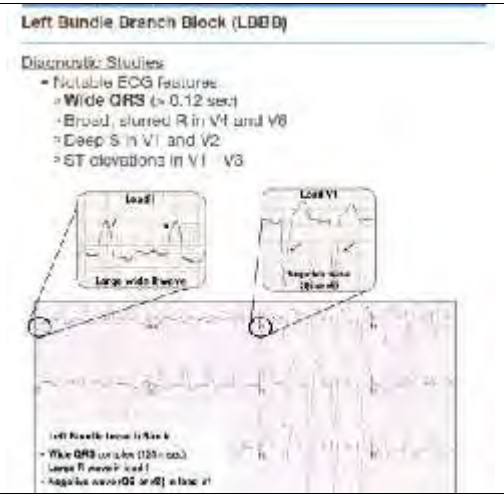
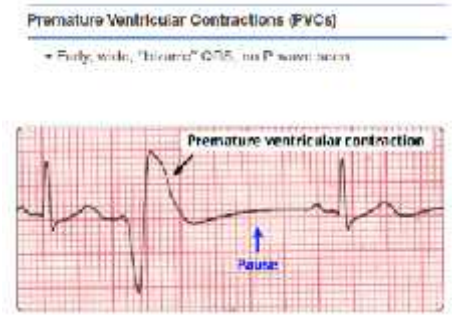
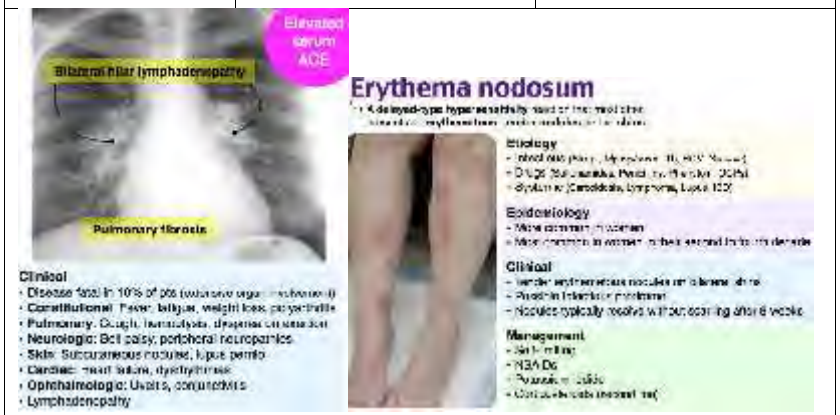
PANCE Quicknotes: Overview of Medicine

KEY:

- disorder categories (disorder systems as organized by PANCE blueprints) = **BOLD BLACK AND CAPITALIZED**
- disorders
  - **red disorders** = PANCE blueprint disorders
  - **bold, black disorders** =NOT listed on PANCE blueprint disorders, falls under a category or is something we have learned in PA school or a disorder tht keeps popping up on practice questions so its probs important
- colors coded
  - BLUE: treatment/medications, usually mainstay treatment
  - black = additional treatments, information, notes, etc.
  - dark red, hella bold pink, other really bold shades of purple/red/pink that catch your eye (bright green, etc) = important information, highlight if you really think its that great
  - orange = categories
    - green = subcategories
- shorthand
  - DOC/1st = drug of choice/ 1st line tx
  - TOC = test of choice, treatment of choice
  - MC = most common
  - x= not, no
  - w= with
  - rx = drugs
  - stnd = standard

L BBB		QRS > 0.12s QRS predominantly negative in Vs uprise QRS = lead 1 + V6 ; QRS may be notched 	
Paroxysmal supra-ventricular tachycardia	reentry AV tachycardia common = elderly w/ underlying heart dz 	palpitations, anxiety rate = 150-180 bpm atrial activity typically NOT noted 	1st = vagal maneuver drugs - adenosine (DOC) - verapamil - B-blocker
Premature beats		PVC: Early wide **bizarre QRS**, no p wave seen PAC: **abnormally** shaped **P wave** PJC: **Narrow QRS** complex, **no p wave** or inverted p wave	
PVC	may originate anywhere in ventricle 	QRS 0.12s or longer (can resemble LBBB or RBBB)	
PVC bigeminy			
PVC trigemini			

Restrictive Disorders: ↓expansion of lung parenchyma; difficulty getting air INTO lungs→ overall ↓ **lung volumes and capacities; ↓FEV1 and ↓FVC and near normal FEV1:FVC ratio**

Sarcoidosis 	Multisystemic, AUTOIMMUNE inflammatory **granulomatous (small nodules)** disorder of unknown etiology **non-caseating granulomatous inflammation in affected organ (**lung[mc], skin[2nd mc], nodes, eyes, liver**)** **QUICK HIT: non-caseating granulomas = Crohn's, berrylosis, sarcoidosis,**	- N americans, AA, F, 20-40 y/o - Disordered *immune* regulation in *genetically* predisposed ppl exposed to certain *env't* antigens -Exaggerated T cell response, accumulation of T cells = granuloma formation → can lead to fibrosis (granulomas take up space & disrupt normal structure and fxn of tissues they form in)	- All organs affected but **lung** MC - 50% asx -common initial presenting sx= fever, weight loss, arthralgia, erythema nodosum 1) Pulm[MC manifestations]: Dry cough, dyspnea, CP 2) Lymphadenopathy: hilar nodes 3) Skin[2nd MC]: **erythema nodosum** (b/l red subcutaneous nodule on anterior legs; **painful**), **lupus pernio** most specific exam finding (pathognomonic- violaceous raised plaques and nodules and discoloration of nose, ear, eyes, cheek, and chin that resembles frost bite), maculopapular rash  4) Parotid enlargement 5) Eye: **uveitis** (blurred vision, photophobia, floaters, etc.), conjunctivitis (tearing, erythema)...can develop **blindness** so ophthalmic exam needed! 6) Heart: arrhythmias, cardiomyopathies 7) Rheumatologic: arthralgias, fever, malaise, wt loss 8) Neuro: CN palsies, diabetes insipidus, hypothalamic/pituitary lesions Lofgren syndrome = acute sarcoidosis TRIAD 1) hilar adenopathy 2) erythema nodosum 3) polyarthralgia (+/- migratory)	Dx made w- 1) compatible clinical/radiological findings, 2) NCGs, 3) exclusion of other dz Biopsy: **noncaseating granulomas (NCG)**= composed of T helper and inflammatory cells *usually you bx a peripheral pulmn lesion or use fiber optic bronchoscopy/endobronchial lung bx for central pulmonary lesions CXR: **symmetric B/L, hilar lymphadenopathy** (hilar LAD= sarcoidosis, histoplasmosis, TB, silicoisis, berrylosis), **pulmn fibrosis**, R paratracheal adenopathy, diffuse reticular infiltrates, interstitial lung dz (reticular opacities +/- ground glass appearance), fibrosis (stage 4) CT scan[usually ordered after suspicious xray findings], Gallium scan: increased uptake in affected areas (panda sign- parotid uptake), Bronchealveolar lavage- to r/o infx causes, see ↑CD4 and ↓CD8 PFT: restrictive pattern→ FEV_1/FVC: normal **FVC: normal to low** Lung vol (VC, RV, RLC, FRC): low Labs: **↑ACE** 4x norm (secreted by granulomas), **HYPER-calcemia** (and hypercalcuria), eosinophilia, cutaneous anergy (decreased skin reactivity to common skin allergens due to peripheral immune suppression b/c central immune system activation) leukopenia, elevated ESR,	1) Observation- most pts spontaneously remit 2) **Oral corticosteroids** (TOC- reduces granuloma formation and fibrosis, cause ACE levels to fall w clinical improvement); 2nd line = immunomodulators (usually if no improvement in ~6 mo); last line =lung transplant methotrexate (SE: ↑LFT= liver) ACE-I = for periodic HTN f/u = yearly exams minimum -echo, EKG = yearly -serial PFTS = assess dz progression, guide tx -chest xray -labs complication= pulmonary fibrosis #1 cause of death
Idiopathic Pulmonary Fibrosis "Idiopathic fibrosis interstitial pneumonia"	Chronic progressive interstitial **scarring (fibrosis)** from persistent inflammation, leading to loss of pulmonary fxn w restrictive component -scar tissue formed by excess collagen → progressive loss of lung tissue → less surface area for gas exchange	- **Unknown cause** - Men 40-50 y/o RF: **amiodarone**, nitrofurantoin, sarcoidosis MC interstitial lung dz	**-Dyspnea gets worse over time, hard to take deep breath** **-non-productive** cough PE- **clubbing** of fingers (hypoxemia), inspiratory crackles  image: honeycombing above	CXR- progressive **fibrosis** CT- **diffuse patchy fibrosis**, honeycombing/ground glass (diffuse reticular opacities) Biopsy: **honeycoming** PFTs- restrictive pattern [↓ lung volume, norm/↑ FEV1/FVC ratio] r/o other causes (ie rx [amiodarone], environmental/occupational exposure [silica, hard metal dust], smoking, viral infxn, XRT, GERD, genetics)	- Stop smoking -possible corticosteroid for inflammation - Oxygen therapy - **Lung transplant = only cure**

<table>
<tr><td></td><td>location = medial aspect in popliteal space

develops @ any age</td><td></td><td></td><td></td><td></td></tr>
<tr><td>meniscal/ ligament injury</td><td>ligament involved depends on mechanism of injury

meniscal injuries commonly associated w/ ligament injuries
<table><tr><td>meniscus/ligament</td><td>mechanism of injury</td></tr><tr><td>meniscus</td><td>twisting or HYPERflexion</td></tr><tr><td>medial collateral ligament</td><td>blow to lateral aspect of leg or lower thigh</td></tr><tr><td>lateral collateral ligament</td><td>blow to medial aspect of leg or lower thigh</td></tr><tr><td>anterior cruciate ligament</td><td>sudden deceleration or rotation</td></tr><tr><td>posterior cruciate ligament</td><td>external force on anterior aspect w/ knee flexed
OR
forced hyperflexion or hyperextention w/ varus/ valgus force</td></tr></table></td><td>cause = trauma</td><td>-presents w pain + effusion
-hemarthroses = common
-meniscal injury = joint line pain, effusion, locking/ popping
-ligament injury = popping of knee, inabililty to bear weight, swelling

drawer test = cruciate ligaments

lackman = ACL
pivot shift test = ACL

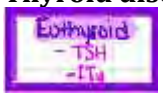
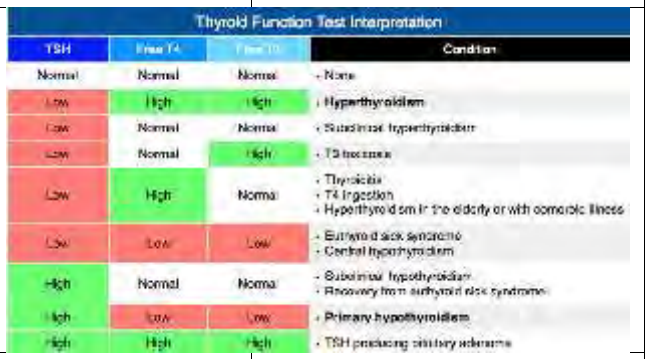
bulge test = effusion

Mcmurray= pt supine, knee flexed & externally (medial meniscus) or internally (lateral meniscus) rotated, then extended →pain = tear

apley = pt prone, knee 90 degree, axial loading w/rotation =causes pain = meniscal dz</td><td>MRI
physical exam</td><td>-knee immobilization
-crutches
-analgesics
-ortho consult</td></tr>
<tr><td>achilles tendon rupture</td><td></td><td>RF: floroquinolone drugs, older pts, deconditioned athlete</td><td>-pop or snap and sudden calf pain
-Thompson squeeze test = lack of plantar flexion with calf squeez</td><td></td><td>-posterior splint in plantarflexion
-ortho consult</td></tr>
<tr><td colspan="6">Upper extremity disorders</td></tr>
<tr><td>Fractures</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>shoulder fracture</td><td>clavicle = very common in pediatrics</td><td>cause= FOOSH (fall on outstretched hand)</td><td>-holds ipsilateral arm close to trunk</td><td>-check neurovascular status</td><td>-figure 8 or cradle sling</td></tr>
</table>

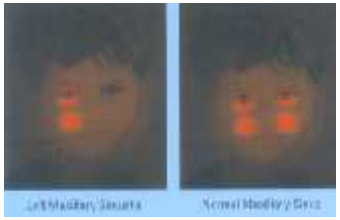
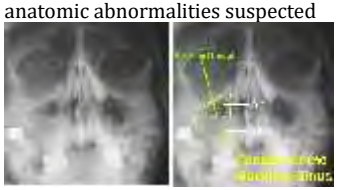
Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
		fissures/ abscesses" & extraintestinal manifestations (ex. oral ulcers)	- Complications: **fistula***HALLMARK, carcinoma (colon CA risk), malabsorption (gallstones, nephrolithiasis, B12 deficiency), abscess, obstruction, perianal disease	appearance, bx shows granulomas -endoscopy=same as colonoscopy - Barium enema: string sign: barium through narrowed area (inflamed/scarred) d/t TRANSMURAL strictures - Blood tests may show ↑ESR, anemia, and nutritional/'lyte imbalances - ASCA + (anti-saccharomyces cerevisea antibodies)	**SE: osteoporosis, ↑infxn weight gain, edema, cataracts - Immune modulators= **steroid sparing**- methotrexate, azathioprine, 6-mercaptopurine - Biologic agents (anti-TNF agents): infliximab, adalimumab, Crohns -uncomplicated crohn's dz= immunosuppressant tx -if ineffective or complications (perf, hemorrhage, toxic colitis, stricture, obstruction, refractory fistula, abscess, perianal dz unresponsibe to rx tx), intractable or fuliment dz, massive hemoorhage, CA ppx, colon CA= surgery - Surgery is NOT curative- colon segmental resection (reserved for tx complications like bleeding, abscess, or obstruction) **AVIODANCE of surgery is desired in crohn's dz (hx of recurrence) - x smoking (critical for reducing frequency and severity of attacks) - If malabsorption, supplements- vit B12, folate, vit D -anti—diarrheal agents NOT good option; may cause ileus in these pts Ulcerative Colitis - Surgery = curative- total proctocolectomy MC, colectomy **indications for surgery: toxic megacolon, colonic perf, extracolonic dz - FYI: ërisk developing colon cancer, so need screening colonoscopy w biopsies every 1-2 yrs, starting 8-10 yrs after dx -check q 1-2 years: vit D, B12
b) Ulcerative Colitis	- **Autoimmune inflammatory** disease of **mucosal surface** of **colon and rectum = LONGLASTING INFLAMMATION AND ULCERS** - **Disease is contiguous*** (not segmental) - More superficial than Crohn's (US =not transmural- limited to **mucosa** and submucosa = INNERMOST LINING of colon) - Mucosal ulcerations seen; anal involvement rare complications = **colon CA, toxic megacolon**	-RF: men, Young or old (15-30 or 50-70 y.o.) -↓risk in smokers **MC site = rectum**	- Abdominal pain (LLQ, colicky), mucous and **bloody diarrhea** (hematochezia), **tenesmus** (aka **fecal urgency; feelings of incomplete defecation**) -extracolonic sxs (erythema nodosum, primary sclerosing cholangitis, etc.) -**fever**, **weight loss**, fecal urgency/incontinence, **anorexia** -blood mucous containing diarrhea -**pus filled diarrhea** -exam= pale tachycardia, fever, distention, tenderness LLQ, heme +stools - Complications: toxic megacolon, colon cancer, anemia, sclerosing cholangitis	- **Flexible sigmoidoscopy (TOC in acute dz)**, minimize risk of perforation - **Colonoscopy + bx**- AVOID IN ACUTE DZ; continuous/ uniform inflammation w/o skip lesions, starting from rectum and extending proximally, **loss of haustra markings (sandpaper appearance)**, lumen narrowing, **pseudopolyps** - Barium enema: **stovepipe sign** (**lead pipe colon** =loss of haustral markings) - Note: avoid colonoscopy and barium enema in acute dz b/c of risk of perforation and toxic megacolon (KUB= colonic dilation (toxic megacolon))! - Common lab findings: anemia, ↑ESR, ↓serum albumin - **pANCA +** (antineutrophil cytoplasmic antibodies; x always though) -labs: ↑ WBC, ↑ ESR, ↑ CRP, **anemia,** ↑ alk phosphatase and y-glutamyl transpetidase (if major colonic involvement, suggests primary sclerosing cholangitis)	

Crohn's Disease	Ulcerative Colitis	
1)**Segmental** Involvement of **small or large intestine** (whole wall, mouth to anus), **skip lesions**, **cobblestone appearance** of bowel, **fistula** formation	**Continuous** Involvement of **colon** (not whole wall involvement, starts in rectum and extends proximal), "**lead pipe colon**"	
mouth to anus, spares rectum = any GI mucosa	**start = rectum** → extend proximally	
ALL layers = **transmural**	**only mucosa** & submucosa	
2) **Non-caseating granulomas**	X granulomas	
3) Colonoscopy: **strictures**/ulcers	Colonoscopy: **pseudopolyps**/ulcers (formed by regenerating mucosa)	
4) **ASCA** may be + (Anti saccharomyces cerevisiae a.b.)	pANCA +	
5) Cancer risk rare	Marked ↑ risk colon cancer	
6) s/s- recurrent abd. RLQ Pain, D, fever lasting days to wks	s/s- bloody Diarrhea, LLQ pain, mucoid diarrhea for days, wks, months and then subsides and recurs	

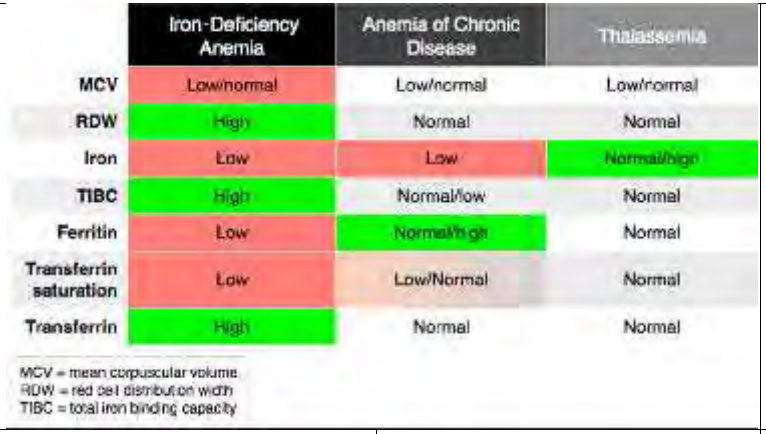
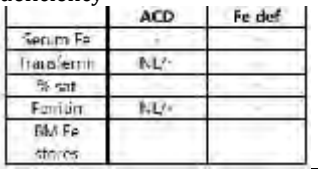
Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
Thyroid disorders  TSH = best test T4 = most important				 		
Hyper-thyroidism metabolic speeding up	graves dz= diffuse toxic goiter= MC -women> men -autoimmune dz (may have + ANA, family hx, incidence of other autoimmune dz [PA, DM]) toxic nodular goiter -elderly, no eye or skin changes thyroiditis thyroid storm -life threatening -**precipitated** by trigger: stress, infxn, surgery, trauma -mortality is high		grave's dz -**exopthalmus** (globe protrusion; NO erythema/swelling; d/t underling endocrinopathy; note: proptosis =non-endocrine globe protrusion), pretibial myxedema (↑hydrophilic glycosaminoglycans [hyaluronic acid] in dermis; b/l symmetric NONPITTING yellow/brown to red/waxy papules, nodules and plaques on shin; tx: high potency topical steroids & intralesional steroids), goiter (w/**anterior neck bruit**), lid lag -appetite change, diarrhea, **proximal m. weakness (**fact: distal m. weakness =common in peripheral neuropathies**)**, sweating, **weight loss** -exertional SOB, **palpitaitons** -fatigue, HA, **heat intolerance**, **hyperacitivity**, irritability, menstrual disturbance (**amenorrhea**) thyroid storm: **HYPERMETABOLIC** -high **fever**, **tachycardia**, **shock**, dehydration, delirium, CHF, agitation/anxiety/ psychosis (AMS), N/V/D, Tremors, Lid lag, Palpitations, Liver failure	Graves --↑ T4 -↓ TSH -positive thyroid stimulating immunoglobulin (TSI) radioactive idodine uptake = diffuse high uptake	Graves dz -**anti-thyroid drugs= methimazole** (preferred in children, fewer SE) **or propylthiouracil** (preferred in pregnancy) - inhibit hormone synthesis - watch for low WBC w/ tx -radioactive iodine - ↓ thyroid activity - monitor for hypothyroidism -beta-blockers (propranolol) = sx: tachycardia, tremor, diaphoresis, anxiety, palpitations Thyroid storm -**propranolol** = avoid in heart failure -**hydrocortisone** = inhib hormone release, impaire hormone production; esp important if exogenous thyroid rleease -treat underlying cause -thiourea drug (stop 1-2 wks before radioactive iodine [propylthiouracil]) -lugol's solution = inhib hormone release -**radioactive iodine = definitive tx**, delay until euthyroid; -avoid ASA d/t displacing T4 &↑T4 level

Thiourea Drugs	MOA	SE	CI &Monitoring
Methimazole (tapazole)	Inhibits organification of iodine, blocking formation of thyroid hormone •prevents thyroid hormone synthesis **USE IN 1st TRIMESTER & STORM**	Methimazole carries greater risk of teratogenicity and goes more into break milk than PTU •Pruritis, rash, urticarial, Joint pain •Abnormal taste, N/V, **fulminant hepatitis** •**Agranulocytosis, aplastic anemia**	Hypersensitivity Breast Feeding (ok if PTU) Monitor: •Thyroid •LFT •CBC
Propylthiouracil (PTU)	Inhibits organification of iodine, blocking formation of thyroid hormone **AND** decreases conversion of T4 -> T3 **first line for prego or breast feeding*	**PTU greater risk hepatotoxicity than methimazole** BBW hepatotoxicity	

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
					**adults = LR 4 ml x wt(kg) x % BSA
3rd degree full thickness	full thickness burn destroys epidermis + dermis	cause = immersion scalds, flame burns, chemical & high voltage electrical injuries 	-skin is white/leathery w/ underlying clotted vessels -**NO PAIN= NUMB**		skin grafting = needed unless burn is small (<1 cm in diameter)
4th degree into bone and muscle	full thickness destruction of skin, subcutaneous tissue, fascia, muscle, bone & oter structures	cause = prolonged exposure to the causes of 3rd degree burns 	-into bone and muscle		requires debriedement & reconstruction of tissues
lacerations					
Pressure ulcers	classifications -stage 1 = non-blanchable hyperemia -stage 2= extension through epidermis -stage 3 = full thickness loss -stage 4 = full thickness wounds w/extend into muscle, bone, supporting structures	RF: **immobility**, reduced sensory perception, moisture (urinary/fecal incontinence), poor nutritional status, friction/shear forces, hospital stay for acute illness	-red skin that worsens over time, area forms a blister then an open sore -MC locations = buttocks, elbow, hips, ankles, heels, shoulders, back, back of head -ulcers in which the base is covered by slough (yellow, tan, grey, green, brown) or eschar (tan, brown, black) = unstageable		-remove necrotic debris & maintain mosit wound bed -pressure-reducing device = improves healing rates -prevention - specialized support surfaces - patient repositioning - optimizing nutritional status - moisturizing sacral skin
Stasis dermatitis					
VASCULAR ABNORMALITIES					
Cherry angioma					
Telangiectasia					
Vesiculo-bullous disease					
pemphigus					
(bullous) Pemphigoid	auto-immune attack on basement membrane → result: subepidermal blistering	most common bullouse autoimmune dz of elderly (60-80yo)	-mild redness, itching, irritation -asx	-punch bx	**-topical or oral corticosteroids**

vasomotor	d/t tempe change, strong smells, humidity, spicy food	common in elderly			
allergic rhinitis = hay fever	d/t airborne allergic particles which intitiate **IgE mediated mast cell histamine release**	seasonal (hayfever = ragweed, grass, tree pollen) or perennial (house dust mites, animal dander, mold) **type 1 hypersensitivity rxn** = starts w/exposure to allergen	-sneezing, nasal secretions, nasal congestion -itching eyes, post-nasal drip, cough -worse in AM exam -edematous mucosa = **pale pink/ blueish violaceous boggy turbinates**  distinguishes allergic rhinitis from viral rhinitis **-cobblestone mucosa** of oropharynx (cause = postnasal drip) **-clear secretions** **-nasal polyps**; worse in AM **-watery eyes** -**allergic shiners** = dark circles (blue discoloration) under eyes d/t congestion (histamine release → vasodilation) similar to bruises; -**allergic salute:** transverse nasal crease from pushing up on nose (wiping up on nose)	clinical dx radio-allergo-sorbent test = serum IgE Antibodies against specific allergin skin-prick test = identify triggers eiosinophils = nasal smear *QUICKHITS: major causes of eiosinophilia (mneumonic: NAACP) -N: **neoplasms** (CML, hodgekins lymphoma) -A: **allergy**/atopy -A: **asthma**, addison (hypoaldrenalism) -C: **connective tissue** disorders (ie: **churgg strauss**) -P: **parasitic** disorders (lymphatic filiariasis, toxacara, trichionosis, strongyloides; NOTE: giardia, malaria and babesia do NOT produce eiosinophilia) **MC cause eiosinophilia worldwide = **helminth** infx; MC cause in industrialized nations = **atopic** dz	-allergic avoidance, saline irrigation -**topical intra-nasal steroids** 1st line = perisistant sx, **1st line if allergic rhinitis or nasal polyps** -mast cell stabilizer: cromolyn sodium= can take 2-6 wks for full therapeutic ffect **-antihistamines** - 1st generation H1 block (sedating) = diphenhydramine, hydroxyzine - **2nd generation** H1 block (NON-SEDATING, preferred over 1st gen) = loratidine, fexofenadine, cetirizine (Zyrtec), azalestine -sympathomimetic = ephedrine, pseudoephedrine -intra-nasal decongestant; do NOT use more than 3-5d (SE: rhinitis medicamentosa= rebound congestion; tx; discontinue irritant, +/- topical steroid during withdrawal period; limit use <3-5days)= pseudoephedrine, oxymatozoline, phenylephrine -immunotherapy= severe allergic rhinitis or failure to respond to rx tx (ie: antihistamines, intranasal steroid) and allergic avoidance (biologics: omalizumab, mepolizumab, dupilumab)
Sinusitis	MC location = **maxillary**, followed by ethmoid, frontal & sphenoid (frontal develops as young child,, sphenoid early 20s) complicatons = osteomyelitis, cavernous sinus thrombosis, orbital cellulitis sinuses -maxillary= under eye -ethmoid = lateral wall nose -sphenoid= bridge of nose, midhead -frontal = forehad	d/t impaired mucocillary clearance & obstruction of ostiomeatal complex *accumulation of mucous secretions & edema d/t reduced clearance of mucus common following URI sx causes: viral[mc], BACTERIAL	-pain + pressure over sinus; **worse w/bending down or leaning forward** -discolored, pururlent nasal discharge -fever, malaise, headache, tooth pain -PE: **tenderness to palpation over sinus**, opacification of sinus w/ **transillumination** 	x-ray= opacification, air fluid levels, thick mucosa; **not** routinely **indicated** **waters view is good initial screening if chronic **CT = TEST OF CHOICE, gold** = bone destruction air fluid levels, thick mucosa; **NOT ROUTINELY INDICATED**, use if recurrent acute/chronic presentation or anatomic abnormalities suspected  -sputum/nasal culture = NOT usually relaible	-NSAID for pain, saline washes, steam, -oral decongestants = pseudoephedrine -nasal decongestants = oxymetazoline -Abx = if **sx > 10 d** without improvement; **fever >102F** and/or **pururlent** nasal discharge; **rapid worsening** of sx after initial improvement *give Abx for 5-7d in adults • 1st line = amoxicillin (usually in **kids** for 10-14d; 500 mg TID or 875 bg BID) o augmentin (amox-clauv) 1st **in adults** (500mg/125mg TID or 875/125 BID), use if
acute	sx **< 4 weeks**	pathogens = viral (rhinovirus, parainfluenza, influenza, RSV), bacterial (**S. pneumonia, H influenze, M catarhalis**), fungal (immunocompromised; rhizopus, mucor, aspergillus)			

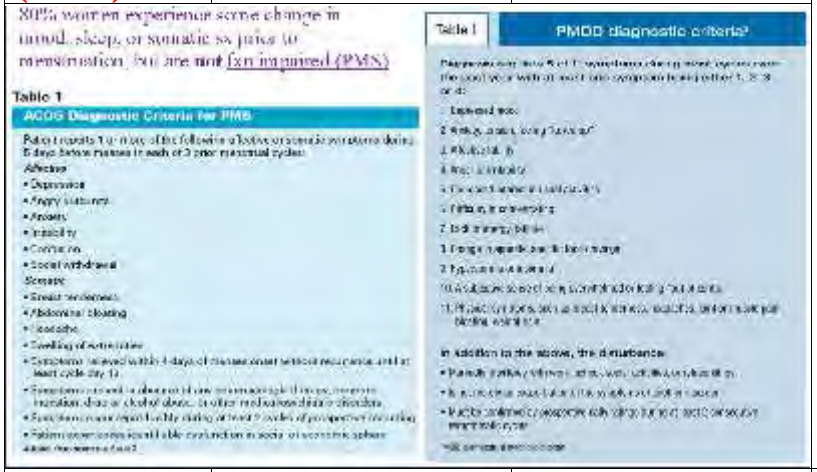
VIRAL	BACTERIAL
sx < 7 d	sx > 7 d
	b/l purulent nasal discharge

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
CYTOPENIAS					
Anemia					
anemia of chronic dz	seen in infxn, inflammatory dz, malignant, renal dz		feeling weak or tired HA paleness SOB	labs = anemia of chronic dz vs iron deficiency 	treat underlying cause
aplastic anemia	decrased production in all cell lines	cause = damage to stem cells d/t acquired or genetic, toxin, radiation, immunologic NSAID, chemo, rhloramphenicol, EBV, CMV, parovirus B19	weakenss & fatigue pallor, purpura, petechiae	pancytopenia	bone marrow transplant
folate deficiency	macrocytic anemia body stores only 4 mo of folate; absorbed in proximal jejunum folic acid requirements are increased in pregnancy, hemolytic anemia, exfoliative skin dz	cause =inadequate dietary intake[major cause] ; other causes= alcoholics, person who does not eat fresh fruits/veggies, person who overcooks food, drugs that interfere w/ absorption (phenytoin, trim-sulfa, sulfasalazine)	similar to B12 defieicny but there are NO NEUROLOGIC ABN -glossitis, angular cheilosis	megaloblastic blood smear = macro-ovalocytes, hypersegmented neutrophils reduced folic acid levels normal serum B12, methylmalonic acid	daiy folic acid 1 mg
B 12 deficiency	macrocytic anemia essential for normal nuclear maturation diet is the ONLY source of intake; total body content 2-5mg; body stores last years; absorption in terminal ileum	RF: vegans, persons w/hx of abd surgery (gastrectomy, resection)	**-neurologic sx = tingling in feet, gait abnormalities** -affects pyramidal tracts + posterior column -glossitis -anorexia -diarrhea -loss of vibratory sense	-megaloblastic blood smear = macro-ovalocytes & hypersegmented neutrophils -low B 12 serum -elevated methylmalonic acid -schilling's test -anti-IF (intrinsic factor) Antibody	-B12 100 mcg IM/SC injections = daily for 1st week, weekly for 1st mo, montly for life -oral replacement B12= once intital correction has occured

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
		triggers: stress, menses, oral contraceptives, alcohol, food (cheese, chocolate), lack of sleep, glare, weather changes, physical exertion, fatigue, head trauma	- **aggravated by activity** **+1 of the following** - n/v - phono/photo - phobia +/- **aura** - scotoma - numbness - paresthesias - paralysis		- propranolol - amitriptyline - clonidine - verapamil abortive -cafergot -sumatriptan = 5-Ht receptor agonist - AVOID IN HTN OR CAD -analgesics
INFECTIOUS DISORDERS					
Encephalitis	infection of brain parenchyma	causes = herpes most common, entervirus, EBV,CMV, measles, eastern & western equine, St. Luis, varicella, west nile virus	-fever, malaise, stiff neck, nausea, altered mental status -sings of upper motor neuron lesion - exaggerated DTR - spastic - paralysis	-PCR -Lumbar puncture CSF analysis - ↓↑lymphocytes - ↑↓/norm glucose - ↓↑protein ** note: most common sequelae after LP = **post-LP HA**	-supportive = acetaminophen -acyclovir = herpes simplex, varicella zoster -ganciclovir or foscamet = CMV -AVOID steroids
Meningitis	inflammation/infection of meningies	cause= bacterial **most common = Strep pneumo -neonates = gram neg bacilli, streptococci, listeria -children<15yr = H. influenza type B, N meningitis, S pneumo -adults >15yrs = S. pneumo, meningitis, gram neg bacilli, listeria (>60 yo) -HIV pts = **Cryptococcus**	bacterial -HA, nuchal rigidity, fever, change in mental status, seizures -rash: petechial (think Nessieria) -kernig sign = knee flexed to 90 degree AND hip flexed to 90 degree → extension of knee elicits pain or limited extension is positive -brudzinski = laying flat on back with legs straight→ passive flexion of neck elicits hip and knee flexion is positive		S pneumonia -1st choice = PCN G, ampicillin, ceftriaxone -2nd choice = vancomycin, chloramphenicol N meningitides -1st choise = PCN G, ampicillin -2nd choice = ceftriaxone H influenza -1st choise = ampicillin, ceftriaxone -2nd choice = 3rd gen cephalosporin, chloramphenicol Listeria -1st choice = ampicillin, PCN G -2nd choice = TMP/SMX S. aureus -1st choice = nafcillin -2nd choice = vancomycin Gram neg bacilli -1st choice = cefotaxime or ceftazidime PLUS aminoglycoside -2nd choice = meropenem + aminoglycoside Pseudomonas -1st choice = cefepime + tobramycin

CSF Analysis:

Bacterial	Bacterial	Viral	Fungal	Normal
Press.	High	High	High	
WBC	>100	>50	>50	<5
PMN	>80%	<50%	<50%	None
Lymphs	<20%	>50%	>50%	100%
Protein	>100	>50	>50	<50
Glucose	<30	>50	<30	>50

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
Persistent Depressive Disorder (Dysthymia) **think Eeyore from Winnie the Pooh**	**mild, chronic form of major depression** -sx less severe vs major depression Distinguished from MDD by fact pts state they have always been depressed **Course/Prognosis:** -Insidious onset of sx prior to age 24 in half pts -Often do not seek care for at least 10 years -Early onset pts at risk for either MDD or bipolar disorder ▪ 20% progress to MDD ▪ 15% progress to Bipolar II ▪ <5% progress to Bipolar I *-Prognosis generally good with treatment*	RF: **women** <64 yo, unmarried, young, low income, often seen w/other metal disorders, onset in childhood/ adolescence/ early adult -Sleep- alteration of REM sleep patterns -Psychosocial factors: Possibility of difficulties w personality and ego development, early life interpersonal disappointment, disparity btwn actual and fantasized situations *-More common in pts with chronic, disabling conditions*	**Typical presentation**- depressed mood that lasts most of day, is continuous, assoc feelings of guild, irritability, anger, inadequacy, loss of interest, inactivity, & withdrawal from society More **subjective** than objective (more sx than signs of depression) -No psychomotor agitation/retardation **Depressed most of time for at least 2 yrs** (1 yr for children/teens) and **never w/o sx for more than 2 mo** -Sx cannot be better accounted for by MDD (does NOT meet severity for MDD) & never had manic (r/o bipolar 1) or hypomanic episode (r/o cyclothymic dz) -Requires 2 or more when depressed • Poor appetite/overeating • Insomnia/hypersomnia • Low energy or fatigue • Low self esteem • Poor concentration or difficulty making decisions • Feel hopeless	@ **least >2 years** (if adult) of chronically depressed mood most of the time (>1 yr in children) Questionnaires always ask about sleep, appetite & activity Additional- • Minor depressive disorder (recurrent mild depression w euthymic btwn) • Recurrent brief depressive disorder (depressive episodes last < 2 weeks) • Double depression (MDD & dysthymia) • Alcohol and substance abuse Neuroendocrine studies- pts w dysthymia less likely than those with MDD to have abnormal DST results	-combo rx + psychotherapy = most effective vs either alone -Cognitive therapy -Behavioral therapy -Insight-oriented psychotherapy -Interpersonal therapy -Family/group therapy -Pharmacotherapy ▪ SSRI ▪ Venlafaxine ▪ Bupropion *(all effective)* ▪ Possibly MAOIs Hospitalization =not generally indicated
Premenstrual Dysphoric Disorder (PMDD)	Somatopsychic illness triggered by changing levels of sex steroids that occur w ovulatory menstrual cycle  Table 1 ACOG Diagnostic Criteria for PMS Table 1 PMDD diagnostic criteria*		-Non-functional -Starts ~1 week prior to menses: LUTEAL PHASE -+1 or more required: • -Marked affective lability (mood swings) • -Marked irritability or anger/conflict • -Marked depressed mood, feelings of hopelessness, self-deprecation • -Marked anxiety, tension, "on edge" -+1 or more following must additionally be present: • - ↓ interest in usual activities • -Subjective difficulty in concentration • -Lethargy, easily fatigued • -Marked change in appetite • -Hypersomnia/insomnia • -Sense of being overwhelmed or out of control • -Physical sx: breast tenderness or swelling, joint/muscle pain, bloating or weight gain ***Must have 1 in each category then 3 more out of the 2 categories* -In **majority** or menstrual cycles, at least 5 sx must be present in last week before onset of menses, start to improve within few days after onset of menses, and are minimal/absent in week post menses -Sx include ▪ Irritability ▪ Emotional lability ▪ Headache ▪ Anxiety ▪ Depression ▪ Somatic symptoms of edema, weight gain, breast pain, syncope, and paresthesia		SSRIs Alprazolam = benzo w high addiction potential and nasty complication if abruptly withdrawn , AKA we don't like this drug that much for these pts Support for pt is essential If severe, consider other mood and anxiety disorders as cause of symptoms
post-partum depression		RF: PDD in previous pregnancy strongest RF			SSRI (sertraline) most common rx
Suicidal behaivor	single most important elemant = constant awareness of the possibility that it exists -women = more likely to attempt suicide -men = more likely to be successful -completed suicides = cause: firearms -attempted suicides: cause: ingestion (MC= antidepressants)	RF= SADPERSONS(male, age, depression, previous attempt, excess alcohol/substance abuse[risk of suicide completion], loss of rational thinking, lack of social support, organized plan, no spouce, sickness), peak attempts 25-30yo (men), 45-50yo (women); Caucasian; protestants; lives alone; bereaved; unemployed; poor health status; impusive; rigid in thinking; faces stressful events; has made direct verbal warnings; has made plans or past attemtps;		-all pts = emergent psych eval -if thoughts of suicide = assess intent and plan	-needs **emergent psychiatric eval** -if pt is at risk of hurting themselves or others, law allows holding pt until further eval completed

	detect cannabis for up to 4 weeks after use Additive sx to those of alcohol if used together (very common) RF: males +26 yo, between ages 12-17 no diff in gender, Caucasian	- serious adverse effects caused by inhaling the same carcinogenic hydrocarbons *(**risk for chronic respiratory dz and lung CA**)* -Long-term cannabis use may be assoc. w cerebral atrophy, seizure susceptibility, chromosome damage, birth defects, impaired immune reactivity, alterations in testosterone concentrations, dysreg of menstrual cycles **Cannabis withdrawal** -usualy within 24-48 hrs of stopping drug -peak sx by day 4 -sx resolution by day 10-14 -sx: malaise, irritability, diaphoresis, night sweats, GI disturbance, drug sweat -does NOT require tx, can use anxiolytics, CBT/motivational incentives usually successful			
Hallucinogens PCP (phencyclidine) LSD (lysergic acid diethylamide) DMT shrooms (psilocybin) mescaline (peyote)	**induce altered states of awareness that resemble those of natural psychoses** -Hallucinogens are intoxicants (common are LSD, Ecstasy, PCP) -Physical dependence/withdrawal sx do not occur -psychological dependence on = common -lacks a withdrawal syndrome	RF: young white men (15-35 yr olds), western states,	PCP (phencyclidine) = hallucinogenic rx -Most commonly an additive to a cannabis or parsley containing cigarette -Antagonist @ NMDA subtype of glutamate receptors and dopaminergic neurons of the ventral tegmental area -**violent or bizarre behavior, horizontal + vertical nystagmus**, disorientation, **auditory hallucinations** -tx = benzo LSD intox -dilation of pupils, ↑DTR, muscle weakness, HTN, tachycardia, fever -synesthesia (sees color, hears sound)	Hallucinogen Intoxication -Symptoms: pupillary dilation, tachycardia, sweating, palpitation, blurring of vision, tremors, incoordination, altered mood: euphoria, vividness of real/fantasied sensory illusions/hallucinations, synesthesia (overflow from 1 sensory modality to another) confusion, time slowing, loss of body boundaries, grandiosity, omnipotence -adverse rxn = acute panic attack, flashback, precipitation of underlying psychosis -If long-term use:Dulled thinking, ↓ reflexes, loss of memory, loss of impulse control, depression, lethargy, impaired concentration	-: Talking down pt, supporting/reassuring pt; diminish stimulation until wears off (quiet room), talking [helps distinguish psychotic sx from reality] -oral diazepam (oral/IV valium) if severe panic, rapid relief of intense anxiety when rx wears off -Dopaminergic antagonists (Haldol) used for a limited time if not needed [NOTE: usually avoid antipsych rx d/t adverse anticholinergic rxn from hallucinogen + antipsych rx]
Inhalants Most used gasoline, glue, spray paint, solvents, cleaning fluids	**mind altering properties when inhaled/sniffed/huffed; high only lasts a few min** -Tolerance for inhalants can develop -Withdrawal symptoms are fairly mild - Dependence and abuse of inhalants does occur -addiction uncommon but possible	RF: young and poor, male, Effects appear within 5 min and last 30 min to an hour Act as a CNS depressant - Rapidly absorbed thru the lungs and rapidly delivered to the brain	**Inhalant Intoxication** Presence of maladaptive behavioral changes and at least 2 physical sx: -Apathy, diminished social and occupational fxn, impaired judgement, impulsive or aggressive behavior -**Nausea**, anorexia, nystagmus, depressed reflexes, diplopia -Irritation of eyes, throat, lungs and nose **-facial flushing, coughing, tachycardia, slurred speech** -erythematous rash around nose/mouth = contact dermatitis =inhaled solvents (paint, glue thinner, lacquer) -Unusual breath/body odors -Residue of inhalant on face, hands, clothing -adverse rxn=coma,stupor,unconsciousness,amnestic for period of intoxication,seizure, death	-suppurtive, Resolves spontaneously, reassurance, quiet support, attention to vital signs, and level of consciousness -Coma, bronchospasm, laryngospasm, arrhythmias, burns need to treatment **Sedative drugs (Benzos) are contraindicated, worsen inhalant intoxication**
narcotics / Opioids heroin oxycodone codeine fentanyl morphine	Assoc. with spread of HIV, esp. in prostitutes Neuropharmacology Primary effects mediated via opioid receptors • Mu opioid receptors regulate/mediate analgesia, resp depression, constipation, and drug dependence • Kapa opioid receptors analgesia, diuresis, and sedation • Delta opioid receptors analgesia FUN FACTS:Heroine more lipid soluble than morphine *(allows it to cross BBB faster, more rapid and pleasurable onset than morphine)* Tolerance to all actions of opioid drugs does not develop uniformly	RF: males, low socioeconomic, children of single/divorced parents, substance related dz in fam hx, underlying depression	**Opioid Use Disorder** =Pattern of maladaptive use of an opioid drug, leading to clinically sig impairment or distress and occurring within 12-month period **Opioid Intoxication** =Maladaptive behavioral changes and specific physical symptoms of opioid use **-Pinpoint pupils, hypotension, bradycardia, ↓resp rate, miosis** -Altered mood, psychomotor retardation, drowsiness, slurred speech, and impaired memory and attention in the presence of other indicators of recent opioid use - tx for overdose =**Naloxone (narcan) specific pure opioid antagonist** • provide supplemental O2 B4 narcan- • Signs of improvement should occur promptly; Too much naloxone may produce signs of withdrawal as well as reversal of over dosage **Opioid Withdrawal** -tx withdrawal=-**clonidine** 0.1 mg for q8hrs for 3-10d or hydroxazine (helpful for sympathetic sx reduction, NOT cure for additction itself- does NOT work @ mu receptors); buprenorphine/naloxone (suboxone) or methadone for withdrawal; **lorazepam/benzo** for mild withdrawal -lacrimation, diarrhea (tx: loperamide 2mg PO 3x/d prn) rhinorrhea, sweating, yawning, anxiety, HTN, tachycardia, N/V (nausea tx = antihistamine: promethazine), abdominal cramps, muscle/joint pain/ cramps (tx: ibuprofen), 1. Adrenergic hyperactivity (CNS excitation, tachypnea, tachycardia, HTN) 2. GI sx (abd cramping, N/V/D) 3. Mydriasis 4. Yawning, lacrimation 5. **piloerection, flu-like sx, rhinorrhea** actual DSM information: withdrawal **A**. Presence of either of the following: 1. Cessation (or reduction in) opioid use that has been heavy and prolonged 2. Administration of an opioid antagonist (ie naloxone, naltrexone) after a period of opioid use **B**. 3 (or more) of the following developing within minutes to several day after criterion A	**-Ensure adequate airway =1st step** -hydration -narcotic anonymous - Psychotherapy, behavior therapy, CBT, family therapy, support groups -opoid overdose tx = naloxone -Medically supervises withdrawal and detoxification; treatment of addiction (long term tx) • Methadone = ok to use if pregnant • Levomethadyl (Orlaam) similar to Methadone • Buprenorphine (Buprenex, Butrans) • Opioid partial agonist at mu receptor and antagonist at kappa opioid receptor • Buprenorphine with naloxone (Suboxone) = prevent overdose of suboxone • Opioid antagonist: Naloxone (Narcan, Evzio) • Rapidly revere opioid OD: Naltrexone (Revia-oral, Vivitrol-injection) **Major weakness is the lack of any mech that compels a person to continue to take the antagonist

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
Endometritis endometrial infxn AKA: the PID of pregnant female	**infxn of decidua** w/gram postivie cocci and gram negative coliforms that commonly **develops on the 2nd or 3rd day post-partum**	RF: operative delivery, **prlonged labor**, lack of prenatal care, frequent vaginal/pelvic exams, **C-section**, retained products of contraception, **PROM >24 hrs,** stage 2 labor >12 hrs, STI, IUD, post abortion	-abdominal pain, chills, **tachycardia** -post-partum **fever**: common post-partum day 2-3 (48-72 hrs after) **- foul smelling lochia or discharge** (vaginal discharge) **-uterine tenderness**, abd pain **-leukocytosis (CBC)**	-clinical dx= common -US = recommended to see if any retained products of conception -culture: NOT commonly recommended; polymicrobial cause -endometrial bx: x routine but can help make dx; **neutrophils in endometrium** (acute), plasma cells in endometrium (chornic)	-**hospitalize** + broad spectrum **IV abx (clindamycin + gentamycin) or (ceftriaxone + metronidazole)** o c-section = clindamycin + gentamycin o ppx during c-section = cephalorsporin o vaginal delivery, chorioamnionitis = ampicillin + gentamycin o if **no response** after **48-72 hrs** = add: gram + coverage for enterococcus: aminoglycoside (-mycin), ampicillin **NOTE: endometritis tx mneumonic: ECG = $E_{endometritis}$ $C_{clindamycin}$ $G_{gentamycin}$: clindamycin + gentamycin **NOTE: choreoamnionitis tx menumonic: CAG = $C_{chorioamnioniitis}$ $A_{ampicillin}$ $G_{gentamycin}$: ampicillin + gentamycin -stop abx once afebrile for 24 hrs; sx tx (fluid, rest, warm baths, heating pad (Decrease cramps) Additional tx depends on cause -childbirth = Abx - remaining placental/fetal tissue = dilation & curettage -Chlamydia/Gonorrhea = Abx (doxy + ceftriaxone) -Tuberculosis= Anti-tuberculosis rx (rifampin, isoniazid, pyrazinamide, ethambutol)

Post-partum/post-op fever

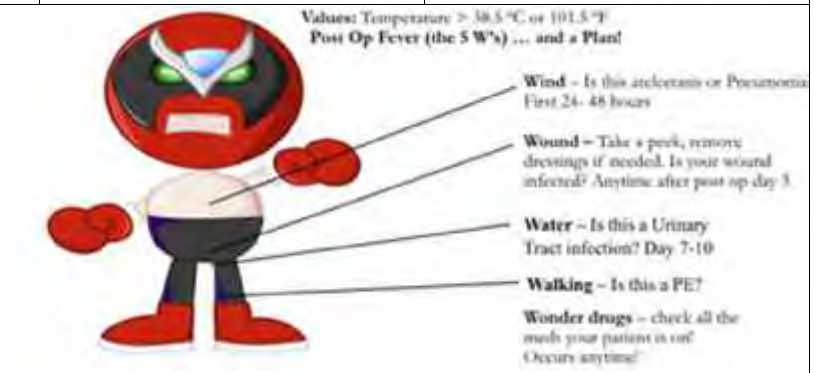
Day 1 = wind
- Atelectasis
- pneumonia

Day 2-3 = water
- UTI
- pyelonephritis
- endometritis

Day 5 = walking
- Thrombophlebitis
- DVT

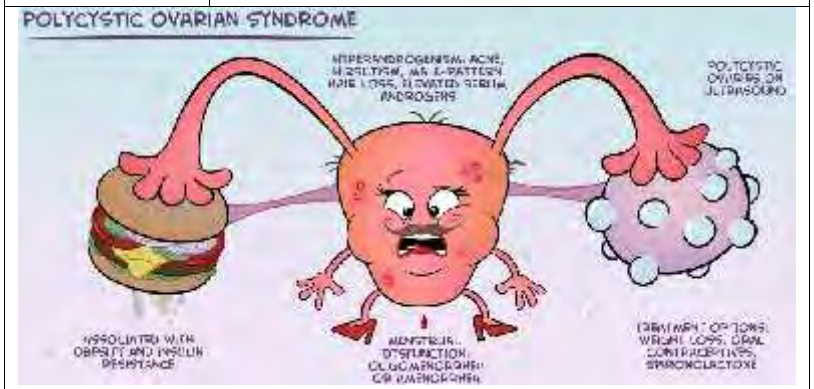
Day +7 = wound
- Surgical wound infection
- Abscess

Weird drugs = drug induced fever = anytime



POD<24 hr; ASAP post-op	POD <24-48 hr	POD 3	POD 5 (or >72 hrs)	POD 7-10 (anytime)	POD anytime
malignant hyperthermia -anesthesia complication (Ca release → m. spasms) -genetic abnormality =aut dominant -sx/dx: higher wave form capnography (maintains shape); fever -tx:dantrolene	atelectasis -collapse of alveoli -SOB, ↓O2 sat, ↓breath sounds, patient cannot breathe deeply secondary to pain on inspiration; CXR=opacification of affected lung (density) -ppx: pre-op smoking cessation, post-op **incentive spirometry**, early ambulation resp failure -tx: supplemental O2, +/- ventilation/ intubation pneumonia	UTI	DVT/PE	wound -MC: Staph -tx: Dressing, +/- healing via secondary intention, abx	wonder drug

Pre-conception/ pre-natal care	intitial screen -risk assessment & maternal hx -estimated date of delivery (EDD) = 1st day of LMP + 7d – 3 mos -gestational age (Naegele's rule) =US -complete physical exam -pelvic exam for uterine size -lab screening: CBC, UA, blood group/Rh antibody screen (blood type, Rh and Ab), serologic test for syphilis (RPR, VDRL), HIV, hepatitis B, hep C antibody (if hx of IV rx use), rubella titer, pap smear, tests fo chalmydia &gonorrhea (NAAT), group B strep (Urine or vaginal culture), tuberculosis skin test or TB blood test (if HIV positive or if living with an individual w/ active TB)	subsequent prenatal visits -BP, weight -edema check -routine lab screening = urine for glucose + protein -fundal height measurements -glucose tolerance test = @ 24-28 wks -MS alpha fetoprotein = measure @ 15-20 wks - increase = open neural tube defects - decreased = down syndrome (trisomy 21) -Rh immune globulin = RhoGAM - 28 wks - w/in 72 hours of childbirth -fetal heart tones = 120-160 bpm -group B strep = @ 32 wks -determination of presentation or "lie" = lepold's maneuver

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
TRAUMA					
Physical assault					
Sexual assault	NOTE: physical contact does X need to occur to be considered assault (ie: forced to watch sexual acts) see more in psychiatric notes			rape=psych emergency & legal issue (document, save clothing, take samples [hepatitis Ag, UA, pregnancy test, culutres from vagina, anus, pharynx: Gonorrhea, chlamydia, syphilis (RPR), HIV]) -sexual assault hotline: 800-656-4673 -ppx Abx: Rocephin 250 + PO doxy (BID for 7d), +/- tetanus toxoid, emergency contraception -counceling B4 leaving ED +f/u -f/u 24-48 hrs (phone checkup), 1 wk (check up how pt is doing), 6 wk (repeat cultures STI, RPR), 12-18wk (repeat HIV)	
Trauma in pregnancy					
OVARIAN DISORDERS					
Cysts	-arise as a result of normal ovarian fxn - when an ovarian follicle fails to rupture→ follicular cyst may develop (most spontaneously resolve) → follicular cyst rupture = acute pelvic pain	can be associated w/ PCOS	-mild-mod **U/L** LLQ or RLQ pain (depends on cyst size) -+/- alteration of menstrual interval -exam: U/L pelvic tenderness/pain on exam, palpable, mobile, cystic adnexal mass	**US** = cystic echo on ovary	most resolve spontaneously= if size <6-8 cm (NSAID and rest) -F/u q 6 wks w/US OCP = suppress gonadotropin stimulation of cyst
Polycyctic ovarian syndrome =PCOS	chornic anovulation w/ infertility; hx of irregular bleeding cause = insulin resistance complications (at ↑ risk of): infertility, endometrial hyperplasia, **endometrial carconima**, HTN 		-**TRIAD:** **1)amenorrhea/ oligomenorrhea** (chornic anovulation) 2) **hirsutism** (course hair growth, usually midline structures: face, neck, abd), 3) **obesity** -hx of irregular bleed -hirsuitism, -obesity, -acne -acanthosis nigricans	mild increase in testosterone LH:FSH ratio 3:1 (normal 1.5:1) US = **b/l enlarged ovaries w/ multiple peripheral cysts; string of pearsl**: b/l enlarged ovaries w/peripheral cysts other labs -↑ **insulin**, insulin resistance = lipid panel -Glucose tolerance test = diabetes -GnRH agonist stimulation test = ↑ serum hydroxyprogesterone -↑ ovarian androgen production = LH driven -↑ **testosterone** -↑**LH:FSH ratio = 3:1** (Normal = 1.5:1) differential=endocrine dz (thyroid [TSH], pituitary adenoma [prolactin], ovarian tumor, cushing's syndrome [dexamethasone suppression test])	#1 mainstay of tx = OCP (combination) -Normalize bleeding -Suppresses androgen Anti-androgenic agents = spironolactone = tx: hirsutism Metformin = tx: abnormal LH:FSH ratio, diabetes; Most important rx for ovulation and to assist w/infertility problems Clomiphene = tx: infertility Surgery = wedge resection, etc. -Clomiphene ineffective + restore ovulation = if pt wants child lifestyle changes = diet, exercise, weight loss
ovarian torsion		RF: **large ovarian cyst**/mass/CA	-**SUDDEN sharp**, non-radiating **u/l** lower abd **pain** (R side = common) -**n/v**, guarding, **adnexal tenderness/mass** -NO cervical motion tenderness, discharge, diarrhea/constipation, urinary sx,	-**doppler US: intial test, diagnostic test of choice** but blood flow is NOT always absent in torsion; findings: bulls eye, whirlpool, -pregnancy test = r/o ectopic pregnancy -**laparoscopic surgery = gold standard**	-**laparoscopic surgery w/detorsion** +/- oophorectomy (if necrotic) or cystectomy post op monitoring: fever, WBC, *if pregnant consider postop progresterone

Condition	Notes	Etiology/Who	Presentation	Diagnosis	Treatment
dysmenorrhea	**painful menstruation** which prevents performing normal acvities= usually requires medication OTC or prescription primary - d/t increased prostaglandin leading to painful uterine m. wall activity - common= F, teens-20 yo, declines w/ age - RF: menarch before <12 yo, nulliparity, smoking, family hx, obesity secondary - d/t clinically identifiable cause: endometriosis, adenomyosis, adhesion, PID, leiomyomata, IUD, cervical lesions/stenosis, psych, - common as woman ages - pain usually increases in severity until end of menstruation		pain w/menses or preceding menses by 1-3 d -diffuse pain in lower abd/ suprapubic; crampy, comes and goes, recurrent -pain associated w/ n/v, diarrhea (d/t smooth m. contraction), HA, backache, -**primary = normal PE** -secondary= PE varies w/ etiology	r/o pregnancy: pregnancy test, pelvic US **laparoscopy = if +3 cycles of pain unresponsive to intitial tx**; r/o secondary causes of pain	primary: no pathologic cause = 1st line rx: NSAID (ibuprofen, naproxen), OCP -heat, exercise, vitamin B & E secondary: pathologic cause = treat underlying cause
pre-menstrual syndrome	RECURRENT **physical, behavioral, and mood changes** that occurs before the onset of menses -group of physical, mood, behavioral changes w/occur in regular, cyclic relationship to **luteal phase** of menstrual cycle - **physical** changes: bloating, breast swelling, breast pain, headache, bowel habit changes, fatigue, muscle pain **-behavioral** changes: poor concentration, food craving **-mood/emotional** changes: depression, irritability, aggressiveness, libido changes, angery outbursts, anxiety, social withdrawal, confusion		-sx occurs in most cycles, resolving near end of menses w/ a sx-free interval of at least 1 week **-sx = 1-2 weeks before menses** **-sx resolve at onset of menses** -common somatic compaints = breast swelling/pain, bloating, HA, constipation/diarrhea, fatigue, muscle/ joint aches -common emotional complaints = irritability, depression, anxiety, hostility, libido changes, -common behavioral complaints = food cravings, poor concentration, sensitivity to noise, loss of motor skills	no definitive physical or lab findings to aid in dx -TSH recommended during intitial labs = common sx, r/o thyroid etiology MUST have sx free follicular phase (approx. 1 week) in contrast to problems during luteal phase; Changes = -start**: 5 days before** menses start = luteal phase -end: **within 4 days after** menses starts -pt is sx free for ~1 week = follicular phase	-SSRI= 1st line; helps mood/ emotional sx (fluoxetine); can be administered as daily tx or cyclically 2 weeks prior to menstrusation -OCP: combined or progestin only = physical sx; Combined estrogen-progesterone OCP is **considered 1st line tx if contraception (stopping pregnancy) is a high priority;** if sx relief with OCP monotherapy is incomplete add SSRI -GnRH agonist = if no response to SSRI or OCP -Surgery (b/l oophorectomy/ b/l salpingoophorectomy) = results in surgical menopause; last result -NSAID = physical sx, does NOT usually help with breast pain
PMDD (see behavioral med for more)	premenstrual syndrome + **functional impairment**: work, personal relationships -PMS w/ more severe emotional sx (significant depression, etc.) -<u>disabling</u> PMS		-5 sx present in final week before menses **One (or more)** of the following symptoms must be present: -Marked **affective lability** (e.g., mood swings; feeling suddenly sad or tearful, or increased sensitivity to rejection). -Marked irritability or anger or increased **interpersonal conflicts.** -Marked **depressed mood**, feelings of hopelessness, or self-deprecating thoughts. -Marked **anxiety**, tension, and/or feelings of being keyed up or on **One (or more)** of the following symptoms **must additionally be present**, to reach a **total of five symptoms** when combined with symptoms from above. -**Decreased interest** in usual activities (e.g., work, school, friends, hobbies). -Subjective **difficulty in concentration.** -**Lethargy,** easy fatigability, or marked lack of energy. -Marked **change in appetite**; overeating; or specific food cravings. -Hypersomnia or **insomnia.** -A sense of being **overwhelmed** or out of control. -**Physical symptoms** such as breast tenderness or swelling, joint or muscle pain, a sensation of "bloating," or weight gain.	dx= clinical -onset 1-2 weeks before menses -sx relief day 2-3 of menses -7 day sx free period (during follicular phase)	-menstrual diary -education, chart system, **-diet/exercise** **-stress reduction** alt therapies = unproven, may help -dietary calcium = 1200 mg/day -vit D -magnesium -complex carbs -Decrease consumption of: caffeine, Salt, Alcohol