

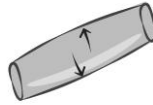
## Cardiovascular Pharmacology

### Hypertension — SVR, CO, REDUCE BLOOD VOLUME

#### VASODILATORS

##### ACE inhibitors ("pril")

- First line therapy.
- Protects against diabetic nephropathy.
- Contraindications: asthma, pregnancy, bilateral renal stenosis.



##### Angiotensin II receptor blockers (ARBs) ("sartan")

- Contraindications: Pregnancy, bilateral renal stenosis.

##### Ca 2+ blockers ("pine")

- Dihydropyridines are first line therapy.
- Elderly, Af. American.



##### Hydralazine

- Use in severe hypertension.

#### REDUCE CARDIAC OUTPUT

##### β-blockers ("lol")

- Contraindications: bradycardia, AV nodal block; caution in diabetic patients.
- Don't use non-selective β-blockers in asthma, COPD.

#### INC. URINE OUTPUT

##### Thiazide diuretics ("ide")

- First line therapy.
- Contraindications: sulfa allergies.

##### Aldosterone antagonists ("one")

- Use in resistant hypertension.
- Contraindications: pregnancy.



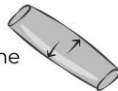
## Cardiovascular Pharmacology

### Angina

#### REDUCE O<sub>2</sub> DEMAND/SUPPLY RATIO

##### VASODILATORS

- Nitroglycerine



##### CARDIOINHIBITORY DRUGS

- β-blockers
- Ca 2+ blockers (non-dihydropyridine)



##### SODIUM CURRENT BLOCKER

- Ranolazine
  - Reduce wall tension; Improve coronary blood flow



##### ANTI-THROMBOTIC DRUGS

- Anti-platelets
- Anti-coagulants



## Cardiovascular Pharmacology

### Heart Failure Reduced EF

IMPROVE CARDIAC FUNCTION, RELIEVE SYMPTOMS

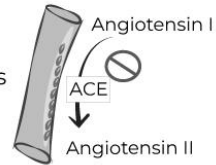
#### INC. URINE OUTPUT

- Diuretics
- Aldosterone antagonists



#### VASODILATORS

- ACE inhibitors
- ARBs



#### CARDIOINHIBITORY

- $\beta$ -blockers (when stable)
- Ivabradine (Persistent HR >70bpm)



#### INOTROPIC

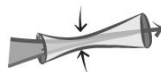
- Digitalis
- Contraindications: hypokalemic, AV block, Reduced renal function.



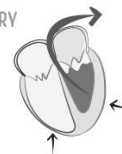
## Cardiovascular Pharmacology

### Hypotension — INCREASE SVR, CO

VASOCONSTRICTORS  
 $\alpha$ -agonists



CARDIOSTIMULATORY  
 $\beta$ -agonists

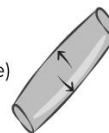


### Myocardial Infarction — REDUCE O<sub>2</sub> DEMAND/SUPPLY RATIO



#### RESTORE CORONARY BLOOD FLOW

- Thrombolytic, anti-platelet drugs
- Vasodilators (nitroglycerine)



#### REDUCE O<sub>2</sub> DEMAND

- $\beta$ -blockers

#### OTHERS

- Morphine
- Anti-arrhythmias
- Diuretics