

Learning unit: Vasodilators

Relevant terms

calcium channel blockers

- vasoselectivity
- reflex tachycardia
- dihydropyridines
 - short half-life drugs, less vasoselective
 - **nifedipine** (SR only – slow release)
 - medium-long half-life drugs
 - **felodipine**
 - long half-life drugs, highly vasoselective
 - **amlodipine**
- non-dihydropyridines
 - diltiazem
 - verapamil

nitrites and NO donors

- nitrites
 - rescue therapy
 - glycerol **trinitrite** (nitroglycerin)
 - tachyphylaxis
 - isosorbide **dinitrite** (ISDN)
 - chronic therapy
 - isosorbide **dinitrite** (ISDN)
 - controlled release
 - isosorbide **mononitrite** (ISMN)
 - tolerance
 - controlled release
- NO donors
 - molsidomine

PDE-5 inhibitors

- **sildenafil**
- **avanafil**
- **tadalafil**

endothelin-1 antagonists

prostacyclin synthetic analogues

Learning outcomes

The student knows the basic strategies how to induce vascular smooth muscle relaxation. The student knows particular drug groups classified as vasodilators (list the most important drugs in particular groups), knows their detailed mechanisms of action, indications, contraindication and adverse drug effects.

Study literature

Rang & Dale's Pharmacology, Humphrey Rang 9th edition, 2020, chapter 23 (pg. 290)

Study materials for courses aVLFA0822p and aVLFA0822c.

Exam questions

Special pharmacology: 50. Nitrates and other vasodilators, 54. Calcium channel blockers, α 1 lytics, 62. Drugs used in erectile dysfunction and BPH

Essential drugs: 51. isosorbid-dinitrate/nitroglycerin, 7. amlodipine, 110. verapamil, 99. sildenafil