

- **Adrenergic agonist drugs**

- **Objectives**

- Discuss the pharmacology of catecholamines
- Classify & describe adrenergic  $\alpha$ -agonists including actions, therapeutic uses & adverse –reactions.

- Classify & describe adrenergic  $\beta$ -agonists including actions, therapeutic uses & adverse –reactions
- Adrenergic transmission
- Catecholamines - Epinephrine ( $\alpha_1\alpha_2\beta_1\beta_2$ ), Norepinephrine ( $\alpha_1\alpha_2\beta_1$ ), Isoproterenol ( $\beta_1\beta_2$ )
  
- **Adrenaline-  $\alpha_1 \alpha_2 \beta_1 \beta_2$**   
Other catecholamines

Noradrenaline ( $\alpha_1$   $\alpha_2$   $\beta_1$  ) is used in severe shock

- NA adverse effects are similar to adrenaline. In addition NA causes severe sloughing of skin due to vasoconstriction
- Dobutamine( $\beta_1$ ) is preferred in Acute congestive heart failure
- Dopamine- ( $\alpha$ ,  $\beta_1$ , D ) -used in cardiogenic & septic shock-
- **Therapeutic classification of adrenergic drugs**
- **Ephedrine**

- Phenylephrine
- **Nasal decongestants**
- **Amphetamine**

- **Anorectics**

- **Clonidine**

- **$\beta_2$  adrenergic agonist**
- **Uterine relaxants**

- **Summary of**

**Sympathomimetics –**

**$\alpha$ - agonist**

- **Summary of  $\beta$ - Agonists**
- **References-**

- Lippincotts Illustrated pharmacology
- Katzung Basic & Clinical Pharmacology