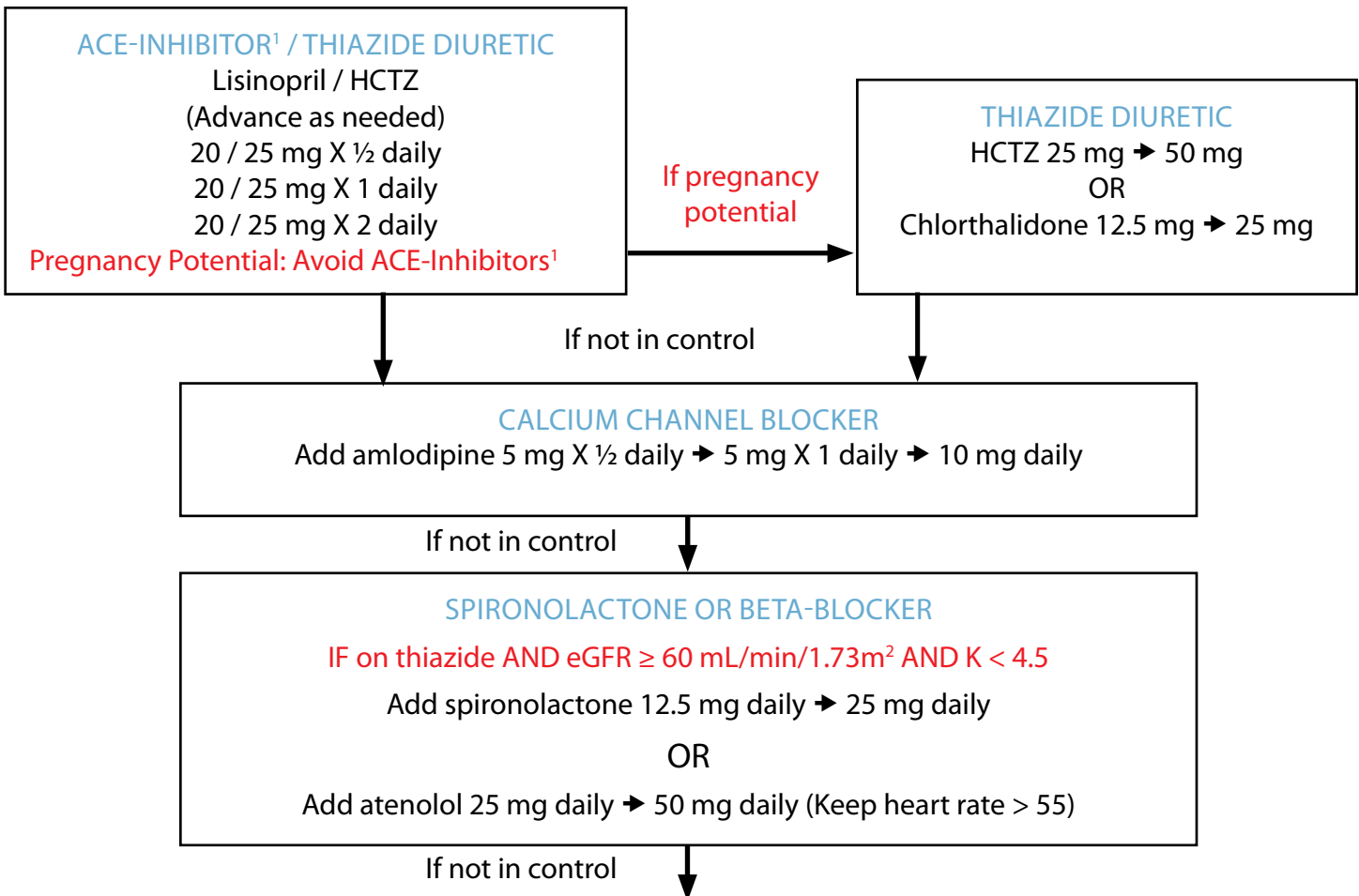


Adult Hypertension

BLOOD PRESSURE (BP) GOAL

≤ 139 / 89 mm Hg – All Adult Hypertension

NNT CVA² = 63
 NNT MI² = 86
 NNT CVA or MI² = 36



- Consider medication non-adherence.
- Consider interfering agents (e.g., NSAIDs, excess alcohol).
- Consider white coat effect. Consider BP checks by medical assistant (e.g., two checks with 2 readings each, 1 week apart).
- Consider discontinuing lisinopril / HCTZ and changing to chlorthalidone 25 mg plus lisinopril 40 mg daily. Consider additional agents (hydralazine, terazosin, reserpine, minoxidil).
- Consider stopping atenolol and adding diltiazem to amlodipine, keeping heart rate > 55.
- Avoid using clonidine, verapamil, or diltiazem together with a beta blocker. These heart-rate slowing drug combinations may cause symptomatic bradycardia over time.
- Consider secondary etiologies.
- Consider consultation with a hypertension specialist.

1. ACE-Inhibitors are contraindicated in pregnancy and not recommended in most child-bearing age women.
 2. NNT = number needed to treat to prevent one event, maintaining hypertension control for at least 5 years.

- Medication up-titrations are recommended at 2-4 week intervals (for most patients) until control is achieved. Consider follow-up labs when up-titrating or adding lisinopril/HCTZ, chlorthalidone, HCTZ, or spironolactone.
- Use lipid lowering therapy according to Dyslipidemia Management in Adults guideline: <http://cl.kp.org/pkc/national/cmi/programs/dyslipidemia/guideline/index.html>
- If pregnant, refer to OB/GYN for hypertension management. If on ACE-Is or ARBs, discontinue immediately.

LIFESTYLE CHANGES ARE RECOMMENDED FOR ALL PATIENTS:

- ◆ DASH diet.
- ◆ Sodium restriction (≤ 2.4 gm sodium daily).
- ◆ Weight reduction if BMI ≥ 25 kg/m².
- ◆ Exercise at a moderate pace to achieve 150 mins / week (i.e., 30 min / 5 days/wk).
- ◆ Limit daily alcohol to no more than 1 drink (women) or 2 drinks (men).
- ◆ Smoking cessation is strongly recommended; counsel tobacco users on the health risks of smoking, and the benefits of quitting.

RECOMMENDATIONS FOR PATIENTS WITH ACE-I INTOLERANCE DUE TO COUGH:

1. HCTZ 25 mg, then 50 mg to achieve BP goal.
2. Add losartan 25 mg, then 50 mg, then 100 mg to achieve BP goal.
3. Add amlodopine 2.5 mg, then 5 mg, then 10 mg to achieve BP goal.

Table 2: Dosage Range for Selected Antihypertensive Medications¹

DRUG CLASS	GENERIC (OTHER NAMES)	USUAL DOSAGE RANGE
ACE-I-THIAZIDE COMBINATION PILL	Lisinopril/HCTZ (Prinzide [®])	10/12.5 mg daily 20/25 mg twice daily
THIAZIDE-TYPE DIURETICS	Hydrochlorothiazide [HCTZ], (Esidrix [®])	25 - 50 mg daily
THIAZIDE-TYPE DIURETICS	Chlorthalidone (Hygroton [®])	12.5 - 25 mg daily
THIAZIDE-TYPE DIURETICS	Indapamide (Lozol [®])	1.25 - 2.5 mg daily
ACE INHIBITORS (ACE-I)	Lisinopril (Zestril, Prinivil [®])	10 - 40 mg daily
ACE INHIBITORS (ACE-I)	Captopril (Capoten [®])	25 - 50 mg twice daily
ACE INHIBITORS (ACE-I)	Benazepril (Lotensin [®])	10 - 40 mg daily
ANGIOTENSIN II RECEPTOR BLOCKER (ARB)	Losartan (Cozaar [®])	25 - 100 mg daily
LONG-ACTING DIHYDROPYRIDINE CALCIUM CHANNEL BLOCKERS (CCB)	Amlodopine (Norvasc [®])	2.5 - 10 mg daily
LONG-ACTING DIHYDROPYRIDINE CALCIUM CHANNEL BLOCKERS (CCB)	Nifedipine ER (Procardia XL [®])	30 - 90 mg daily
LONG-ACTING DIHYDROPYRIDINE CALCIUM CHANNEL BLOCKERS (CCB)	Felodipine ER (Plendil [®])	2.5 - 20 mg daily
ALDOSTERONE RECEPTOR BLOCKER	Spironolactone (Aldactone)	12.5 - 25 mg daily
BETA-BLOCKERS (BB)	Atenolol (Tenormin [®])	25 - 100 mg total, taken once or twice daily
BETA-BLOCKERS (BB)	Metoprolol (Lopressor [®])	25 - 100 mg BID
BETA-BLOCKERS (BB)	Carvedilol (Coreg [®])	3.125 - 25 mg BID
BETA-BLOCKERS (BB)	Metoprolol ER (Toprol XL [®])	50 - 100 mg daily
ACE-I-THIAZIDE COMBINATION PILL	Spironolactone/HCTZ (Aldactazide [®])	25 / 25 mg daily
ALPHA BLOCKERS	Terazosin (Hytrin [®])	1 - 20 mg daily
ALPHA BLOCKERS	Doxazosin (Cardura [®])	1 - 16 mg daily
ALPHA BLOCKERS	Prazosin (Minipress [®])	1 - 10 mg BID
DIRECT VASODILATORS	Hydralazine (Apresoline [®])	25 - 100 mg BID
DIRECT VASODILATORS	Minoxidil (Loniten [®])	2.5 mg daily - 20 mg BID
ALPHA-2 AGONISTS	Clonidine (Catapres [®])	0.1 mg HS - 0.4 mg BID
PERIPHERAL ADRENERGIC INHIBITOR	Reserpine (Serpalan [®])	0.05 - 0.1 mg daily

1 Availability of medications may vary depending on regional formularies.