GYNECOLOGY

MENSTRUATION

EOR EXAM TOPIC LIST:

- amenorrhea
- dysmenorrhea
- dysfunctional uterine bleeding
- menopause
- normal physiology
- PMS
- PMDD

AMENORRHEA

Primary: no menses by age 16 or 13 w/ absence of secondary sex characteristics

causes → Turner Syndrome (XO, web neck, ↑FSH), hypothalamic-pituitary insuff (↓FSH/LH), androgen insensitive (↑T, XY), imperforate hymen, anorexia

Secondary: amenorrhea for 6mon

causes → pregnancy, weight change, hypothyroid, prolactinoma

workup → BhCG, TSH, prolactin, Progesterone challenge

DUB: NOT caused by pregnancy or miscarriage

AUB: problem w/ hypothalamic-pituitary-ovarian axis

└causes → PALM COEIN. If older/obese → endometrial hyperplasia

sx excessive bleeding and prolonged menses

dx of exclusion. D/C is gold standard

- BhCG levels, progestin trial, hormone levels

tx OCPs and NSAIDs.

DYSMENORRHEA

Primary → no organic cause

epi: teens-early 20s, ↓ w/ age

risk factors: menarche <12yo, nulliparity, smoking, obesity

patho: excess prostaglandins

sx: pain at beginning of mense

- N/V/D, headache, normal PE

tx: NSAIDs, OCPs

Secondary → clinically identifiable cause

etiology: endometriosis, polyps, adenomyosis, fibroids, PID, IUD, tumor, adhesions

Sx: pain begins mid-cycle, ↑severity at end

tx: treat underlying cause

MENOPAUSE

epi mean age 51

patho ↓ovarian function

sx vasomotor (hot flashes), mood disturbance, vaginal dryness, atrophy, ↓skin elasticity, ↓sleep

dx 12+ mon of amenorrhea after age 40. ↑FSH/LH but ↓E

tx estrogens for hot flashes

- HRT (w/ uterus), ERT (w/ out)

alt. SSRI/SNRI, clonidine, gabapentin

PMS

patho imbalance of E/P w/ ↑prostaglandin production

sx somatic (breast tender, HA, bloat, edema), affective (anxiety, depression, irritable, angry, confused)

dx └1+ sx during 5d before to 4d after mense starts

tx SSRIs, OCPs → GnRH ag → surgery (BOS) last resort

- exercise, stress reduction

↓caffeine, alcohol, tobacco

PMDD

patho w/ disruption to function

sx repeated, significant depression

1+ → affect lability, ↑conflict, depressed mood, anxiety

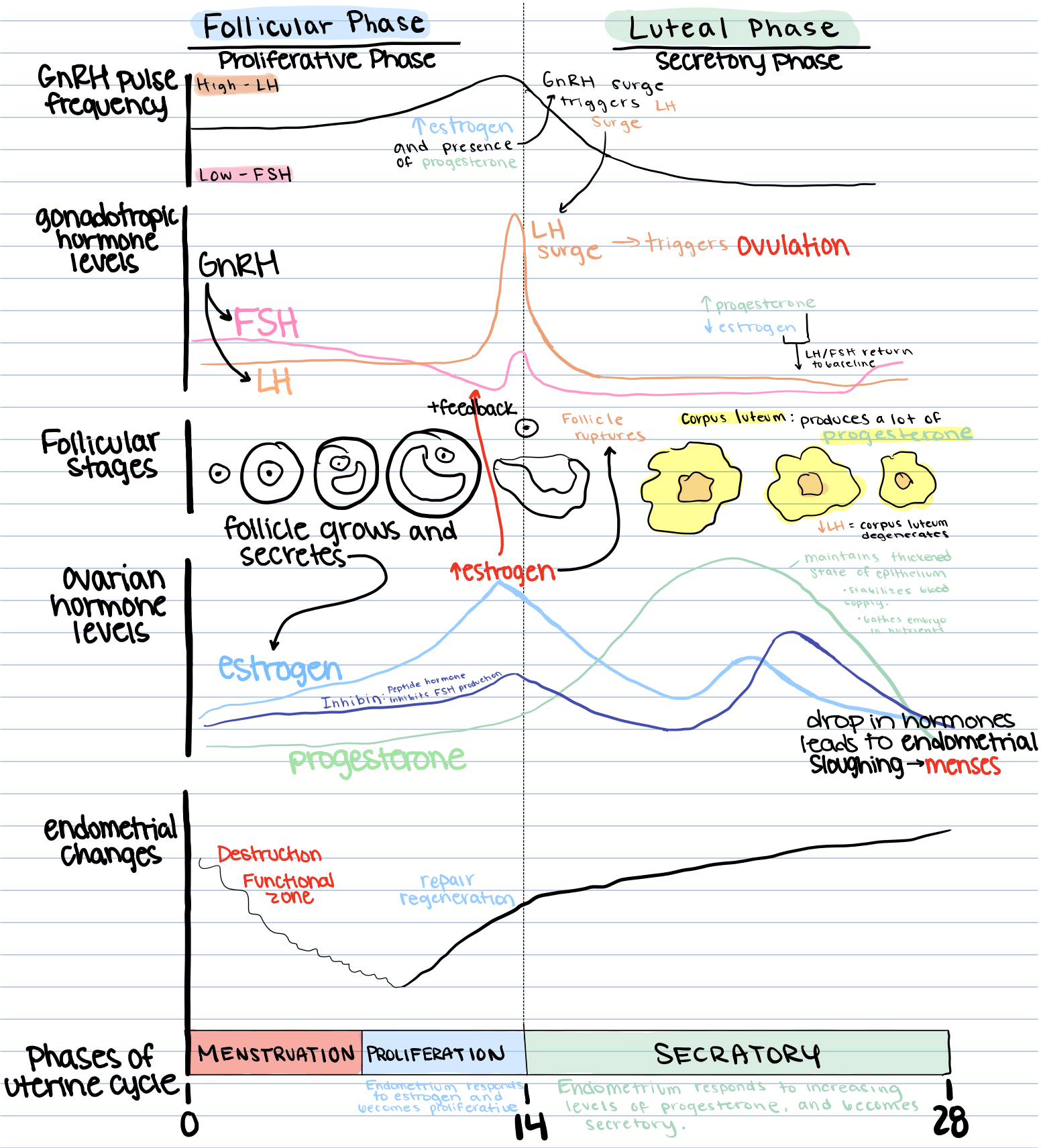
1+ → ↓interest, ↓concentration, lethargy, appetite change, insomnia, physical (pain, bloat)

dx 5+ sx in week before menses

tx SSRI/SNRI, BC, diuretics → GnRH agonists (leuprolide, goserelin) → ovariectomy as last resort

NORMAL PHYSIOLOGY

Menstrual Cycle: 20-35days. Average = 28 days



INFECTIONS

EOR EXAM TOPIC LIST:

- cervacitis
- PID
- lymphogranuloma venereum
- chancroid
- syphilis
- vaginitis (BV, trich, atrophic, candida)

CERVACITIS inflammation of cervix

	GONORRHEA	CHLAMYDIA	HERPES	HPV
epi		most common		
patho	gram⁻ diplococci	gram⁻ ovoid, obligate intracellular	DNA virus	HPV 6/11
sx	mucopurulent discharge; disseminated → tenosynovitis, arthritis, dermatitis	urethritis, clear discharge	prodrome: pruritis, burning, tingling; vesicles on erythy. base; ↳ requires c-section	genital warts
dx	NAAT	NAAT distinguish on microscopy	culture/PCR; tzanck → multi-nuc. giant cells	biopsy to confirm
tx	ceftriaxone 500 mg IM once	doxy 100mg PO BID x 7d (azithro x1 if hx noncompliance)	valacyclovir 1000mg BID	sx mgmt → TCA, imiquimod, surgery

PID

- patho: gonorrhea/chlamydia
  - infection ascends from cervix
- sx: cervical motion tenderness, pelvic pain, fever
  - comp → infertility
- dx: Clinical: tenderness + CMT and either temp >38°C, WBC >10,000, or pelvic abscess
- tx: ceftriaxone + doxy ± metro or cefoxitin + probenecid
  - If inpt → IV cefotetan/cefoxitin + doxy or IV clinda + gent

LYMPHOGRANULOMA VENEREUM

- epi: uncommon. MSM, HIV, HCV
- patho: ulcerative disease of genital area due to: Chlamydia trachomatous
- sx: 1° → painless genital ulcers
  - 2° → tender inguinal/femoral LAD
  - late → strictures, fibrosis, fistulae
- dx: serology is definitive or identify specimen
- tx: doxy 100 mg PO BID x21d

CHANCROID

- epi: rare in developed world
- patho: Haemophilus ducreyi gram⁻ rod
- sx: painful genital ulcers w/ marked LAD (inguinal)
- dx: gram stain, culture, biopsy
- tx: ceftriaxone 250mg IM or azithromycin 1g PO once

SYPHILIS

- epi: risky behaviors → drug use
- patho: treponema pallidum
- sx: 3 phases w/ 3wk incubation
  - 1° → chancre (painless ulcer)
  - 2° → rash on palms/soles
  - 3° → CNS changes or gummas
- dx: RPR/VDRL. Confirmed w/ FTA-ABS (treponemal ab-absorption)
- tx: benzathine penicillin
  - IV penicillin if late or congenital
  - alt → doxy

VAGINITIS

	Candidiasis	Bacterial Vaginosis	Trichomoniasis	Atrophic
epi	MC vaginitis		sexually active women	post-menopausal
patho	DM, OCPs, abx	Gardnerella	trichomonas vaginalis	↓estrogen
sx	clumpy discharge, pruritis, dysuria	frothy, gray, fishy-smelling discharge	green/gray discharge; "strawberry cervix" on PE	dyspareunia, UTI, dry, irritated
dx	KOH → hyphae; pH <4.5 - acidic	"clue cells", pH >4.5 + whiff test ↳ basic -	Wet mount → pear-shaped protozoa w/ flagella	Vaginal exam → thin, pale mucosa
tx	fluconazole 150 mg PO x2	metronidazole; alt → Clindamycin	metronidazole 2g PO once	topical estrogen oral if not contrai.

NEOPLASMS

EOR EXAM TOPIC LIST:

- Breast Cancer
- Cervical carcinoma
- Cervical dysplasia
- Endometrial cancer
- Ovarian neoplasms
- Vaginal/vulvar neoplasms

BREAST CANCER
most common malignancy in women

epi menarche <12 yo, menopause >52 yo

patho ↑estrogen exposure. Most commonly infiltrating intraductal carcinoma

sx immobile, irregular breast mass. Nipple retraction, bloody discharge

dx mammography → MRI → biopsy (FNA → excisional) ↱ if >35yo

tx mastectomy/ lumpectomy → radiation ± chemo. Tamoxifen, aromatase-i, monoclonal ab

CERVICAL CARCINOMA (squamous)

epi postmenopausal. Multiple partners, early intercourse/pregnancy, HPV+, smoking

patho 80% are squamous cell
HPV 16, 18, 31, 33

sx abnormal uterine bleeding
Post-coital bleeding, discharge, pain

dx friable, bleeding cervical os
definitive - biopsy (lesion or colposcopically)

tx resect and/or chemo+radiation
(stage 1) (stage 2+)

CERVICAL DYSPLASIA

screening → pap smear starting at 21 yo
21-29 yo → ONLY cytology x3yrs
30+ yo → cytology + HPV x5yrs
high risk → annual screening
discontinue at 65 or after hysterectomy

tx ASCUS + require reflex HPV testing
ASCUS/LSIL → HPV testing → if ⊕ → colposcopy
↳ if ⊖ → retest in 1 year
HSIL/CIN2,3 → LEEP/cryotherapy or cone
(outside cervix) (inside)
SCC → resect and/or chemo/radiation

ENDOMETRIAL CANCER

epi post-menopausal (adenocarcinoma)
most common gyn malignancy

risk factors: obesity, nulliparity, early menarche, late menopause, DM, hx cancer

patho most often adenocarcinoma

sx abnormal uterine bleeding

dx endometrial biopsy (suction curette)

tx total hysterectomy, bilateral salpingo-oophorectomy

OVARIAN NEOPLASM (epithelial)

epi 40-60 yo

↑risk: nulligravidity, endometriosis, late menopause
↓risk: multiparity, OCP use, breastfeeding

patho 90% epithelial tumors

sx ascites, abdominal pain

dx transvaginal US → biopsy
- serum tumor marker: Ca125

tx surgical excision ± chemo, radiation
↳ hysterectomy w/ bilateral salpingo-oophorectomy

VAGINAL CANCER (squamous)

epi rare. peaks 60-65yo

patho squamous (HPV), adeno (exposure)

sx AUB or menstrual changes

dx biopsy

tx radiation

VULVAR CANCER

peaks at 50 yo

squamous and melanoma

vaginal pruritis

acetic acid → biopsy

vulvectomy

BREAST DISORDERS

EOR EXAM TOPIC LIST:

- mastitis
- breast abscess
- fibrocystic disease
- breast fibroadenoma

MASTITIS

epi breastfeeding women

patho regional breast infection from skin/oral flora of breastfeeding baby
- nipple trauma → clogged milk ducts
- congestive (bilateral) vs. infectious (uni)

etiology: S. aureus enters erosion or cracked nipple

sx Unilateral erythema, tenderness, in single quadrant, fever, chills

dx clinical

tx warm compress, analgesics

abx → dicloxacillin, cephalexin, erythromycin
- alt → clindamycin

BREAST ABSCESS

epi progression from mastitis

patho infection within breast.

etiology: S. aureus

sx breast pain, swelling, fever, chills w/ fluctuant mass
- same as mastitis w/ addition of localized mass and systemic signs of infection

dx Clinical ±ultrasound

tx I/D +antibiotics

abx: nafcillin/oxacillin or cefazolin PLUS metro
- alt → vancomycin

Continue breastfeeding

FIBROCYSTIC DISEASE

epi

patho benign condition in which breasts feel lumpy. Fluid-filled cysts

sx bilateral, well-circumscribed, round, wax and wane w/menses → ↑size and painful

dx breast cyst aspiration plus US or mammogram
- Straw-colored fluid

tx NSAIDs, heat/ice
- OCPs w/ low estrogen, potent progestin

most resolve spontaneously
- FU US and clinical eval in 2-4 mon

BREAST FIBROADENOMA

epi Most common noncancerous tumor
- young women (15-35 yo)

patho ↑breast tissue sensitivity to estrogen

sx Small, firm, painless, well-circumscribed, round, mobile. "Rubbery". Size change w/menses

dx diagnostic mammogram w/ US

indeterminant → FNA w/ pathology

<25yo → biopsy

tx avoid trauma, bra w/ support
- OCPs ↓severity of cyclic changes in tissue
- ↓coffee, tea, chocolate

STRUCTURAL ABNORMALITIES

EOR EXAM TOPIC LIST:

- cystocele
- rectocele
- uterine prolapse
- ovarian torsion

CYSTOCELE

epi risk factors → childbirth, constipation, violent coughing, heavy lifting

patho bulge of bladder into the vagina
- anterior vaginal prolapse of posterior bladder wall

sx pelvic pressure, feels like bladder hasn't fully emptied
- concurrent incontinence
- worse w/ valsalva
- better w/ redundancy

dx POP-Q - quantifies extent and location of defect. US, MRI
- voiding cystourethrogram

tx flexible ring pessary to support bladder or surgical repair w/ mesh augmentation

prophylaxis → Kegels, estrogen

RECTOCELE

epi risk factors → childbirth

patho herniation of rectum into posterior wall of vagina

sx pelvic pressure and bowel sx (constipation, straining, incomplete emptying)
- soft bulge in vagina, low back pain

dx POP-Q plus colonoscopy to rule out cancer ± rectal studies

tx Kegel exercises, pelvic floor retraining, bowel regimen, pessary, repair w/ mesh

UTERINE PROLAPSE

epi caucasian women, after L/D, chronic cough

patho uterus descends toward/into vagina due to weak pelvic floor muscles and ligaments

sx vaginal fullness, pain worse late in day (after prolonged standing)
- relieved by lying down

1° → btwn normal, ischial spine

2° → btwn ischial spine, hymen

3° → cervix within hymen

4° → entirely through hymen

dx pelvic exam
- speculum or bimanual

tx only if symptomatic

1° or 2° → pessary

3° or 4° → hysterectomy w/ repair of pelvic support structures and vaginal suspension

OVARIAN TORSION

epi mass >5cm, pregnancy, reproductive age, induced ovulation, hx torsion

patho rotation of ovary at pedicle to such a degree as to occlude ovarian artery/vein

sx sudden, sharp, unilateral lower abdominal pain. Usually accompanied by nausea/vomiting. Fever, vaginal bleeding.

dx abdominal US w/ doppler flow

gold standard → laparoscopy

tx laparoscopic surgery to uncoil ovary

OTHER

EOR EXAM TOPIC LIST:

- contraception
- infertility
- urinary incontinence
- endometriosis
- leiomyoma
- ovarian cyst
- sexual assault
- spouse/partner neglect

ENDOMETRIOSIS

epi 25-35 yo

patho endometrial glands outside uterus
- ovaries, tubes, ligaments

sx dyspareunia, dyschezia, dysmenorrhea, pain before menses

PE → fixed, retroflexed uterus

dx laparoscopy is definitive

tx NSAIDs, OCPs 1st line
→ GnRH agonists, danazol
→ hysterectomy

LEIOMYOMA

epi black women, fam hx

patho benign SM cell tumors

sx pain, pressure, ↑girth
menstrual changes

PE → enlarged, mobile

Intramural (within uterine wall) is most common

dx US and/or MRI → mass

tx NSAIDs, OCPs, danazol, leuprolide. Definitive → hysterectomy, myomectomy, ablation

OVARIAN CYST

epi follicular most common

patho functional (menstrual variant) or nonfunctional (neoplastic)

sx functional → 2-3 cm, clear/serous w/ smooth internal lining.
Non-functional → >10cm, irregular, septations

dx transvaginal US ± MRI
- aspiration is definitive

tx most resolve. If >5cm → annual US
If >7cm → MRI or surgical assessment
If persistant → surgical biopsy

CONTRACEPTION (fail rate)

Barriers: STI protection, hormones contraindicated
- male (20%), female (21%), diaphragm (15%)

Spermicides: destroys sperm, ↑HIV risk (27%)

OCPs: prevents ovulation by inhibiting LH surge, thickens cervical mucus, thins endometrium (0.3% - 9%)
- improves dysmenorrhea, controls cycle, improves acne, protects against ovarian/endometrial cancer

Contraindications: smokers >35, clot hx, breast cancer, migraine w/ aura Side effects: headaches, TBP

Progestin Only Pill: same failure rate
- safe in lactation, no estrogenic side effects, ↓cancer risk. Slightly less effective

Transdermal Patch: same failure rate
comparable efficacy. Change weekly

Nuvaring: insert on day 5 of cycle for 3 weeks. Remove for week → replace (7%)

IUD: copper (0.8%) replaced every 10 years
progestin-only (0.2%) replaced every 3-5yrs

Emergency: levonorgestrel within 3 days and Ulipristal within 5 days (20%). Copper IUD w/in 5d.

Depo-Provera: long-acting progesterone injection (5%)

Nexplanon: long-acting progesterone implant (0.1%)

Sterilization: tubal ligation (0.5%), vasectomy (0.15%)

INFERTILITY

inability to conceive within 12 months of unprotected intercourse

Primary: in absence of previous pregnancy

Secondary: after previous pregnancy

Causes: 65% female, 20-40% male, 15% unknown
- Anovulation (amenorrhea, AUB) most common
- tubal disease, male factor, multifactorial

Diagnosis: PAP, hormones, US, semen analysis
Labs → TSH, prolactin, LH, FSH
If progesterone <3 during lutal phase → anovulation

Last resort → hysterosalpingogram, laparoscopy

Treatment: underlying cause. Clomiphene to hyperstimulate ovulation. Metformin (PCOS). Bromocriptine

SEXUAL ASSAULT

SPOUSE/PARTNER VIOLENCE

URINARY INCONTINENCE

OBSTETRICS

PRENATAL CARE

NORMAL PREGNANCY

Uterus ↑size, strength, volume, stretch, soft
Cervix mucus plug, ↑vascularity, hyperplasia
Placenta embryo attaches uterus
Vagina ↑vascularity, distensibility. Leukorrhea
Breasts ↑size, nodularity, sebaceous gland activity
CVS ↑HR, SV, CO but ↓BP. Mild hypertrophy. ±S3
Heme ↑volume, WBC, clotting factors, RBC (w/iron supp)
Pulm ↑oxygen consumption. Hyperventilation.
GI ↓peristalsis → N/V, GERD, constipation, cholestasis
GU ↑frequency, nocturia, stress incontinence in 1st/3rd tri. ↑GFR. Physiologic hydronephrosis
Skin hyperpigmentation, ↓connective tissue strength → stretch marks
MSK abd distension, ↑joint mobility, high bone turnover, diastasis recti, widening of pelvis
Endo ↑PTH. Physiologic hypercortisolism. "Diabetogenic state" → ↑need for glucose/insulin. ↓TSH, FSH, LH, oxytocin
Nutrition +300 kcal/day, ↑weight 25-35 lbs 600 mcg folic acid, 1-1.3g Ca, 60g protein, 27mg iron

PRENATAL CARE

Pregnancy Diagnosis: Urine hCG (1-2wks)
Ultrasound → most accurate to detect fetal size
- gestation sac (5w), fetal image (6-7w), HR (8w)

Sx → amenorrhea, ↑urine frequency, nausea, breast engorgement, Chadwicks sign

1st tri: visit every 4wks
evaluate → weight, BP, edema, fundal height, urine
Screening → cell free fetal DNA
first tri screen
CVS IF >35yo, ↑risk, abnormal screen
risks → miscarriage, amnio leak, infection

2nd tri: visit every 4wks
Screening → Quad (AFP, hCG, estriol, inhibin)
amnio (16-20w) if >35yo or hx indicates
other → document movement (17w), 1hr GTT (24w)

3rd tri: visit every 2wk, then every wk after 36
tests → UA, blood glucose
preterm sx → bleeding, contractions, PROM
rhoGAM (28-30w), GDM (28-32w), GBS (35-37), GC/CT if indicated (36-40w)

FETAL POSITION

Fetal Size: head most critical
Cephalopelvic disproportion → dystocia
macrosomia associated w/ dystocia, injury
↳ >4500g or ≥90th percentile

Fetal attitude: relationship of fetal parts to one another
Full flexion - chin on chest, back rounded, arms/legs flexed, smallest diameter of head an inlet

Fetal Lie: fetal spine relative to mom
longitudinal → parallel (ideal)
transverse → perpindicular
oblique → fetus at slight angle

Fetal Presentation: presenting part enters inlet first

Cephalic: head first
- vertex → head completely flexed onto chest. occiput presenting. optimal for delivery
- brow → partially extended. Sinciput presenting.
- face → head hyperextended. Face presenting.

Breech: head up
- frank → hips flexed, knees extend.
- complete → hips/knees flexed. Bottom presents
- incomplete → hip(s) slightly flex. Feet present.
- shoulder → transverse lie. Shoulder presents.

LABOR / DELIVERY

NORMAL LID

Uterine contractions → cervical changes → delivery of baby/placenta

- begins at 37-42wk gestation, duration varies w/ parity

Premonitory Signs:

1. Cervical changes - remodeling of cervix → softening → mucus plug expulsion → "bloody show"
2. False labor - no cervical change, pain may ↓ w/ ambulation, irregular, intermittent

First Stage: onset of labor to full dilation (10cm)

- early → 0-3cm. 8-12h. Mild, irregular contractions (30s) x5-30m. 0-3cm dilation. 0-30% effaced
- active → 3-7cm. 3-5h. Regular contractions (≥1m) x3-5m. 3-7cm dilation. 80% effaced.
- transition → 7-10cm. 30m-2h. Intense contractions x1.5-2m. 7-10cm dilation. 100% effaced.

Second Stage: fully dilated to birth of infant (pushing stage)

- Power → frequency, duration, intensity of contractions
- Passenger → fetal size, attitude, lie, presentation
- Passage → route through bony pelvis.
  - size/type of pelvis: gynecoid (optimal), android (distocia), anthropoid (favorable), platypelloid (non-favored)
  - cardinal movements: descent → flexion → internal rotation → extension → restitution → expulsion

Third Stage: delivery of infant to delivery of placenta

Delivery of placenta, umbilical cord, fetal membranes.
↳ Uterus contracts firmly → placenta separates from uterine wall

Fourth Stage: physiological adaptation to blood loss. Initiation of uterine involution.

APGAR

Immediate Assessment of Infant at 1 and 5min postpartum

Sign	2	1	0
Activity (muscle tone)	active	arms/legs flexed	absent
Pulse	>100 bpm	<100 bpm	absent
Grimace (reflex irritability)	sneeze, cough, pull away	grimaces	no response
Appearance (skin color)	normal	abnormal extremities	cyanotic all over
Respirations	good, crying	slow, irregular	absent

MULTIPLE GESTATION

epi 1 out of every 80 births

patho based on genetic relationship of offspring

- Monozygotic → splitting of singly zygote → identical
- Dizygotic → two zygotes → fraternal
- Polyzygotic → multiple fetuses, multiple zygotes

dx first screening ultrasound

other clues → ↑AFP, extra fetal heart tones, fundal height > dates

tx frequent visits to monitor/prevent maternal complications. Try to deliver >34wks.

comp → spontaneous abortion, preterm, preeclampsia, anemia.

PREGNANCY COMPLICATIONS

EOR EXAM TOPIC LIST:

- abortion
- ectopic pregnancy
- incompetent cervix
- gestational DM
- pre/eclampsia
- rh incompatibility
- placental abruption
- placental previa
- GTD (molar preg.)

ABORTION

rf smoking, BMI <18.5 or >25

patho expulsion of products of conception <20 wk gestation

sx vaginal bleeding, pain in back/belly

dx B-hCG, US, placentation

tx expectant (<13 wk), mifepristone/misoprostal (>13wks)

Surgical → D/C (1st tri), dilation and evacuation (2nd tri)

ECTOPIC PREGNANCY

epi hx, past surgery, IUD, smoking, salpingitis → tube damage

patho occlusion of tube second. to adhesions MC

sx abd pain, bleeding, mass

dx BhCG >1,500, no fetus in utero

US → ring of fire (vascularity)

tx methotrexate if HCG <5000, <3.5 cm, no heart tones

emergent → lap. salpingostomy

INCOMPETENT CERVIX

epi hx cervical insufficiency/surgery (procedures for dysplasia), anatomic abnormalities, DES exp.

patho premature dilation → recurrent 2nd tri miscarriages

sx painless dilation (>2cm) and effacement. Bleeding/discharge

dx transvaginal US → funneling
- cervical length <25mm before 24w

tx cervical cerclage placed at 12-16w, removed at 36-38 wks

GESTATIONAL DM

sx asymp. Comp → macrosomia.

dx random glucose during first prenatal visit → repeat at 24-28 wk

1hr GTT → >130 mg/dL → 3hr GTT

dx is level >2: fasting >95, 1hr >180, 2hr >155, 3hr >140

tx insulin w/ goal glucose <95
- NPH/regular 2/3 AM 1/3 PM
- monitor blood glucose

Comp → dystocia, hypoglycemia, ARDS, cardiac abnormalities

PRE/ECLAMPSIA

Mild: 140/90 - 160/110, +1 Protein, edema

Severe: >160/110, 3+ protein, vision change → hospitalized

HELLP → hemolysis, ↑liver enzymes, ↓platelets

Eclampsia: +seizures/coma

dx HTN + proteinuria

tx delivery is cure. MgSO4 seizure prophylaxis.

BP → methyldopa, labetalol, nifedipine

If severe → hydralazine

rH INCOMPATIBILITY

epi Rh- mom, Rh+ child

patho mother may develop antibodies against infant blood

sx 1st pregnancy unaffected

dx ABO blood group, Rh-D type, indirect erythrocyte Ab screen, indirect Coombs test

tx Rhogam at 28 wks, within 28hrs of delivery, during any uterine bleeding in pregnancy

Comp → hydrops fatalis

PLACENTAL ABRUPTION

epi trauma, smoking, HTN, cocaine

patho premature separation of placenta from uterine wall

sx painful bleeding, severe abd pain, strong contractions

dx Clinical - blood stained fluid

US → retroplacental blood collection

tx delivery of fetus/placenta

expectant if small

PLACENTA PREVIA

epi C-section, twins, ↑age

patho placenta covers all/part of cervical os

sx painless bleeding

Comp → preterm/PPROM, ↓growth, congenital anomalies

dx transvaginal US
- NO pelvic exam

tx C-section preferred
- strict pelvic rest

GTD

rf <20 yo or >35 yo and previous molar pregnancy

patho proliferation of placental cells

sx ↑B-hCG, hyperemesis, size-date discrepency

dx HCG >100,000

US → "snowstorm"/"swiss cheese"

tx uterine evacuation via suction curettage

L/D COMPLICATIONS

EOR EXAM TOPIC LIST:

- breech position
- dystocia
- PROM
- preterm labor
- prolapsed umbilical cord
- fetal distress

FETAL DISTRESS

>160 bpm for 10min → fetal tachy. <120 bpm for 10min → fetal brady

Nonstress Testing → no fetal heart rate accelerations or <15 bpm ↑ lasting <15s →

Contraction Stress Testing → measures fetal response to stress

⊕ if repetitive late decelerations in presence of 2 contractions in 10min

↳ prompt delivery

APGAR → <3 is critically low. 4-6 is fairly low.

PROM

patho rupture of membrane at ≥37 wk gestation prior to onset of contractions

sx Sudden "gush" of fluid

dx fluid pooling, nitrazine test (blue), fern pattern crystallization when dry

tx if >34wk → labor.

32-34w → check lungs → induce

<34wk → monitor, steroids, abx

PRETERM LABOR <37 WKS

epi smoking, cocaine, infection, malformations, cervical incompetence, low pregnancy weight

sx uterine contractions which occur more often than every 10min or leaking of fluid

dx fetal fibronectin in secretions

- PAMG-1 - predict spontaneous delivery
- OB US - assess cervix (↑risk if length <25cm at 24wks)

tx tocolytics delay onset of labor (24-48hrs)

- NSAIDs, CCBs (nifedipine)

corticosteroids induce fetal lung maturity

PROLAPSED UMBILICAL CORD

obstetric emergency

rf malpresentation and rupture of membranes

patho umbilical cord comes out of uterus with or before fetus presents

sx fetal hypoxia, brain damage, death

dx fetal heart tracing → sudden, severe↓ that doesn't resolve. Mod-severe variable decelerations

tx immediate c-section preferred. Alt → manual elevation of fetus, mom in knee-to-chest

BREECH POSITION

epi 3-5% of pregnant women. Prevalence ↓ w/ gestational age:

- 25% if <28w, 7-16% if 32wks, 3-4% at term

patho frank, complete, incomplete

sx born bottom first

dx PE w/ US confirmation

tx external cephalic version at/near term → trial of vaginal delivery.

If refractory → cesarean delivery

DYSTOCIA

baby does not exit pelvis due to being physically blocked

patho abnormal labor progression due to:

- Small pelvis, macrosomia, birth canal defect

abnormal positioning → shoulder dystocia

sx head delivers then suddenly retracts against maternal perineum

dx PE ↳ turtle sign. US predict position

tx change mothers position. If obstructed → C-section or vacuum → surgical opening

- Shoulder → McRoberts maneuver

POSTPARTUM CARE

EOR EXAM TOPIC LIST:

- endometritis
- puerperium
- perineal laceration/episiotomy care
- postpartum hemorrhage

PUERPERIUM or postpartum period (generally lasting 6 weeks)

Immediate → first 24hrs when acute postanesthetic/delivery complications may occur
Early → extends until first week postpartum
Remote → period of time require for involution of organs and return of menses (~6 wks)

Uterine involution: at end of first wk → ↓ to size at 12wk. Palpable at symphysis pubis
Placental implantation site: contracts after delivery. Discharge begin as **lochia rubra**
Pelvic organs: **cervix** gradually closes (1cm at 1wk). **Vagina** returns to antepartum state by wk 3. Involution of musculature takes **6-7 wk**. Urinary stasis may persist **12 wks**.
Management: **2-4d** of hospitalization. Home nurse visit on **4th** postpartum day
activity → as soon as tolerated. Diet → regular (+500 cal/day). Sex → when bleeding diminished.

ENDOMETRITIS inflammation of endometrium

epi C-sections, PROM, vaginal delivery, D/C, pelvic exam
patho infection from bacteria that normally live in lower genital tract (or outside body/STI)
causes → childbirth, gyn procedures, IUDs, sexually transmitted
sx fever, low abd pain, abnormal bleeding/discharge
dx Clinical (± biopsy) → fever, tachy, pain, 2-3d post C-section/abortal
If chronic → plasma cells in endometrium. If acute → neutrophils
tx Post childbirth → clinda + gent. Due to STI → doxy + ceftriaxone

PERINEAL LACERATION

epi most common form of obstetric injury → 85% of pregnant women
patho tear of skin and other soft tissue structures that separate vagina from anus
sx 1st degree → perineal skin and vaginal mucosa
2nd degree → injury to perineal body
3rd degree → through the external anal sphincter
4th degree → injury through the rectal mucosa
→ surgical repair
tx heal naturally or surgical repair

POSTPARTUM HEMORRHAGE

epi main cause of maternal morbidity/death
patho 4Ts: tone (uterine atony) → boggy, enlarged uterus → fundal massage and meds (Oxytocin, misoprostal)
trauma precipitous labor, operative vaginal delivery → >2cm → surgery
tissue (retained placenta) → may require hysterectomy
thrombin (coag disorders) → consult heme
dx loss of >500mL of blood in first 24hrs after vaginal delivery **OR**
loss of 1,000mL after C-section

PREGNANCY TIMELINE

1ST TRI

Cell free fetal DNA (trisomy 13, 18, 21)

First tri screen (11-13w) CVS (9-12w)
- plasma protein A
- nuchal translucency

2ND TRI

Amniocentesis (14-20w)

Quad screen (15-20w)
- AFP
- estriol
- hCG
- inhibin A

Glucose challenge test

1hr 50g → >139 → 3hr 100g → fast >95, 1hr >180, 2hr >155, 3hr >140

3RD TRI

GBS Screen

Prevent fetal sepsis/meningitis

1
2
3
4
5 → gestational sac on US
6
7 → fetal image detected on US
8 → cardiac activity on US
9
10
11 → labs: CBC, blood type, UA,
12 screenings: rubella, syphilis, GC/CT, hep b, HIV, tb, thyroid, genetic, varicella, hep C
13
14
15
16 → maternal serum alpha fetal protein
17 → document movement
18
19 → anatomy scan
20
21
22
23
24
25
26
27
28 → RhoGAM if indicated
CBC, glucose test, syphilis screen, HIV ab
29
30
31
32 → fetal non-stress test if high risk
33
34
35
36 → determine fetal presentation
37
38
39 → fetal non-stress test
40

Eligible for medically induced abortion (methotrexate/misoprostol)