Achievable

USMLE STEP 1 DUMP SHEET

Cardiovascular and renal drugs

Antihypertensives

Class	Drugs	Adverse effects and notes
ACE inhibitors	Captopril, enalapril, lisinopril	Cough, angioedema, high K; not in pregnancy or bilateral renal artery stenosis
ARBs (AT1)	Losartan, valsartan	High K; rarely cough. Both: diabetes, proteinuria, heart failure
DHP Ca blockers	Nifedipine, amlodipine, nicardipine	Reflex tachycardia, flushing, headache, ankle edema
Non-DHP	Verapamil, diltiazem	Bradycardia, AV block, less contractility; not with β-blockers
β-blockers	Metoprolol, atenolol; propranolol	Bradycardia, AV block, bronchospasm (less if β1-selective)
Central α2	Clonidine, methyldopa	Rebound hypertension (clonidine). Methyldopa: Coombs-positive, pregnancy
Vasodilators	Hydralazine, minoxidil	Reflex tachycardia. Hydralazine: lupus. Minoxidil: hair growth
Nitroprusside	Arteries and veins (NO)	Cyanide toxicity. Emergency: lower at most 25% in hour 1

Anticoagulants and thrombolytics

Drug	Action	Monitor	Reversal and notes
Heparin	Antithrombin: IIa, Xa	aPTT	Protamine; safe in pregnancy
LMWH (enoxaparin)	Antithrombin: Xa more than IIa	Anti-Xa	Partly protamine; cut dose in renal failure
Warfarin	Vitamin K epoxide reductase	INR	Vitamin K, PCC, FFP; teratogen; heparin bridge
Apixaban, rivaroxaban	Direct Xa (fondaparinux: via AT)		Fondaparinux: not in renal failure
Argatroban, dabigatran	Direct thrombin		Argatroban, bivalirudin for HIT; dabigatran: idarucizumab
Alteplase, streptokinase	Plasminogen → plasmin		Tranexamic or aminocaproic acid

Antiarrhythmics

Class	Drugs	Action	Notes
IA	Quinidine, procainamide	Na block; longer ERP, QT	Cinchonism (quinidine), lupus (procainamide)
IB / IC	Lidocaine / flecainide	Na block; ERP shorter / same	Lidocaine, mexiletine: ischemic myocardium
II / IV	Metoprolol / verapamil	Slow SA and AV nodes	Rate control; esmolol IV
III	Amiodarone, sotalol	K block; longer AP, QT	Torsades. Amiodarone: lung fibrosis, thyroid
Adenosine		A1 (Gi): opens K channels	Half-life under 10 s; transient AV block
Digoxin		Na/K-ATPase → more Ca	Yellow halos; worse if low K or Mg, renal failure

Diuretics

- **Loops:** NKCC2. Low K, ototoxicity, gout
- **Thiazides:** NCC. Hypercalcemia, high glucose, urate
- **Spironolactone, amiloride:** high K; spironolactone: gynecomastia
- **Acetazolamide:** acidosis. **Mannitol:** lung edema

Platelets and HIT

- **Aspirin:** irreversible COX-1, no TXA2
- **Clopidogrel, ticagrelor:** P2Y12. **Abciximab:** IIb/IIIa
- **HIT:** anti-PF4 IgG activates platelets: clots
- **Warfarin necrosis:** protein C falls first

Lipid-lowering drugs

- **Statins:** myopathy, worse with gemfibrozil
- **Fibrates:** PPAR-α, lower TG; gallstones
- **Niacin:** flushing (aspirin first), gout
- **Ezetimibe:** NPC1L1. **PCSK9:** evolocumab

Pressors and antianginals

- **Dopamine:** D1 low, β1 mid, α1 high dose
- **Dobutamine:** β1. **Phenylephrine:** α1
- **Nitrates:** lower preload; no sildenafil
- **Ranolazine:** Na. **Ivabradine:** funny current