

Indoor Cycle Instructor's Reference Guide to Common Antihypertensive Medications

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	Examples - Generic	Mechanism of action	Usual effect on HR	Common adverse effects	RPE vs. HRM
Diuretics					
Loop	furosemide bumetande ethacrynic acid torsemide	Inhibit sodium and chloride reabsorption on Na ⁺ /K ⁺ /2CL ⁻ cotransporter in kidney	Occasionally increases , as a compensation for decreased plasma volume	Low potassium, orthostatic hypotension, renal injury	RPE
Thiazide	chlorthalidone hydrochlorothiazide	Inhibit sodium and chloride reabsorption on NaCl cotransporter in distal kidney	Occasionally increases . See above.	Low potassium	RPE
Potassium-sparing	spironolactone amilioride	Blocks aldosterone, increases secretion of water and sodium	Decrease	Rash, gynecomastia, GI upset	RPE
ACE Inhibitors					
	lisinopril captopril enalapril ramipril	Blocks angiotensin converting enzyme, a step in the pathway to vasoconstriction	None	Cough, angioedema, kidney injury in chronic kidney disease, hypotension, dizziness	HRM
Angiotensin Receptor Blockers					
	losartan valsartan irbesartan telmisartan	Blocks a later step in the pathway to vasoconstriction	Occasionally decreases but less likely	Hypotension, diarrhea, dizziness	HRM
Calcium channel blockers					
Dihydropyridines	amlodipine nifedipine	Block calcium entry into cells, reducing contraction. More direct effect on vessels	Increase to compensate for potent vasodilation	GI upset, headache, flushing, edema	RPE
Non-dihydropyridines	verapamil diltiazem	See above, more effect on heart than vessels.	Decrease	GI upset, headache, excessive bradycardia	RPE
Beta blockers					
Non-selective	propranolol labetalol (+alpha) carvediol (+alpha)	Blocks B1 and B2 adrenergic receptors of sympathetic nervous system	Decrease	Bronchospasm (avoid in asthma), orthostatic hypotension, exercise intolerance	RPE
B1-selective	Atenolol metoprolol	Blocks B1 adrenergic receptors as above, more specific to heart	Decrease	Orthostatic hypotension, excessive bradycardia, exercise intolerance	RPE

Notes

* For many generic drugs, there are multiple brand name forms. The brand names listed here are not inclusive. If your client mentions a brand name drug you do not recognize, Google it for its generic equivalent

* Many antihypertensive medications are prescribed in the form of a brand name combination with another antihypertensive medication (or a medication for another indication). Be sure to identify the generic components of a combination drug in order to derive maximum benefit from this reference

Reference

Micromedex® Healthcare Series: DRUGDEX® Drug Point. Thomson Reuters. 2010. www.thomsonhc.com/