





Cardiovascular

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- Acetazolamide
 - Adenosine
 - Amiloride
 - Amiodarone
 - Amlodipine
 - Carvedilol
 - Clonidine
 - Digoxin
 - Diltiazem
 - Dofetilide
 - Enalapril
 - Esmolol
 - Fenoldopam
 - Furosemide
 - Hydralazine

Hydrochlorothiazide

- Labetalol
- Mannitol
- Methyldopa
- Minoxidil
- Nesiritide
- Nitroglycerin
- Nitroprusside
- Propafenone
- Quinidine
- Sotalol
- Spironolactone
- Valsartan
- verapamil

Acetazolamide

- Diuretic
- **Carbonic anhydrase inhibitor**
 - Parasthesia
 - Urinary stone formation
- **Inhibits interconversion of carbonic acid & bicarbonate**
- **↑ NaHCO₃ excretion**
- **Inhibit aqueous humor formation**
- **Hyperchloremic metabolic acidosis**
 - Tx open-angle glaucoma
 - Mtn sickness
 - Metabolic alkalosis

Adenosine

- Antiarrhythmic
 - Transient asystole
- **Purine nucleoside, cardiac node membrane stabilizer**
- **Opens K channels & blocks Ca influx in SA & AV nodes**
- **Slows AV conduction**
- **↑ AV refractory period**
 - Terminate SVT

Amiloride

- K-sparing diuretic
 - Hyperkalemia
- **Epithelial Na channel blocker**
- **Blocks Na Channel distal tubule & collecting duct**
 - **Inhibits Na reabsorption & K excretion**
 - Prevent & Tx hypokalemia

Amidarone

- Antiarrhythmic
- Cardiac ion channel blocker
- **Blocks K, Na, Ca channels & β receptors**
 - Prolongs repolarization
 - \uparrow refractory period
 - Slows HR
 - \uparrow PR & QT intervals
 - SVT, VT, VF
- Hypo/hyperthyroidism
- Photosensitivity
- **Blue-gray skin**
- Corneal microdeposits
- Pulmonary fibrosis

Amlodipine

- Antihypertensive, antianginal
 - **Dihydropyridine Ca channel blocker**
 - **Ca channel blocker in vascular smooth m.**
 - Arteriolar vasodilation & ↑ coronary blood flow
 - HTN
 - Angina pectoris
- HA
 - Edema
 - Hypotension
 - Effects ↑ w/ grapefruit juice

Carvedilol

- Antihypertensive & heart failure Tx
- **Nonselective adrenergic receptor agonist**
- **Blocks β_1 , β_2 , α_1 receptors**
 - Cause vasodilation
 - HTN
 - Heart failure
 - \downarrow remodeling
- Orthostatic hypotension
- Dizziness
- Bradycardia

Clonidine

- Antihypertensive
- α_2 receptor agonist
- Central α_2 receptor agonist
 - ↓ sympathetic outflow from vasomotor center
 - Inhibits pain neurotransmission in spinal cord
 - HTN
 - Opioid w/drawal
- Abrupt w/drawal → severe rebound HTN
- Sedation
- Dry mouth

Digoxin

- Cardiac stimulant
 - **Digitalis glycoside**
 - **Inhibits Na/K ATPase**
 - ↑ **IC Ca & cardiac contractility**
 - ↓ **AV conduction**
 - ↑ **AV refractory period**
- Arrhythmias
 - N, V
 - **Blurred vision**
 - Yellow vision
- Heart failure
 - Serum levels assess dosage & toxicity

Diltiazem

- Vasodilator, antiarrhythmic
- **Non-dihydropyridine Ca channel blocker**
- **Block Ca channels in cardiac tissue & vascular smooth m.**
 - Vasodilation
 - ↓ **HR & conduction**
 - ↓ **contractility**
 - HTN
 - Angina pectoris
 - SVT
- Dizziness
- Hypotension
- Peripheral edema
- Constipation
- **Gingival hyperplasia**
- Grapefruit juice ↑ serum levels

Dofetilide

- Antiarrhythmic
- **K channel blocker**
 - QT prolongation
 - **Torsade de pointes**
- **Blocks delayed K channels in cardiac tissue**
 - **Slows repolarization & prolongs refractory period**
 - **↑ QT interval**
 - AF, A flutter
 - Monitor QT interval during initial dose titration

Enalapril

- Antihypertensive
- ACE inhibitor
- Inhibits ACE & formation of AT II
 - Vasodilation
 - ↓ aldosterone secretion
 - ↑ CO
 - ↓ V remodeling
 - ↑ survival in heart failure
- HTN
- Heart failure
- Post-MI
- ↓ progression of diabetic nephropathy
- Cough & angioedema
 - Inhibits bradykinin degradation
- Hypotension
- Taste disturbances

Esmolol

- Antiarrhythmic
- **Class II**
- **Selective β_1 blocker**
- **Blocks SNS stim. SA & AV nodes**
 - \downarrow **HR**
 - \downarrow **AV conduction**
 - \uparrow **AV refractory period**
 - Sinus tachycardia & SVT during/after surgery
 - **Rapidly metabolized by plasma esterase**
- Hypotension
- Bradycardia

Fenoldopam

- Antihypertensive
- **D1-like receptor agonist**
- **D1 receptor agonist**
 - Arteriolar vasodilation
 - Afferent & efferent renal arterioles
 - ↑ renal blood flow
 - Hypertensive emergencies
- ↓ serum K levels
 - Monitor for hypokalemia

Furosemide

- Loop-acting diuretic
- **Membrane ion transport inhibitor**
- **Inhibits Na/K/2Cl cotransporter in ascending loop of Henle**
 - **Blocks NaCl reabsorption**
 - Edema
 - Heart failure
 - HTN
 - Hypercalcemia
 - ↑ Ca excretion
 - ↑ Na/K exchange in collecting duct
- Hypokalemia
- Metabolic alkalosis
- Hyperuricemia
- Hypomagnesemia
- **↑ ototoxicity of aminoglycoside ABX**

Hydralazine

- Antihypertensive. heart failure
- Vasodilator
- **Alters IC Ca metabolism**
 - Relaxes arteriolar smooth m.
 - vasodilation
 - ↓ afterload
 - Heart failure in combo w/ isosorbide dinitrate
 - *More effective than ACEI in black people*
 - Moderate-severe HTN
- Edema
- Reflex tachycardia & MI
- **Lupus syndrome**

Hydrochlorothiazide

- Antihypertensive
- **Thiazide diuretic**
- **Inhibits NaCl transporter in distal tubule**
 - ↑ excretion Na, K, Cl
 - ↓ Ca excretion
 - HTN
 - Nephrogenic DI
 - Nephrolithiasis
 - Hypokalemia
 - Metabolic alkalosis
 - **Hyperuricemia & gout**
 - ↓ excretion of lithium

Labetolol

- Antihypertensive
- Adrenergic α & β receptor antagonist
- Selective α_1 & nonselective β_1, β_2 blockers
 - HTN
 - Postural hypotension
 - Abrupt w/drawal cause life-threatening HTN, arrhythmias, or MI

Mannitol

- Diuretic
- **Osmotic Diuretic**
- **Osmotic attraction of edematous & ocular fluid**
 - **Filtered by glomerulus**
 - ↑ **electrolyte excretion**
 - Oliguric renal failure
 - Cerebral edema – ↑ ICP
 - Acute glaucoma
- Electrolyte imbalances
- Transient volume expansion
 - Pulmonary edema or heart failure

Methyldopa

- Antihypertensive
- Adrenergic α_2 receptor agonist
- Converted to active form methyl-norepinephrine which activates central α_2 receptor agonist
 - ↓ SNS outflow from vasomotor center
 - HTN
 - HTN in pregnancy
 - Positive direct Coomb's test

Minoxidil

- Antihypertensive, hair growth stimulant
 - **Vasodilator, K channel opener**
 - **Opens K channels in vascular smooth m.**
 - **Hyperpolarization**
 - **m. relaxation**
 - **vasodilation**
 - **Stim. resting hair follicle → growth follicles**
 - Severe HTN
 - Topical for alopecia
- Systemic admin.
 - Reflex tachycardia
 - Angina pericarditis
 - Pulmonary HTN
 - **hypertrichosis**

Nesiritide

- Heart failure Tx
- **Recombinant human B-type natriuretic peptide**
- **Activate guanylate cyclase → ↑ cGMP**
 - Dilates venous & arterial smooth m.
 - ↓ venous pressure, cardiac preload, vascular congestion, & dyspnea
 - Decompensated heart failure
 - Hypotension

Nitroglycerin

- **Antianginal**
- **Organic nitrate**
- **Releases NO in vascular smooth m.**
 - **Vasodilation**
 - **↑ coronary blood flow**
 - **↓ myocardial O₂ demand**
 - Angina pectoris
 - Sublingual or lingual admin.
 - Short half-life
- HA
- Hypotension
- **Syncope**
- Reflex tachycardia
- ↑ vasodilative effect of sildenafil, tadalafil, vardenafil

Nitroprusside

- Antihypertensive
- Vasodilator
- Relaxes venous & arteriolar smooth m.
 - *Metabolized to CN & thiocyanate*
 - *Tx toxicity w/ sodium nitrite & sodium thiosulfate*
 - HTN crisis
 - Acute heart failure or cardiogenic shock
 - Controlled hypotension during pregnancy
- **CN toxicity**
- Hypotension
- HA

Propafenone

- Antiarrhythmic
- **Class IC Na channel blocker**
- **Blocks Na channel in cardiac tissue**
 - ↓ conduction & prevent re-entry
 - ↑ PR, QRS, & QT duration
 - SVT & life-threatening V arrhythmias
- **Proarrhythmic 1st 2 wks**
 - Monitor ECG when starting Tx
- GI disturbances
- ↑ digoxin levels

Quinidine

- Antiarrhythmic
- **Class IA Na channel blocker**
- **Blocks Na & K channels in cardiac tissue**
 - ↓ **conduction**
 - ↑ **QRS & QT duration**
 - SVT & VT
 - D-isomer = quinine, used to treat malaria pts
- **Cinchonism**
 - Blurred vision
 - Tinnitus
 - Photophobia
- ↑ levels w/
 - Amiodarone
 - Cimetidine
 - Diltiazem
 - Verapamil
 - Grapefruit juice

Sotalol

- Antiarrhythmic
 - Torsades de pointes
- **Class III K channel blocker**
- **Blocks K channels in cardiac tissue**
 - Prolongs repol.
 - ↑ refractory period & ↑ QT interval
- **Blocks adrenergic β receptors**
 - SVT & life-threatening arrhythmias

Spirolactone

- K-sparing diuretic
- Aldosterone antagonist
- Blocks aldosterone receptors
 - ↑ Na excretion
 - ↓ K excretion
 - Primary hyperaldosteronism
 - HTN
 - hypokalemia
 - Gynecomastia
 - Impotence
 - Hyperkalemia

Valsartan

- Antihypertensive
- **Angiotensin receptor antagonist**
- **Blocks AT II receptor in vascular smooth m. & adrenal cortex**
 - Vasodilation & ↓ aldosterone secretion
 - HTN
 - Nephropathy
 - *Less cough & angioedema than ACEI*

Verapamil

- Antihypertensive, antianginal
- **Non-dihydropyridine Ca channel blocker**
- **Blocks Ca channels in cardiac m. & vascular smooth m.**
 - Vasodilation
 - ↓ HR & conduction
 - ↓ contractility
 - Suppress contractility more than other Ca channel blockers
 - HTN
 - Angina pectoris
 - SVT
 - Prevent migraine HA
- **Peripheral edema**
- Constipation
- Gingival hyperplasia