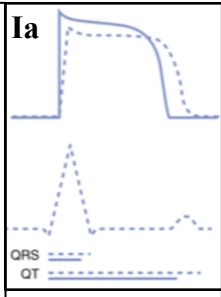
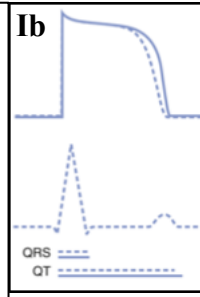


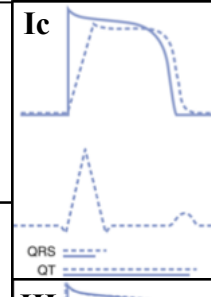
1. Class Ia
MOA: Na Channel blocker- ACTIVATED - Modest K⁺ inhibition ↑ERP, ↑AP
Procainamide – SPVT, VT, WPW – active metabolite NAPA
Quinidine – A. Fib, SPVT, VT
Disopyramide – VT
SE: - All can cause QT prolongation/Torsades
Procainamide – Lupus, Torsades, Vagolytic,
Quinidine – Anticholinergic, torsades, cinchonism, TCP
Disopyramide – anticholinergic, negative inotropy (HF)
CI: Class III, Digoxin (except Procainamide), macrolides, Beta blockers (Disopyramide), cimetidine (Procainamide)



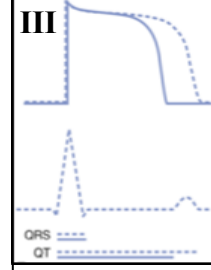
1. Class Ib
MOA: Na Channel blocker- INACTIVATED, rapid dissociation ↓ERP, ↓AP (Normal tissue) ↑ERP, ↑AP (depolarized)
Lidocaine - IV
Phenytoin – CYP inducer
Mexilitene – No first pass effect
Use: VT dysrhythmias (MI), digoxin toxicity
SE: CNS effects, seizures, GI side effects
CI: Beta blockers, cimetidine – CYP3A4 (lidocaine), theophylline (mexilitene), MI



1. Class Ic
MOA: Na Channel blocker- ACTIVATED - slow ↑ERP, ↑AP
Propafenone – hepatic
Flecainide – hepatic
Use: SPVT, VT dysrhythmia, A. Fib
SE: Pro-arrhythmic, prolong QRS, metallic taste, use-depend.
CI: Pts with MI or Ischemia, Class III, β-blockers, CHF

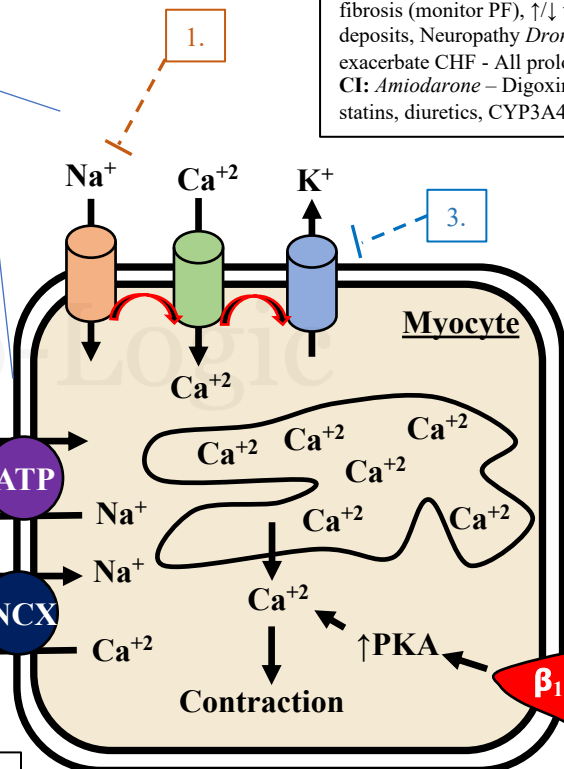
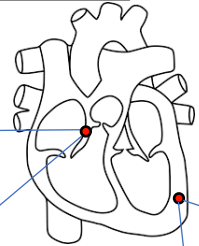
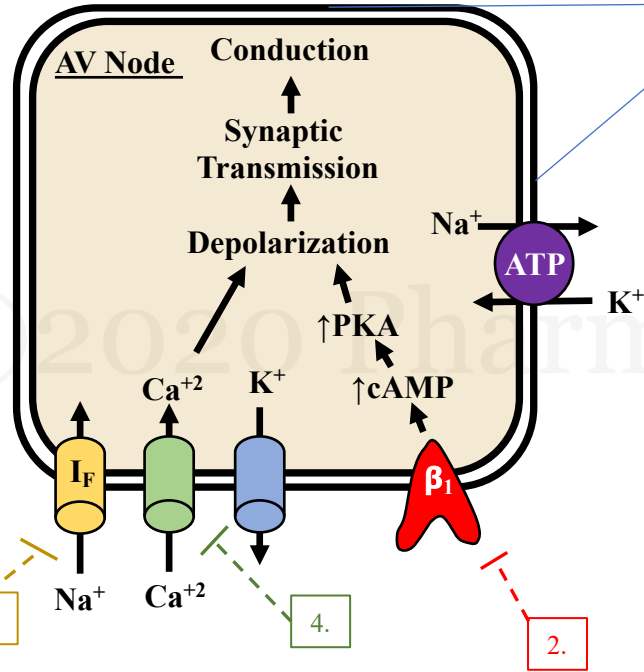
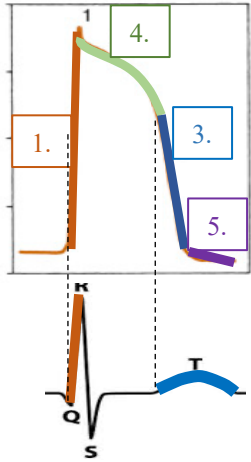


3. Class III
MOA: Block K⁺ Channels ↑ERP, ↑AP
Amiodarone – Class I-IV, LONG t1/2
Dronedaron
Sotalol – Beta-blocker
Dofetilide – Renal elimination, torsades
Use: SPVT, VT, A. Fib (most common)
SE: *Amiodarone* – Heart block, Pulmonary fibrosis (monitor PF), ↑/↓ thyroid, corneal deposits, Neuropathy *Dronedaron* – exacerbate CHF - All prolong QT
CI: *Amiodarone* – Digoxin, Warfarin, statins, diuretics, CYP3A4 inhibitors



Rhythm Control – Class I/III

Class I drug mnemonic:
 Class Ia - Double Quarter Pounder,
 Class Ib - Lettuce and Mayo,
 Class Ic - Fries Please!
Binding strength 1C > 1A > 1B

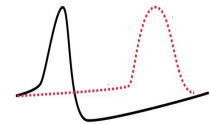


6. Ivabradine
MOA: Pacemaker (current inhibitor (I_i) → ↓HR (not contractility))
Use: angina, arrhythmia
SE: Visual disturbances, AV block
CI: NS CCBs, β-blockers, Sick sinus syndrome

Rate Control – Class II/IV/Digoxin

5. Digoxin
MOA: 1. Inhibition of the Na/K ATPase → ↑Ca²⁺
2. ↑Vagal tone, ↓AV conduction, ↑ANP/BNP
PK: T1/2 = 30 hrs, Elimination = kidney
SE: Arrhythmia (Ca²⁺ overload), activation of the Vagus nerve, Visual disturbances, GI symptoms
CI: Hypokalemia, diuretics (↓K⁺), Calcium supplements (TUMs), Verapamil, Corticosteroids (↓K⁺)
 Antidote – Digifab – Monoclonal antibody

2. Class II - β-Blockers
MOA: ↓SA/AV node conduction ↓Inotropy
Prolong Phase 4 (diastole)
Propranolol – Beta 1&2
Metoprolol – Beta 1
Esmolol – Beta 1
Nebivolol – Beta 1 & NO production
Carvedilol – alpha and beta
Sotalol – Class II & III – A. fib, VT, SE: Long QT
Use: Tachyarrhythmia, PSVT, A. Fib/Flutter (supraventricular arrhythmias)
SE: AV block (↑PR), exacerbate CHF, bronchospasm, exercise intolerance
CI: Verapamil, diltiazem, asthma, Diabetes, K-sparing Diuretics, ACEI, ARB, Systolic failure



4. Class IV - CCBs
MOA: Block Vascular AND cardiac Ca²⁺ channels (AV/SA node inhibition), ↓contractility
Verapamil
Diltiazem
Use: A. Fib, A. Flutter (prevent rapid ventricular response), SPVT
SE: AV block (↑PR), bradycardia, Hypotension, Edema, Gingival hyperplasia, constipation
CI: β-blockers, Digoxin

