUM AMMONIA = it is ACUTE FATTY LIVER OF PREGNANCY. Other findings may include DIC, ELEVATED LIVER ENZYMES AND ELEVATED BILIRUBIN (means liver functions are totally disrupted).

What is the cause of AFLP ? = The cause is disordered metabolism of Fatty acids by mitochondria of fetus (LCAD deficiency in the mitochondria of fetus which is the main culprit)... MEANS MASLA MAA KO HORAH HA BUT PANGA BACHY KI WAJA SE HA jabky intrahepatic cholestasis of pregnancy me masla maa me khud ha k uska apna estrogen cholestasis kra rha ha... Very important to note that Estrogen causes cholestasis, there are some other drugs which can cause cholestasis like Erythromycin, Anabolic steroids, OCP (b/c of estrogen), Chlorpromazine, Thazide, Amoxicillin-clavulanate (Make sure to differentiate AFLOP from HELPP syndrome) and always remember hypoglycemia and hyperammonimia association with acute fatty liver.

24) Most common anemia during pregnancy is NUTRITIONAL DEFICIENCY and most commonly nutrient deficiency is IRON.

25) Anemia = Hemoglobin <11g/dl....

26) Total iron requirement during pregnancy = 1200mg........(placenta = 300mg; fetus=300mg; RBC=600mg))

27) Oral Feso4 is given during pregnancy ; s.e: diarrhea, constipation, cramps........ take oral iron with meals and Vitamin C aids in absorption............

28) If can’t tolerate orally or anemia >28 weeks = give: p/E::: iron( Dextran, Sucrose, sorbitol, Feric carboxymaltase)…. Iron sorbitol is given i/m on buttock with Z-technique to prevent dark staining.

29) Response to iron therapy manifests 4-8 weeks after starting therapy so if u want to assess the response to therapy before 4 weeks.......... Do RETICULOCYTE COUNT as reticulocytosis happens 7-10 days after iron supplement.

30) If anemia >36 weeks / SEVERE ANEMIA/ cardiac failure= we can’t wait 4-8 weeks for effect of iron supplement = SO TRANSFUSE PCV. Or EXCHANGE TRANSFUSION

31) Folic acid deficiency esp in Multiple pregnancy; diabetic; and in women on anticonvulsants.....For prophylaxis = 400ug (0.4mg)/ day is given = mainly combined with iron tabs.... Folic acid prophylaxis is
given before pregnancy and continuing in 1st half of pregnancy.........but if lady has already folate deficiency = give high dose x10 times = 4000 ug (4mg)... and continue giving even four weeks after delivery........... similarly if a lady has previous history of neural tube defects = give same high dose folic acid.

32) Malaria also causes folic acid deficiency...and folic acid deficient in turns lead to NTD, Megaloblastic anemia and ABRUPTIO PLACENTA.

33) Most common chronic disease in pregnancy is ASTHMA

34) Most common cause of jaundice in pregnancy is VIRAL HEPATITIS and esp Hep E is notorious in preg.
HORMONAL DISORDERS

1) A <8 years old girl with signs of puberty (thelarche→Adrenarche→Menarche) = PRECOCIOUS PUBERTY....

i) Gonadotropin dependant: Idiopathic or may be due to any CNS pathology (hydrocephalus, meningitis, encephalitis, sarcoid)....Mx: After ruling out CNS pathologies...

Increased LH which increases with GnRH stimulation test

Do brain imaging to rule out CNS lesion ...Rx with continous GnRH agonists to delay the closure of epiphysis with diaphysis.

ii) Gonadotropin independent:

Decreased LH which does not change with GnRH stimulation test

   a) McCune-Albright syndrome: Café-au lait spots, Polyostotic fibrous dysplasia leading to multiple fractures, autonomous stimulation of aromatase enzyme which leads to increased estrogen and osteoporosis...... Rx: Aromatase inhibitors

   Café lait spots of mc-al syndrome= Large, irregular border, no axillary or genital freckling (diff from nf-1)

   Defect in G-protein CAMp kinase function

   Also associated with other endocrine problems: Hyperthyroidism, GH pituitary adenoma, Adrenal cushing syndrome

   b) Granulosa cell tumor: Precocious puberty + Pelvic mass (v. imp mcq)..... it secretes estrogen

Note: Granulosa cell tumor is a sex cord stromal tumor with bimodal distribution and it presents with precocious puberty in younger girls whereas post-menopausal bleeding in older women.

<table>
<thead>
<tr>
<th>Central</th>
<th>Peripheral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased FSH, LH</td>
<td>Decreased LH, FSH</td>
</tr>
<tr>
<td>Early activation of HPO axis</td>
<td>Mccune Albright, CAH, Granulosa cell tumor, Peutz jeghers) b.c of estrogen secreting tumor</td>
</tr>
<tr>
<td>GnRH given → increase in LH</td>
<td>GnRH given→ no increase in LH</td>
</tr>
</tbody>
</table>
## 2) PRIMARY AMNEORRHEA

<table>
<thead>
<tr>
<th></th>
<th>Uterus Present</th>
<th>Uterus Absent</th>
</tr>
</thead>
</table>
| Breast present           | i) Imperforate Hymen  
|                          | ii) Vaginal septum |   | i) Mullerian Agenesis  
|                          |                 |               | ii) Androgen insensitivity  
|                          |                 |               | iii) 5-a reductase deficiency |
| Breast absent            | A) ↑FSH: (Problem with ovary)  
|                          | i) Turner  
|                          | ii) Savage syndrome (46XX)  
|                          | iii) Male gonadal agenesis (46 XY)  
|                          | iv) Defects in testosterone production  
|                          | (17-a hydroxylase and 17,20 desmolase (46 XY) | | B) ↓FSH: (Problem with Pituitary or Hypothalamus)  
|                          | Do GnRh stimulation test to find whether pituitary or hypothalamus problem ( 1) Pituitary: | | 2) Hypothalamus:  
|                          | i) Kallman syndrome  
|                          | ii) Stress, anxiety, anorexia nervosa, excessive exercise |

a) Androgen insensitivity: XY, Remove testis before 20 years b/c of increased risk for testicular cancer... then give estrogen replacement *It is extremely important question. They may give scenario of Androgen insensitivity and ask what is the patient at increased risk for = Gonadal malignancy/testicular cancer*

b) Turner: XO, Estrogen –progesterone replacement for development of 2ndry sexual characters

c) Mullerian agenesis: Surgical reconstruction of Vagina for satisfactory sexual intercourse

d) If patient with primary amnorrhea ; breast absent; uterus present; high FSH= ALWAYS DO KARYOTYPE TO FIND THE CAUSE.... (again very very impotant point to order karyotype)

 e) If patient with primary amnorrhea ; breast absent; uterus present; low FSH= Do GnRH stimulation test to find whether pituitary or hypothalamus problem
### 3) SECONDARY AMNEORRHEA

| 1) Do B-HCG | May be Hypothyroidism. Hypothyroidism me T4 LOW hoga jiski waja se TRH INCREASE HOJAYE ga..... TRH ja k TSH ko to increase krta ha magar pituitary se Prolactin ko release krta ha .... Prolactin ja k GnRH ko decrease krta ha aur hence FSH, LH ko kam ker deta ha |
| 2) TSH | If elevated:  
  i) Review medications: Dopamine antagonists  
  ii) CT or MRI of head to rule out prolactinoma  
  <1cm = bromocriptine (d.agonist)  
  >1cm=surgical |
| 3) Check Prolactin levels |  
  Prolactin ja k GnRH ko decrease krta ha aur hence FSH, LH ko kam ker deta ha |
| 4) PCT |  
  PCT  
  EPCT  
  PATIENTS WITH HYPOGONADOTROPIC HYPOGONADISM ARE AT INCREASED RISK FOR OSTEOPOROSIS BC ESTROGEN IS NOT FORMED  
  Hypogonadotropic hypogonadism is also caused by marijuana |
| 5) EPCT | Positive shows Inadequate estrogen....  
  A) ↑FSH: (Problem with ovary)  
  Premature ovarian failure;/ Premature menopause  
  i) <25 years = Y chromosome mosacism  
  ii) >25 years = Radiation, Chemotherapy, Autoimmune (hashimoto, pernicious), Fragile X syndrome, mumps, ophoritis  
  These pts can become pregnant only with IVF  
  B) ↓FSH: (Problem with Pituitary or Hypothalamus)  
  1) Pituitary:  
  Any tumor  
  2) Hypothalamus:  
  Any tumor  
  Heavy exercise, anorexia, stress, Marijuana, starvation  
  Rx these with Estrogen and cyclic progesterone |

Dopamine = Inhibits prolactin  
TRH and Serotonin = Stimulates prolactin  
Dopamine antagonist: Antipsychotics, TCA, MAOI

4) >12months of Amneorrhea with elevated FSH and LH (FSH>LH) at median age 51 years = MENUPAUSE............d/d = HYPERTHYROIDISM

Women experience following b/c of lack of ESTROGEN  
i) Hot flashes: most common symptom  
i) Urogenital: decrease lubrication, dryness, frequency, urgency
iii) Psychic: emotional labiality, mood and sleep disorders

iv) CVS: most common cause of death

v) Osteoporosis

Obese women are less likely to experience these symptoms because fat tissue has aromatase which converts adrenal androgens to estrogens.

5) Abdominal pain in young girl

| Midcycle pain (Mittelschmerz) | i) 2 weeks after LMP  
|                             | ii) Unilateral  
|                             | iii) Non-radiating  
|                             | iv) Absence of systemic |
| Ectopic |  |
| Ovarian torsion | i) Sudden onset of lower quadrant pain  
|                             | ii) Unilateral  
|                             | iii) Radiates to groin or back and accompanied by nausea and vomiting |
| Ovarian hyperstimulation syndrome | Pain, ascites, respiratory difficulty |
PERINATAL INFECTIONS

1) HSV-II mostly causes genital lesions in mother:

<table>
<thead>
<tr>
<th>PRIMARY HERPES</th>
<th>RECURRENT HERPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever, malaise, adenopathy, diffuse genital ulcers and vesicles</td>
<td>Migration from dorsal root ganglion, localized and less severe</td>
</tr>
<tr>
<td>i) Transplacental cross</td>
<td>Only pass through birth canal to baby</td>
</tr>
<tr>
<td>ii) Birth canal cross</td>
<td></td>
</tr>
</tbody>
</table>

i) Squale in child?

a) Fetus: spontaneous abortion, Symmetric IUGR, microcephaly, cerebral calcifications

b) Neonte: Meningoencephlitis, mental retardation, pneumonia, HSM, jaundice, petechiae

ii) What to do if active genital lesions?

C-SECTION SHOULD BE PERFORMED at the time of labor. If membranes have been ruptured >12 hours = c-section is of no value as virus has already infected baby)
1) If estrogen component of combined oral contraceptive pills (COCP) is >50ug = it can lead to ARTERIAL AND VENOUS THROMBOSIS.

**Side effects of COCP:**

i) Mild: Nausea, mastalgia, migraine,

ii) Moderate: Breakthrough bleed, acne, hyperpigmentation

iii) Severe: Thromboembolism, Hypertension, DVT, Hepatic adenoma, Cholestasis, premature cessation of lactation, Atherogenesis.

<table>
<thead>
<tr>
<th>Side effects</th>
<th>Protective effects (Ovarian protection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venous thromboembolism</td>
<td>Ovarian cysts and cancer</td>
</tr>
<tr>
<td>CVS</td>
<td>Endometrial cancer</td>
</tr>
<tr>
<td>Stroke</td>
<td>Benign breast disease</td>
</tr>
<tr>
<td>Increase triglycerides</td>
<td>Dysmenorrhea</td>
</tr>
<tr>
<td>Cholestasis</td>
<td>Anemia</td>
</tr>
<tr>
<td>DM</td>
<td>Ectopic pregnancy</td>
</tr>
<tr>
<td>Hypertension (Na and Water retention)</td>
<td>DUB</td>
</tr>
</tbody>
</table>

Contraindications of OCP: Migraine, smoker >35 yrs, h/o thromboembolism, stroke, stage 2 htn, major surgery with prolonged immobilization, within 3 months postpartum, breast cancer, cirrhosis /liver cancer

- As COCP can cause PREMATURE CESSAION OF LACTATION= they should never be used in LACTATING WOMEN........BUT the contraceptive of choice in LACTATING WOMEN IS PROGESTERONE ONLY PILL (MINI-PILL).... although BREASTFEEDING IS NATURAL CONTRACEPTIVE but remember; Breastfeeding prevents ovulation only for 1st 6 months.... usk baad beshak mother jitni dair tk feed kraye ovulation ho ge... so POP would be better choice to use for them....
- Although failure rate of POP is high as compared to COCP ; but it is better contraceptive choice for i) Breastfeeding women ii) Old age (>40 years) iii) Patients with CVS risk factors eg smoker, diabetic 13)
- Progesteron only contraceptive methods include : POP, DMPA, Implanon, Mirena, pLAN-B (Levonorgestrel)

2) The spermicidal agent used in Sponge and Gels for barrier contraception is NONOXYNOL-9

3) Diaphragm should be inserted 6 hours before intercourse and should be kept there 6 hours after intercourse...... if kept for long time... can lead to urinary retention. **(It is very important to note the time frame of insertion and removal of diaphragm)**

4) IUCD are indicated for women i) Who have atleast one child ii) Have normal menstrual cycle iii) No h/o of PID iv) In monogamous relationship
5) IUCD should never be used for NULLIPAROUS; woman with MULTIPLE SEX PARTNERS; H/O ECTOPIC PREGNANCY; H/O PID; GTD; immediate-postpartum or immediate-septic abortion

6) Mirena IUCD can be used for 5 years; have low failure rate than cu; causes hormonal side effects like acne, mastalgias, irregular periods

7) Cu-T can be used for 10 years; have high failure rate than mirena; no hormonal side effects; causes painful periods

8) Mirena can also be used for other purpose beside contraception eg HRT and aslo helps in prevention of HEAVY AND PAINFUL MENSES; but it does not controls menorrhagia caused by uterine fibroids

9) Other side effects of IUCD are: Bleeding; pain; PID; infection; spontaneous abortion; ectopic pregnancy; expulsion; dysmenorrhea

10) Implanon contains 68mg Etonogesterel which is given sub-dermally after local anasthesia and gives effective contraception for 3 YEARS.

11) A couple having sexual intercourse and CONDOM BURSTS / UNPROTECTED unplanned sexual intercourse=.= What to do now?........... use EMERGENCY CONTRACEPTION (POST-COITAL CONTRACEPTION) which include

   i) Mechanical (insert copper-T iucd within 5 days)
   ii) Hormonal (PLAN B= Levonogestrel 0.75mg tab.... 1 goli abi and 1 goli 12 hours baad ....but both tabs
      should be given if time frame is <72 hours) (But note recently a new drug is in market ULPRISTIL which is superior to levonogestral and it is now a good question to ask)
   iii) Mifepristone (RU-486)... 10mg SINGLE DOSE WITHIN 72 hours

12) Methods of terminal contraception include VASECTOMY in males and FEMALE STERILIZATION..

13) Methods of female sterilization include: Fallopian tube Clips, Rings, Tubul Ligation, Electrocauty, Essure, Chemical Quinacrine....

14) All female methods of sterilization can be done by Laproscopy/Mini-laprotomy in general anesthesia but ESSURE and Quinacrine can be done under Local. (this is low yield point)

15) VASECTOMY can be done under LOCAL ANASTHESIA and include: Clips, Ligation, Excision, Sclerosing agents, Non-scalpal vasectomy (this is also low yield point)

16) VASECTOMY is most effective mean of contraception b/c it has very low failure rate i.e 0.02/HWY........ but immediately after doing vasectomy= there are still sperm in the genital tract and those sperms get rid of the body after atleast 12 ejaculations so couple should use barrier or other methods for 3 months atleast after vasectomy.... and complete vasectomy is said if 2 CONSEUCTIVE SPECIMENS ARE FREE OF SPERMS....
17) The most common complication of vasectomy is HEMATOMA .......... others are: i) Sperm granuloma  ii) Anti-sperm antibodies iii) Failure after long time
The most common cause of prolonged Latent phase of Labour is Anesthesia / Regional anesthesia...
LIVE LIKE MUHAMMAD (S.A.W.W) & ALI (A.S)
DIE LIKE HUSSAIN (A.S)
😊 STAY BLESSED 😊

FROM: DR. SHAHERYAR ALI JAFRI (AIMC)