

Learning unit: Antihypertensives

Relevant terms

First-line antihypertensives

- Angiotensin-converting enzyme (ACE) inhibitors
 - see Learning unit **Drugs influencing RAAS**
- Angiotensin (AT1) receptor blockers
 - see Learning unit **Drugs influencing RAAS**
- Calcium channel blockers, dihydropyridines
 - see Learning unit **Vasodilators**
- Diuretics
 - thiazides, loop diuretics, potassium-sparing diuretics, aldosterone receptor blockers
 - see Learning unit **Drugs affecting diuresis**
- Beta blockers (beta-lytics)
 - see Learning unit **Drugs influencing myocytes - drugs with negative chronotropic effects**

Second-line antihypertensives

- Central antihypertensives
 - Central alpha2 receptor agonists
 - see Learning unit **Sympathotropic agents**
 - methyldopa
 - clonidine
 - Agonists of imidazoline I1 receptors
 - moxonidine
 - rilmenidine
 - Combined agonists of central alpha2 receptors and antagonists of peripheral alpha1 receptors
 - urapidil
 - Peripheral alpha1 receptor blockers (alpha1-lytics)
 - terazosin
 - doxazosin
 - see Learning unit **Sympathotropic agents**
- Nitrates and NO donors
 - see Learning unit **Vasodilators**
- Renin inhibitors
 - see Learning unit **Drugs influencing RAAS**

hypertension in pregnancy (pre-existing and gestational hypertension)

- methyldopa
- labetalol

hypertensive crisis

- furosemide
- urapidil
- nitrates
- clonidine

Learning outcomes

Student describes pharmacological profiles (mechanisms of action, adverse effects, indications and contraindications) of antihypertensive drugs.

Student gives the list of first-line antihypertensives and second-line antihypertensives.

Student provides the list of antihypertensives available for the pharmacotherapy of hypertension in pregnancy, in patients with diabetes mellitus/metabolic syndrome.

Student explains the principles of combination therapy of hypertension.

Student gives examples of drugs used in the therapy of hypertensive crisis.

Recommended literature

Rang & Dale's Pharmacology, 9th edition, 2020, Chapters 22-23

Study materials in the IS – subject codes aVLFA0822c and aVLFA0822p

Exam questions

Special pharmacology: 53. Beta blockers and central antihypertensives, 54. Calcium channel blockers, alpha1-lytics

Essential drugs: 7. amlodipine, 25. doxazosin, 39. furosemide, 46. indapamide, 51. isosorbide dinitrate, 73. methyldopa, 75. metoprolol, 91. perindopril, 101. spironolactone, 105. telmisartan