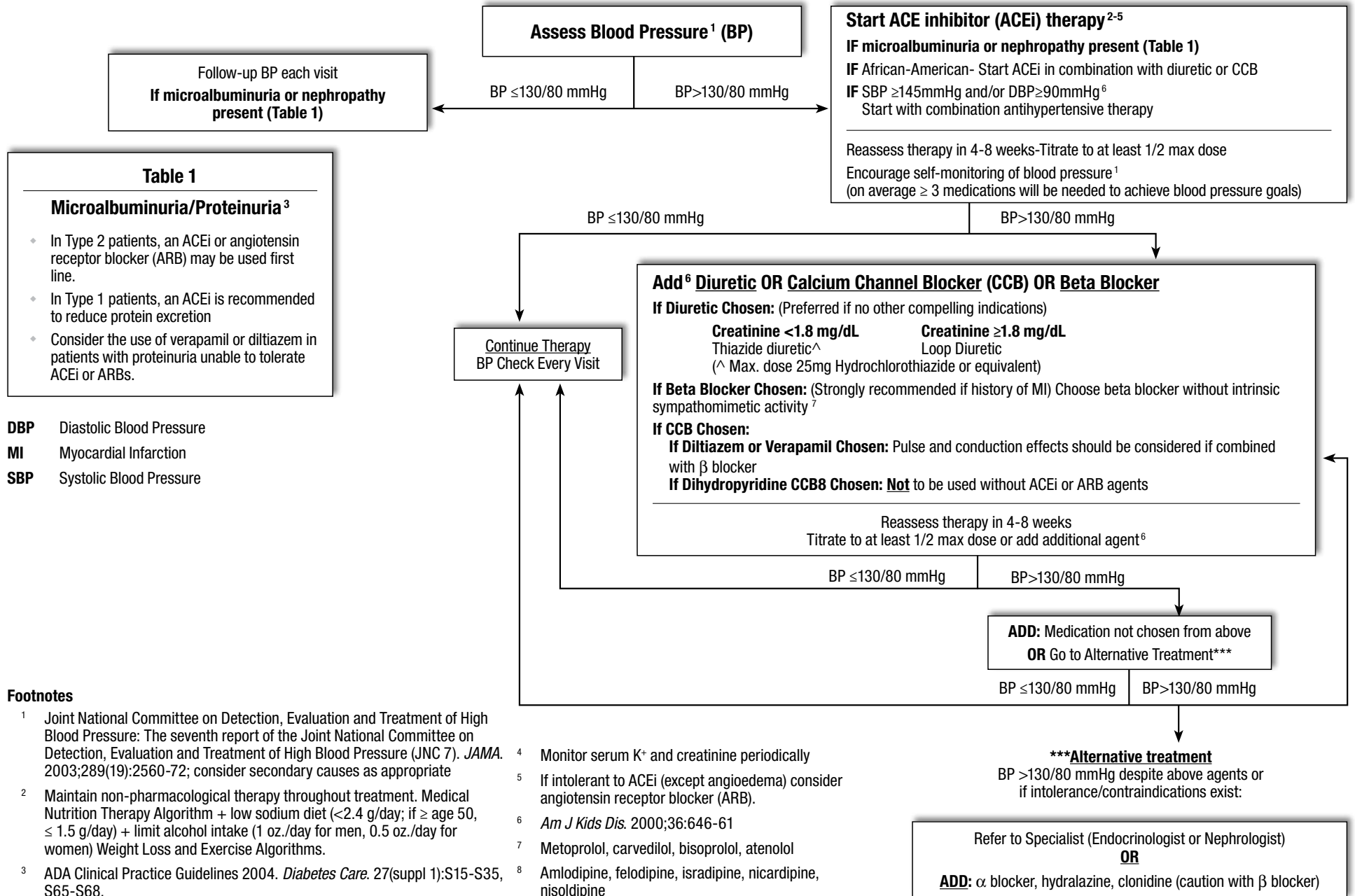


Hypertension Algorithm for Diabetes in Adults



Footnotes

¹ Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure: The seventh report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC 7). *JAMA*. 2003;289(19):2560-72; consider secondary causes as appropriate

² Maintain non-pharmacological therapy throughout treatment. Medical Nutrition Therapy Algorithm + low sodium diet (<2.4 g/day; if ≥ age 50, ≤ 1.5 g/day) + limit alcohol intake (1 oz./day for men, 0.5 oz./day for women) Weight Loss and Exercise Algorithms.

³ ADA Clinical Practice Guidelines 2004. *Diabetes Care*. 27(suppl 1):S15-S35, S65-S68.

⁴ Monitor serum K⁺ and creatinine periodically

⁵ If intolerant to ACEi (except angioedema) consider angiotensin receptor blocker (ARB).

⁶ *Am J Kids Dis*. 2000;36:646-61

⁷ Metoprolol, carvedilol, bisoprolol, atenolol

⁸ Amlodipine, felodipine, isradipine, nicardipine, nisoldipine

HYPERTENSION ALGORITHM FOR DIABETES IN ADULTS

Proper blood pressure assessment

National Committee on Detection, Evaluation and Treatment of High Blood Pressure: *The Seventh Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC 7)*. National Institutes of Health, National Heart, Lung and Blood Institute, 2003 <http://www.nhlbi.nih.gov/guidelines/hypertension/>

ACE inhibitor as 1st line therapy in Diabetes Mellitus

National Committee on Detection, Evaluation and Treatment of High Blood Pressure: *The Seventh Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC 7)*. National Institutes of Health, National Heart, Lung and Blood Institute, 2003 <http://www.nhlbi.nih.gov/guidelines/hypertension/>

Kasiske BL, Kalil RS, Ma JZ, et al.: Effect of antihypertensive therapy on the kidney in patients with diabetes: a meta-regression analysis. *Ann Intern Med* 118:129–38, 1993

UK Prospective Diabetes Study Group: Efficacy of atenolol and captopril in reducing the risk of macrovascular complications in type 2 diabetes (UKPDS 39) *BMJ* 317:713–20, 1998

The Heart Outcomes Prevention Evaluation Study. Effects of an ACE inhibitor, ramipril, on cardiovascular events in high risk patients. *N Engl J Med* 342:145–53, 2000

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Wing LMH, Reid CM, Ryan P, et al. A comparison of outcomes with angiotensin-converting-enzyme inhibitors and diuretics for hypertension in the elderly (ANBP2). *N Engl J Med* 348:583–92, 2003

Diuretic as second line

National Committee on Detection, Evaluation and Treatment of High Blood Pressure: *The Seventh Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC 7)*. National Institutes of Health, National Heart, Lung and Blood Institute, 2003 <http://www.nhlbi.nih.gov/guidelines/hypertension/>

Antihypertensive & Lipid Lowering Treatment to Prevent Heart Attack (ALLHAT) *JAMA* 288:2981–97, 2002

Beta-Blocker as second line

National Committee on Detection, Evaluation and Treatment of High Blood Pressure: *The Seventh Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC 7)*. National Institutes of Health, National Heart, Lung and Blood Institute, 2003 <http://www.nhlbi.nih.gov/guidelines/hypertension/>

UK Prospective Diabetes Study Group: Efficacy of atenolol and captopril in reducing the risk of macrovascular complications in type 2 diabetes (UKPDS 39) *BMJ* 317:713–20, 1998

Hansson L, Lindholm LH, Niskanen L, et al. Effect of angiotensin converting-enzyme inhibition compared with conventional therapy on cardiovascular morbidity and mortality in hypertension: the Captopril Prevention Project (CAPPP) randomised trial. *Lancet* 353: 611–16, 1999

Verapamil or Diltiazem

Hansson L, Hedner T, Lund-Johansen P, et al. Randomized trial of effects of calcium antagonists compared with diuretics and beta-blockers on cardiovascular morbidity and mortality in hypertension. NORDIL. *Lancet* 356:359–65, 2000

Bakris GL, Copley JB, Vicknair N, et al. Calcium channel blockers versus other antihypertensive therapies on progression of NIDDM associated nephropathy. *Kidney Int* 50:1641–50, 1996

Dihydropyridine calcium channel blockers

Tuomilehto J, Rastenyte D, Birkenhager WH, et al. Effect of calcium channel blockage in older patients with diabetes and systolic hypertension. *N Engl J Med* 340:677–84, 1999

Dahlof B, Sever P, Poulter N, et al. Prevention of cardiovascular events with an antihypertensive regimen of amlodipine adding perindopril as required versus atenolol adding bendroflumethiazide as required, in the Anglo-Scandinavian Cardiac Outcomes Trial-Blood Pressure Lowering Arm (ASCOT-BPLA): a multicentre randomised controlled trial. *Lancet* 366: 895–906, 2005

Estacio RO, Jeffers BW, Hiatt WR, et al. The effect of nisoldipine as compared with enalapril on cardiovascular outcomes in patients with non-insulin-dependent diabetes and hypertension. *N Engl J Med* 338:645–52, 1998

Alpha-Blockers

Major cardiovascular events in hypertensive patients randomized to doxazosin vs chlorthalidone. (ALLHAT Data) *JAMA* 283:1967–75, 2000

Blood Pressure Goal <130/80

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Urine Protein Excretion >1 gram/ 24 hour BP goal <125/75

Peterson JC, Adler S, Burkart JM, et al. Blood pressure control, proteinuria, and the progression of renal disease. The Modification of Diet in Renal Disease Study. *Ann Intern Med* 123:754–62, 1995

Angiotensin Receptor Blockers

Renoprotective effect of the angiotensin-receptor antagonist irbesartan in patients with nephropathy due to type 2 diabetes. *N Engl J Med* 345: 851–60, 2001

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African Americans

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