

# Capital Health

P L A N<sup>SM</sup>



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## Management of High Blood Pressure in Adults 2022

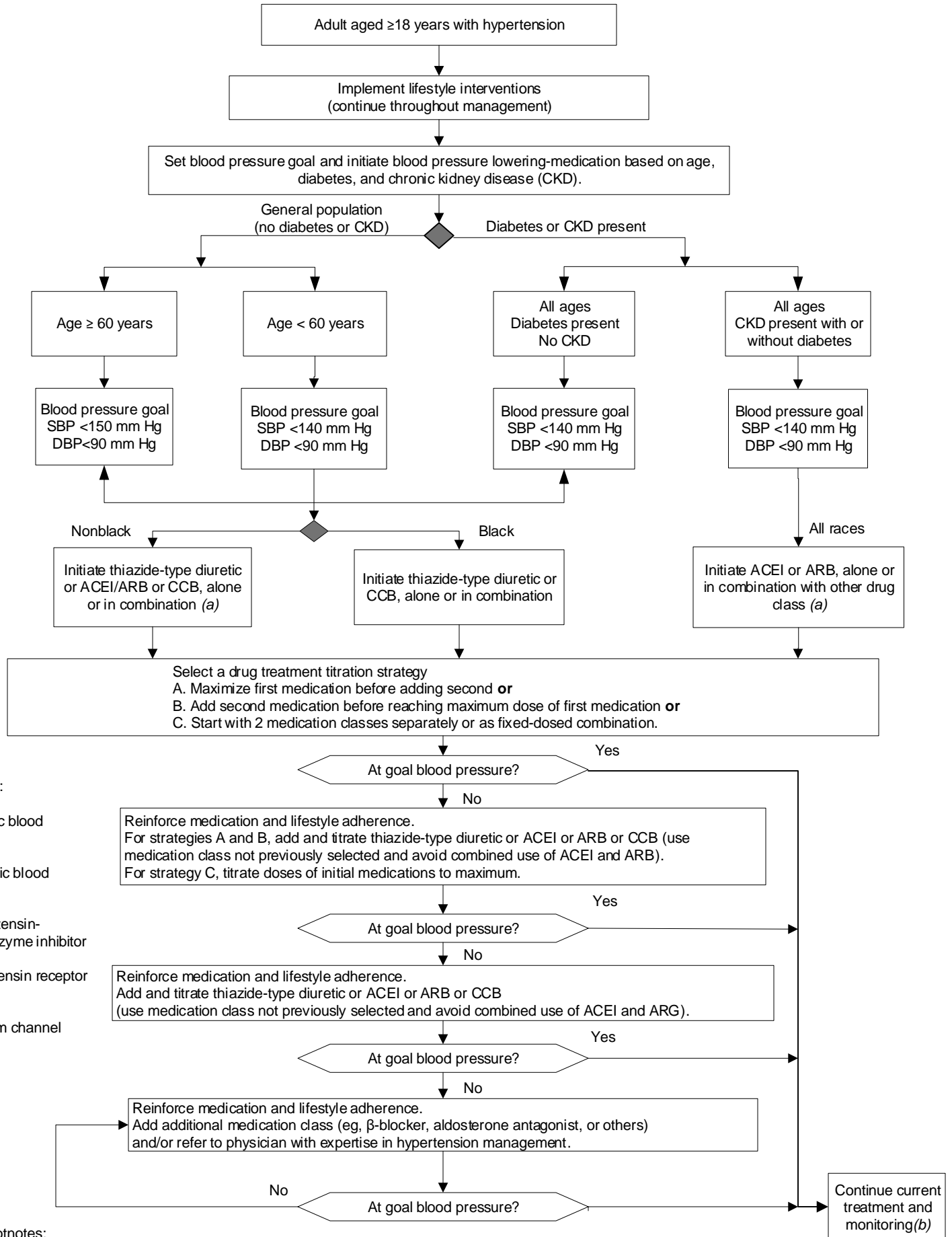
**Based on the Report from the Panel Members Appointed to the  
Eighth Joint National Committee (JNC8)**

James, P. A. (2014, February 05). 2014 Guideline for Management of High Blood Pressure. Retrieved April 30, 2018, from <https://jamanetwork.com/journals/jama/fullarticle/1791497>

Adapted by Capital Health Plan

Approved by Quality Improvement Committee: 4/20/07, 3/10/09,  
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# JNC8 Hypertension Guideline Management Algorithm



**Abbreviations:**

**SBP** – systolic blood pressure

**DBP** – diastolic blood pressure

**ACEI** – angiotensin-converting enzyme inhibitor

**ARB** – angiotensin receptor blocker

**CCB** – calcium channel blocker

**Footnotes:**

(a) ACEIs and ARBs should not be used in combination.

(b) If blood pressure fails to be maintained at goal, reenter the algorithm where appropriate based on the current individual therapeutic plan.

# Hypertension Treatment

Compelling Indications	
Indication	Treatment Choice
Heart Failure	ACEI/ARB + BB + diuretic + spironolactone
Post –MI/Clinical CAD	ACEI/ARB AND BB
CAD	ACEI, BB, diuretic, CCB
Diabetes	ACEI/ARB, CCB, diuretic
CKD	ACEI/ARB
Recurrent stroke prevention	ACEI, diuretic
Pregnancy	labetolol (first line), nifedipine, methyldopa

**Beta-1 Selective Beta-blockers** – possibly safer in patients with COPD, asthma, diabetes, and peripheral vascular disease:

- metoprolol
- bisoprolol
- betaxolol
- acebutolol

Drug Class	Agents of Choice	Comments
Diuretics	HCTZ 12.5-50mg, chlorthalidone 12.5-25mg, indapamide 1.25-2.5mg triamterene 100mg <i>K<sup>+</sup> sparing</i> – spironolactone 25-50mg, amiloride 5-10mg, triamterene 100mg  furosemide 20-80mg twice daily, torsemide 10-40mg	Monitor for hypokalemia Most SE are metabolic in nature Most effective when combined w/ ACEI Stronger clinical evidence w/chlorthalidone Spironolactone - gynecomastia and hyperkalemia Loop diuretics may be needed when GFR <40mL/min
ACEI/ARB	<i>ACEI</i> : lisinopril, benazapril, fosinopril and quinapril 10-40mg, ramipril 5-10mg, trandolapril 2-8mg <i>ARB</i> : candesartan 8-32mg, valsartan 80-320mg, losartan 50-100mg, olmesartan 20-40mg, telmisartan 20-80mg	SE: Cough (ACEI only), angioedema (more with ACEI), hyperkalemia Losartan lowers uric acid levels; candesartan may prevent migraine headaches
Beta-Blockers	metoprolol succinate 50-100mg and tartrate 50-100mg twice daily, nebivolol 5-10mg, propranolol 40-120mg twice daily, carvedilol 6.25-25mg twice daily, bisoprolol 5-10mg, labetalol 100-300mg twice daily,	Not first line agents – reserve for post-MI/CHF Cause fatigue and decreased heart rate Adversely affect glucose; mask hypoglycemic awareness
Calcium channel blockers	<i>Dihydropyridines</i> : amlodipine 5-10mg, nifedipine ER 30-90mg, <i>Non-dihydropyridines</i> : diltiazem ER 180-360 mg, verapamil 80-120mg 3 times daily or ER 240-480mg	Cause edema; dihydropyridines may be safely combined w/ B-blocker Non-dihydropyridines reduce heart rate and proteinuria
Vasodilators	hydralazine 25-100mg twice daily, minoxidil 5-10mg  terazosin 1-5mg, doxazosin 1-4mg given at bedtime	Hydralazine and minoxidil may cause reflex tachycardia and fluid retention – usually require diuretic + B-blocker  Alpha-blockers may cause orthostatic hypotension
Centrally-acting Agents	clonidine 0.1-0.2mg twice daily, methyldopa 250-500mg twice daily  guanfacine 1-3mg	Clonidine available in weekly patch formulation for resistant hypertension