CARDIOLOGY PACE THE PANCE POWER PACK (104 Questions)

Question	*Answer*
Which of the following are causes of dilated cardiomyopathy?	*1. idiopathic (MC)* *2. alcohol, cocaine* *3. viral (coxsackie, enterovirus)* *3. heart dz (HTN, HF, CAD)* *4. obesity, DM* *5. doxorubicin* *6. pregnancy (↑ volume circulation)* *7. hyperthyroid*
45 year old male with PMHx of cocaine and alcohol use presents w/ worsening DOE, orthopnea, JVD, and peripheral edema. You hear S3 sounds and bounding pulse on cardiac exam with bilateral lobar crackles. What is the diagnosis and what is the treatment?	***Dilated cardiomyopathy*** *Dx:* *-echo: LV dilation w/ thin walls, ↓ EF* *-CXR: cardiomegaly, pulm congestion* *HF tx:* *-mortality benefit: ACE/ARB, BB, ARNi, SGLT2, verapamil/diltiazem, spironolactone* *-sx control: diuretics, digoxin* *-fix underlying cause if able***
W*hat lab finding indicates a poor prognosis in a pt w/ dilated* cardiomyopathy*?*	*Hyponatremia*
What is Takotsubo cardiomyopathy and what are the risk factors?	*Transient regional LV systolic dysfunction following a catecholamine surge (stress) with microvascular dysfunction and coronary artery spasm* • *Can imitate MI but has absence of sig obstructive CAD or plaque rupture* • *More common in post-menopausal women*

60-year-old female w/ no past cardiac hx presents w/ left sided substernal CP, SOB, and diaphoresis starting this morning. EKG shows ST elevation in V2-V4. Troponin biomarkers are elevated. Coronary angiography is clean. Echo showed apical ventricular ballooning. What is the diagnosis and what is the treatment?	***Takotsubo cardiomyopathy***
	• *Dx of exclusion! r/o MI first*
	  ○ *Apical ballooning on echo***
	• *Tx: -initially tx w/ ACS protocol until r/o (MONA-B)*
	  ○ *Mainstay: supportive (+/- ACE-i/BB short-term, anticoagulant therapy if thrombus)*

RF for restrictive cardiomyopathy?	*· Idiopathic* *· Amyloidosis* (mc)*

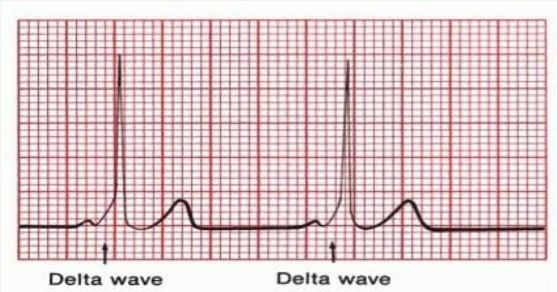
	· Sarcoidosis *· Hemochromatosis* *· Endomyocardial fibrosis* *· Scarring from radiation or chemo* *· Long standing CAD, HTN, DM*
Pathophysiology and s/sx of restrictive CM?	*Ventricles become stiff & rigid but do NOT thicken or thin* • *Ventricles do not relax, don't fill w/ normal BV --> ↓ preload --> RHF, valvular abnormalities* ***s/s:*** *-RHF -> LHF* *-Kussmaul's sign: ↑ JVD w/ inspiration*
75 yo F w/ hx of sarcoidosis presents w/ bilateral LE 2+ edema and JVD. On exam, you notice increased JVD w/ inspiration. Echo shows non-dilated & normal thickness ventricles w/ marked atrial dilation and diastolic dysfunction. dx? tx?	***Restrictive Cardiomyopathy*** *S/sx:* *-Kussmaul's sign: ↑ JVD w/ inspiration* *Dx:* *-initial = echo* *-definitive = endomyocardial bx* *Tx:* *-tx underlying d/o (steroids for sarcoid, chelation for hemochromotosis)*
16 yo M football player has sudden syncope at practice in the summer that was preceded by dyspnea. He has FHx of sudden cardiac death. He has a harsh systolic murmur heard best at the LSB that increases in intensity with valsalva and standing with a loud S4. Dx? tx?	***Hypertrophic cardiomyopathy*** • *AD ventricular (septal>>) thickening -> obstruction worse w/ activity / dehydration* • ***MC cause of sudden death <30 yo* *S/sx* *-dyspnea = mc sx* *Dx:* *-echo*: septal wall thickness >15mm* *-EKG: LVH* *Tx:* *-BB > CCB* *-myomectomy vs alcohol ablation = definitive* *-avoid dehydration, exercise, digoxin, nitrates, diuretics = ↓ preload*

What should you avoid in a patient with hypertrophic cardiomyopathy?	*AVOID things that ↓ preload or ↑ cardiac demand* *-dehydration* *-exercise* *-digoxin* *-nitrates* *-diuretics*
↑ JVD w/ inspiration	*Kussmaul's sign = restrictive CM*
Diastolic rumbling murmur with a prominent S1 and opening snap. what is it associated with? What is the diagnosis? What is the treatment?	***Mitral stenosis*** ***rheumatic heart dz* • *↑ LA pressure -> pulm congestion / pulm HTN -> RHF* • *Associated with arrhythmias such as Afib from atrial dilation* • *Mitral facies: flushed cheeks w/ facial pallor* *Dx: Echo* *Tx* • *-percutaneous balloon valvuloplasty > MVR* • *Treat sx until surgery (diuretics, AFib tx)*
You notice your patient has visible pulsations in the fingernail bed and their head is bobbing with each heart beat. Their radial pulses are bounding. what do they likely have.	***Aortic regurgitation*** *↓ blood in vasc tree -> ↑ SV*
AFib treatment?	*1. Rhythm control:* *-<48 hrs = cardioversion* *->48 hrs = anticoag x21 days then cardioversion or TEE (avoid dislodging clot)* *-amio, flecainide* *2. Rate control:* *-CCB (diltizem, verapamil)* *-BB (metoprolol)* *3. anticoagulation* *-CHADSVASC: >2 = coumadin, 1 = ASA*

Difference between afib and aflutter. What is the tx?	*aflutter: single re-entrant circuit (reg saw tooth), 250-350 bpm* *afib: multiple re-entrant circuits (irreg pattern)* *tx for BOTH:* *-stable: BB vs CCB, anticoagulation* *-unstable: synchronized cardioversion if <48 hrs, otherwise req TEE prior or 21 days anticoag to avoid dislodging clot* *-definitive: ablation*
What murmurs will increase w/ squatting?	*ALL but MVP and HCM* *squatting = ↑ venous return = ↑ flow thru heart* *MVP/ HCM = ↑ flow pushes away defect and murmur ↓*
Harsh, rumbling murmur vs blowing murmur	*harsh, rumbling murmur: stenosis* *blowing murmur: regurgitation*
What murmurs will increase w/ valsalva?	*MVP and HCM* *↑ pressure -> ↓ preload = obstruction of MVP/HCM becomes more prevalent*
Mid systolic crescendo-decrescendo murmur, radiating to carotids. dx? features? tx?	***Aortic stenosis*** *S/sx: syncope, angina, dyspnea* *-mc elderly d/t calcification > bicuspid aortic valve* *-pulsus parvus et tardus: weak, delayed carotid pulse* *Dx: echo* • *LVH, small aortic orifice, calcified valve* • ***critical dz = area <1cm* *Tx: surgery = only effective tx* *-TAVR >>* ***preload dependent = avoid vasodilators and diuretics*

Holosystolic murmur radiating to axilla w/ S3 heart sounds	***Mitral regurgitation*** *-MVP = mc cause in US; rheumatic fever = mc in developing countries* *tx:* *-afterload reduction: ACE/ARB, hydralazine, nitrates* *-valvuloplasty if EF <60% or refractory*
Wide pulse pressure w/ diastolic blowing murmur radiating down LSB that increases in intensity with squatting and leaning forward. what is it a/w? other s/s? tx?	***Aortic regurgitation*** *-a/w marfans, rheumatic, syphilis, inflam, acute MI/dissection* *other s/s:* *-bounding pulses (= water hammer pulse; ↓ blood in vasc tree -> ↑ SV)* *-pulsus bisferiens (bi-peaked pulse wave)* *-Quincke's pulse (fingernail bed pulsations)* *-De Musset's sign (head bobbing w/ heart beat)* *dx:* *1. echo: regurg jet* *2. cath: definitive* *tx:* *-after load reduction: ACE/ARB, nifedipine, hydralazine* *-surgery: definitive (if sx, EF <55%)*
25 yo F w/ intermittent CP, palpitations, and panic attacks x2 wks. On PE, she has a mid-systolic click. Otherwise normal. Unremarkable EKG. Likely dx and tx?	***MVP*** • *Echo for dx* • *tx: BB if symptomatic*
Harsh mid-systolic crescendo-decrescendo murmur loudest at LUSB w/ radiation to neck that increases with inspiration	***Pulmonic stenosis*** *-mc congenital (rubella vs TOF)* *tx: balloon valvuloplasty*
AV blocks	*1°: prolonged PR >0.2s* *2° T1 (Wenkebach): longer, longer, drop* *2° T2: dropped beats w/ fixed PR interval (req PM)* *3°: AV dissociation (req PM)*

Pt presents with HR of 170 bpm. There is a delta wave w/ wide QRS and shortened PR interval on EKG. Dx? tx?



WPW
-intact bundle of kent allowing re-entry tachycardia

tx:
-stable: rhythm control (procainamide >>)
-unstable: synchronized cardioversion
-definitive: ablation

***avoid AV nodal blockers if wide QRS -> can lead to preferential conduction down bunde of kent and worsen tachycardia (ABCD): adenosine, BB, CCB, digoxin*

Pt presents after drinking 5 red bulls w/ sudden onset palpitations w/ HR of 200 bpm that resolves w/in a few minutes. On EKG, there is narrow QRS tachycardia w/ retrograde P waves. Sx resolve w/ carotid massage. Dx? Tx?

AVNRT
-can dx if sx resolve w/ carotid massage

tx:
-carotid massage prn
-adenosine, BB, or CCB if massage fails
-ablation prn

MC ventricular arrhythmia? features? tx?

PVCs
-wide QRS
-absent P wave
-bigeminy: 1 NS to 1 PVC
-trigeminy: 2 NS to 1 PVC

tx if:
-freq PVCs >10% (-> dilated CM)
-runs of conseq. PVCs >3 (-> Vtach)
-multiform PVCs
-a/w MI
-PVCs fall on previous T wave (R on T -> Vtach)

tx: BBs & avoid stimulants

Vtach cause and tx	• *>3 consecutive PVCs at HR >100 bpm* • *mc d/t underlying heart dz (ischemic heart dz > structural defects, CM), prolonged QT, lyte disturbance, dig tox* *tx:* *-stable sustained VT: rhythm control (amio, procainamide)* *-unstable WITH pulse: cardioversion* *-unstable with NO pulse or polymorphic: defibrillation + CPR* *-TDP: IV Mg*
How to dx STEMI on EKG	*>2mm ST elevation in >2 contiguous leads*
35 yo F w/ abrupt onset palpitations and SOB was found to have a narrow complex tachy w/ HR of 180 bpm. They are hemo stable. Dx? tx?	***SVT*** *hemo-stable:* *1. Vagal maneuvers* *2. Adenosine 6mg IV* *3. Adenosine 12 mg IV* *4. Cardioversion* *hemo-unstable:* *-Cardioversion* *definitive:* *-ablation* ***if you can't tell if the bump is a P or T, then it must be SVT*
Torsades De Pointes cause and tx	*cause:* *-prolonged QT interval* *-lyte disturbance (↓ Mg, K)* *-meds: abx (macrolides), digoxin, procainamide, sotalol, antipsychotics, antidepressants, anti-emetics* *tx: IV Mg sulfate*
when should adenosine be used?	*AV nodal blocker = used to terminate SVT* *AVOID if irregular rhythm or ventricular tachycardias*
How to evaluate a pt's risk for clotting?	*CHADS-VASc score:* *0 = no tx or ASA* *1+ = oral anticoagulation*

systolic murmur at LUSB with wide fixed split S2	***ASD*** *1. Ostium secundum (75%): foramen ovale* *2. Ostium primum: on AV valves, a/w DS* *3. Sinus venosus*
79 yo M presents w/ dyspnea. Their EKG shows an tachycardia w/ a narrow QRS and an irregular rhythm with a P wave to each QRS complex. What is the rhythm? What conditions cause it? tx?	*Multifocal atrial tachycardia (MAT)* • *>3 diff P wave morphologies* • *d/t chronic lung dz* *tx: O2, tx underlying condition*
when should the ductus arteriosus and foramen ovale close?	*within 8 weeks of delivery* 1. *disconnection of placenta -> ↑ SVR -> thickening of LV* 2. *crying -> inflation of lungs -> ↓ PVR -> allows more blood to get into lungs d/t pressure gradient -> ↑ blood in LA -> closure of ductus arteriosus and foramen ovale -> thinning of RV* 3. *Infant breathing -> ↑ O2 tension -> ↓ prostaglandins -> stimulates endothelial lining to close ductus arteriosus after birth*
12 wk old presents w/ poor feeding d/t dyspnea w/ associated diaphoresis. On exam, you hear a continuous machinery murmur over LUSB and feel bounding pulses with a widened pulse pressure. dx? tx?	*Patent ductus arteriosus (PDA)* *-↑ blood in lungs -> pulm congestion* *-get Echo and refer!* *tx:* *1. indomethacin (↓ prostaglandins = closes PDA)* *2. Lasix (dry out lungs -> easier to breath/feed)* *3. ACE-i (↓ afterload = relaxes aorta -> ↓ P gradient so less blood shunts back into pulm artery)* *4. surgical ligation, catheter occlusion*
2 yo presents for WCC. You hear an systolic murmur at LUSB and a fixed split S2. They are asx. likely cause? tx?	***ASD*** *-LA -> RA shunting* *-mc = ostium secundum (fossa ovalis)* *-mc asx* *dx: echo, cardiac cath = definitive but rarely done* *tx:*

	-watchful waiting: 40% close by 4 yo *-surgery if patent >4 yo or if >1cm defect* ***may cause paradoxical emboli (CVA from venous clots)*
what are the most common acyanotic congenital heart disease? features?	*1. VSD (holosystolic murmur; sx of pulm congestion)* *2. ASD (wide split S2, few sx)* *3. PDA (continuous murmur, bounding pulses, pulm congestion sx)* *4. COA (weak femoral pulses, tachypnea/shock, UE HTN)*
8 wk old presents w/ worsening SOB w/ poor feeding and weight gain. On exam, there is increased work of breathing, and a holosystolic murmur heard best at LLSB. Baby is acyanotic. CXR shows pulm congestion. dx? tx?	***VSD*** *LV -> RV shunt = ↑ RV volume (cardiomegaly) and pulm congestion* *dx: echo* *tx:* *1. furosemide (dry out lungs)* *2. ACE-i (↓ afterload to ↑ BF to aorta)* *3. nutrition prn* *4. surgery at 4-6 mo*
mc congenital heart defect in a pt w/ down syndrome? s/s?	*AV canal defect* *-asx vs tachy/tachy, diaphoresis w/ feedings, poor wt gain (pulm fluid overload)* *-holosystolic murmur* *-if DS, you get echo at birth d/t high prevalence (40%)* *-also a/w ASD (ostium primum- 30%)*
tetralogy of fallot	*1. VSD* *2. overriding aorta* *3. RVOT obstruction* *4. RVH* *RV -> LV shunt + ↓ blood to lungs + aorta overriding both Vs = ↓ oxygenation of blood -> cyanosis* ***mc cyanotic CHD*

2 yo presents w/ intermittent cyanosis after some feedings and while crying. O2 sat is 84% on room air. On PE, there is a 3/6 harsh systolic murmur loudest at LUSB. likely dx? tx?	***Tetralogy of Fallot (TOF)*** • *"tet" spells: extreme cyanosis, no murmur = emergency* *tx:* *-BB (relaxes outflow tract = blood gets to lungs easier)* *-"tet" spell = squat! (↑ SVR), sup O2*
ddx of widened pulse pressure	• *-PDA (continuous machinery murmur at LUSB, bounding pulse; tx: indomethacin)* • *-aortic regurg (diastolic blowing murmur radiating down LSB; a/w marfans)* • *-shock (hypotension, unstable)* • ***↓ blood in vascular tree*
newborn M is found to have weak femoral pulses bilaterally, but strong brachial pulses bilaterally. What is likely the cause? tx?	***Aortic coarctation*** *-surgical repair at 1 wk old* *-elective stent / surgery if minor or caught at older age* *-associated with turner syndrome*
turner syndrome is a/w what congenital heart malformation? s/s?	*-coarctation of aorta: BP in UE > LE, CXR: notching of ribs* *-bicuspid aorta*
AHA risk factors for ASCVD	*->40yo* *-M* *-tobacco use* *-total cholesterol >200* *-HDL <40* *-SBP >130mmHg* *-current HTN tx* *-DM* *-black* *-1° M w/ CVD <55yo; or 1° F w/ CVD <65yo*
primary CVD prevention guidelines	• *LDL ≥ 190 mg/dL = high intensity statin* • *40-75 yo w/ DM = mod intensity statin; high intensity if other RF* • *40-75 yo w/ LDL btwn 70-189 mg/dL w/o DM = use ASCVD risk calculation* • *-Start statin if >7.5%* • *-mod dose if 7.5-20%* • *-high dose if ^ + RF* • *-high dose if >20%* • *% ↓ in LDL is the strongest predictor of CV benefit -> a 50% reduction should be targeted (usually achieved w/ high intensity statin)*

LDL and TGL tx goal levels	*Extreme ASCVD risk: LDL <55* *Very high risk: LDL <70* *Mod and high risk: LDL <100* *Low risk: LDL <130* *TGL: <150*
what level of TGL is a/w increased risk of pancreatitis?	*>1000* *tx with icosapent ethyl (Vascepa) > fenofibrate, omega-3*
HTN tx goals	*<60 or with DM/CKD: <140/90* *>60 yo w/o DM or CKD: <150/90*
when do you start screening for HTN?	*18 yo*
when do you start screening for HLD?	*men = 35 yo* *women = 45 yo* *begin screening at 20 yo if RF for CVD:* *-HTN* *-DM* *-obesity* *-tobacco use* *-FHx of CVD* *screen q5 yrs*
who gets antibiotic prophylaxis for dental procedures for endocarditis ppx? what do you ppx with?	*ppx w/ amoxicillin in pts w/ prosthetic valves* ***at risk for strep viridans infective endocarditis s/p dental procedure*
prosthestic valve endocarditis cause? tx?	- *staph epidermiditis if <60 days* - *strep if >1 yr post surgery* *tx: "Valve Got Replaced"* *-vanc* *-gentamicin* *-rifampin*
58 yo M w/ moderate HA and blurry vision over the past few hours has a BP of 210/110. What might you find on fundoscopic exam?	*-arteriolar narrowing* *-AV nicking* *-copper/silver wiring* *-dot/flame hemorrhages* *-cotton wool spots* *-hard exudates* *-papilledema (HTN emerg)* *tx: BP control!*

HTN emergency tx	*tx:* *-IV NTG, nitroprusside, labetalol, nicardipine* *-if HTN emergency = ↓ BP by 10-20% in 1st hr and additional 10-15% over next 24 hrs* ***exceptions =* *-aortic dissection & ecclampsia = rapid ↓ in BP* *-CVA = only ↓ if >185/110 if reprofusion candadite and if >220/110 in not*
Pt w/ hx of colorectal cancer presents w/ fever and fatigue x3 days. They are found to have a new heart murmur on exam. TEE shows valvular vegetation. what bug is likely the cause?	- *strep bovis* - ***associated with colorectal cancer*
RF for aortic dissection? dx? tx?	*-HTN* *-cocaine use* *-bicuspid aortic valve* *-CT dz (marfan, ehlers danlos)* *-polycystic kidney dz* *-Male* *-advancing age* *CTA = gold std dx* *tx:* *-type A (ascending): emergency surgery* *-type B (descending): BB to ↓ SBP <120 -> vasodilators (nicardipine or nitroprusside)*
Which electrolyte is increased w/ HCTZ?	*Calcium -> why it needs to be avoided in pts w/ gout & kidney stones*
Absolute and relative CI for use of thrombolytic in STEMI	*absolute CI:* *-hx of hemorrhagic stroke* *-malignant brain tumor* *-ischemic CVA <3mo ago* *-aortic dissection* *-active bleeding / bleeding d/o* *-head trauma <3 mo ago* *relative CI:* *-preg* *-poorly controlled HTN* *-BP >180/110* *-ischemic CVA >3mo* *-PUD*

	-pericarditis *-pregnancy* *-anticoagulation* *-age >75*
initial HTN tx for black vs non-black pts? pregnant pts? CKD?	*- 1st line = lifestyle changes* *black:* *- thiazide* *- CCB* *non-black:* *- ACE/ARB* *- thiazide* *- CCB* *Pregnant:* *- nifedipine (only one that is qd, the rest are BID-TID; mc AE = HA)* *- labetalol* *- hydralazine* *- methyldopa (not very effective but safest)* *CKD: ACE/ARB* ***ACEi are a/w ↑ risk for stroke in black pts & are generally less effective*
what patient population shouldn't use a BB?	*-asthma hx (bronchospasm w/ B2 activity; metoprolol & atenolol are more B2 specific)* *-DM (can mask hypoglycemia)* *-bradycardia*
what things improve outcomes in cardiopulmonary arrest?	*-AED use* *-Early bystander CPR* *-Presenting rhythm: VT or Vfib* *-CPR prior to defibrillation* *-Amiodarone use in shock-resistant VT and Vfib* *-Therapeutic hypothermia*
How to approach work up / tx in a stable vs unstable pt w/ sx of aortic dissection?	*if stable: get CTA (dx) 1st -> surgery consult* *if unstable (hypotension, tachycardia, shock): crystalloids -> TEE* *type A = emergent surgery* *tybe B = BB for SBP <120*

	***anticoag is CI d/t risk of bleeding*
What does hypotension in the setting of aortic dissection usually indicate?	*Cardiac tamponade or aortic rupture*
management of acute HF	*1. supp O2 if <90% -> escalate prn* *2. IV loop diuretic* *3. look for cause & tx* *4. IV NTG (↓ preload + afterload)* *5. IV inotrope (digoxin, dobutamine)* *6. ventricular assist device (fail meds)*
When is NTG contraindicated?	*-SBP<90mmHG* *-brady or tachycardia* *-PDE5i taken <24 hrs prior* *-right V infarction (NTG causes vasodilation -> ↓ preload. heart is dependent on preload in RV MI)*
concentric vs eccentric hypertrophy	*Concentric hypertrophy: d/t ↑ afterload (AS, HTN) -> thickened V compensating by ↑ cardiac muscle w/o increase in cavity size to maintain SV* *Eccentric hypertrophy: d/t volume overload (dilated CM, AR, MR) -> stretched, thin, and weak V that ↑ LV volume w/o ↑ LV pressure to maintain V compliance*
which valve has 2 cusps?	*mitral*
tx of unstable angina?	*MONA-B* *-statin* *-heparin* *-antiplatelet* ***angina w/o elevated cardiac enzymes or EKG changes* *risk stratify via HEART score:* *-Hx, EKG, age, RF, troponins* *- <3 = low risk; outpt f/u* *- 4-6 = intermediate risk* *- 7-10 = high risk* *intermediate-high risk req admitting for observation + non-invasive testing (exercise/chemical stress test, CTA)*

How long post MI does troponin begin to rise? what enzyme rises first?	- *troponin rises 2-3 hrs post MI* - *myoglobin -> troponin -> CKMB* - ***troponin = most sensitive/specific*
what is the mc tachydysrhythmia a/w sinus node dysfunction?	- *Afib > Aflutter, paroxysmal SVT* - *mc d/t SA node dysfunction* - *tx: PM*
what should you evaluate for w/ refractory HTN (2ndary HTN)?	*-CKD* *-renal artery stenosis* *-OSA* *-substances (etoh, cocaine, tobacco)* *-hyperaldosteronism* *-PV* *-thyroid dysfunction* *-cushing dz* *-pheo* *-hyperPT* *-Meds (OCPs, steroids, NSAIDs)* *-DM* *-GN* *initial eval: BMP, CBC, UA, lipid panel, EKG* ***acute onset, new onset HTN in <20yo or >50yo*
35 yo F presents w/ multiple episodes of CP that awaken her from sleep on several early mornings x2 months. EKG after 1 episode showed ST elevation initially that resolved when CP resolved. Coronary angiography was unremarkable. She has no cardiac RF and is otherwise healthy. Dx? tx?	*Prinzmetal angina* *dx criteria:* *1. nitrate responsive angina* *-spontaneous, worse at night/early morning* *2. transient ischemic EKG changes during episodes* *3. coronary artery spasm* *-mc in W <50yo* *tx: CCB or nitrates* ***avoid tobacco, cocaine, triptans*
tx of atrial arrhythmias from hyperthyroidism?	- *propranolol* - *(neg inotrope + inhibits some T4 -> T3 conversion)*
how does the location of the coarctation of the aorta relate to the presentation? tx?	***circulatory failure and shock may occur upon closure of a PDA if located at insertion of coarctation*

	-life-threatening if coarctation is prox to PDA *-most benign = coarctation distal to PDA* ***tx w/ IV Alprostadil (prostaglandin E1) 0.05-0.1 mcg/kg/min to maintain PDA*
what congenital heart defects are dependent on a PDA?	*-Transposition of the great vessels* *-Tetralogy of Fallot* *-Tricuspid atresia* *-Interrupted aortic arch* *-Coarctation of the aorta* *-Hypoplastic left heart syndrome* *Presents with shock, "gray baby" within hours to days after birth* *Acute management: PGE1*
what meds can cause orthostatic hypotension?	*-Antiparkinsonian* *-clonidine, guanfacine* *-anticholinergics* *-antidepressants* *-antiarrhythmics* *-antipsychotics* *-diuretics* *-narcotics* *-sedatives*
What is the INR range in a patient taking warfarin for atrial fibrillation?	*2-3*
what meds can prolong QT interval? tx?	*-antipsychotics* *-antidepressants* *-antibiotics* *-antihistamines* *-antidysrhythmic agents* *tx: BBs*
what meds can increase lipids?	*-thiazides* *-estrogen* *-protease inhibitors (HIV antivirals)* *-BBs*
14 yo presents w/ pectus excavatum. What etiologies are associated with this?	*-Marfans syndrome* *-MVP (up to 60%)* *-↓ exercise capacity* *-scoliosis* *-restrictive lung dz* *-aortic root dilation (Esp if marfans)*

	***get echo if sx or if suspect marfans* *tx: surgery*
what are the classes of antiarrhythmics?	*I: Na channel blockers (procainamide, lidocaine, flecainide) **can prolong PR and QRS* *II: BBs (indirect Ca channel blockers)* *III: K channel blockers (amiodarone)* *IV: CCBs (verapamil, diltiazem)*
G2P1 W at 30 wks gestation presents w/ a DVT. How to anticoagulate?	*LMWH (lovenox/enoxaparin) > UFH* ***neither cross placenta but lovenox has less bleeding & mortality risk in pregnant pts* ***req 6 mo anticoagulation and at least 6 wks PP* ***warfarin is CI in pregnancy*
anticoagulation for pts w/ cancer, pregnancy, BF, liver dz, kidney dz	*cancer: LMWH (enoxaparin) , DOACs (rivaroxaban, apixaban)* *Pregnancy: LMWH* *Breast feeding: heparin vs warfarin* *Liver dz: LMWH* *Renal Dz (CrCl <30): Warfarin*
heart blocks at different locations and their associated arrhythmias	- *SA node block: bradycardia, sinus pause* - *AV node block: 2° T1 AV block (Mobitz 1)* - *His-Purkinje block: 2° T2 AV block (Mobitz 2)* - *LBBB: broad or notched R in V5-6* - *RBBB: R'R in V1-2*
blowing holosystolic murmur best heard at the LLSB, more intense with inspiration. mc cause?	- *Tricuspid regurg* - *↑ right heart pressure (COPD, LHF) >>> IVDU endocarditis*
what murmurs intensify with inspiration?	- *right sided murmurs* - *(tricuspid / pulmonic)*

what pt populations are at risk for atypical ACS presentations?	*-DM* *-women* *-hx of CVA* *-HF* *-elderly* ***up to 1/3 of pts have atypical presentations*
stable angina vs unstable angina vs NSTEMI vs STEMI	*Stable angina:* *-predictable CP w/ activity that resolves w/ rest and NTG* *Unstable angina:* *-unpredictable or worsening CP on exertion, CP at rest* *-EKG changes +/-* *-no troponin elevation* *-suggests ACS* *NSTEMI:* *-troponin elevation* *-ST depression* *-subendocardial ischemia* *STEMI:* *-troponin elevation* *-ST elevation* *-transmural ischemia*
what XR finding might you see in an adult with coarctation of the aorta?	*-notching of ribs* *-"3 sign" (indentation of aorta)*
decrease in the strength of the patient's radial pulse during inspiration	***pulsus paradoxus*** *normal = inhalation -> negative intrathoracic pressure -> increases venous return to R heart* *if R heart is unable to expand to accept increased blood return during inspiration -> decrease blood flow w/ inspiration / ↓ pulses* *-constrictive pericarditis* *-restrictive CM* *-cardiac tamponade* *-PE* *-obstructive lung dz*

who gets screening for AAA?	*Men 65-75yo who have ever smoked via abdominal US* *AAA = dilation >3cm* *monitoring:* *-4.0-4.9 cm: US annually* *-5.0-5.4 cm: US q6 mo* *fix if >5.5 cm or >0.5 cm growth in 6 months*
NY heart association classification for HF	*1: asx* *2: mild sx w/ nml activities* *3: sx w/ minimal activities* *4: sx at rest*
mc AE of amiodarone? monitoring?	*hypotension* *others:* *-blue-gray skin discoloration* *-N/V* *-hypothyroidism* *-pulm fibrosis* *-heart block* *-corneal deposits* *Monitoring:* *-thyroid & liver fxn* *-yearly CXR and eye exams*
who gets 2° ppx for rheumatic heart disease? with what?	*hx of rheumatic fever: 2° ppx against group A Strep (↑ risk of RHD w/ each strep infection)* *-IM penicillin G benzathine q 21-28 days > PCN V PO BID > azithro (PCN alx)* *RF + carditis + residual heart dz: x10 yrs or until 40 yo* *RF + carditis w/o heart dz: x10 yrs or until 21 yo* *RF w/o carditis: x5 yrs or until 21 yo*

	post MI LV free wall rupture *-usually leads to hemopericardium w/ cardiac tamponade*
84 yo F is 4 days s/p anterior MI when she suddenly develops CP, tachypnea, and dyspnea. HR is 115, RR is 26, BP is 85/50. She elevated JVP and distant heart sounds. Lungs are CTA. No new murmur. Likely cause of acute decompensation? tx?	*-RF: MI esp anterior, elderly, female* *-sx: sudden RHF and shock w/in 2 wks post MI* *-dx: emergent echo (diastolic collapse of RV; systolic collapse of RA)* *-tx: emergent pericardiocentesis and hemodynamic support*
When is the greatest risk of sudden death after a MI?	*w/in the first few hours after d/t vtach, vfib, or cardiogenic shock*
what do ABIs results indicate?	*<0.9 = >50% stenosis* *<0.4 = ischemia*
your pt got a lipid panel when they weren't fasting. What levels will increase?	*↑ TGL and LDL* ***only evaluate total cholesterol and HDL*
pericarditis + fever + pleural effusion a few weeks post MI. tx?	*Dressler syndrome* *tx: ASA vs colchicine (↓ inflam- NSAIDs can worsen fibrosis)*
what are some causes of high output heart failure?	*-anemia* *-thyrotoxicosis* *-pregnancy* *-AV fistula* *-paget disease* *-beriberi (thiamin def)*
What med should you stop in a pt in acute decompensated HF?	*BB* *Can potentially worsen HF in decompensated state due to decreasing contractility of the heart*