

THIAZIDE Like DIURETICS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19

| NAME: Generic /Pregnancy Rating TRADE (Dosage strength & forms) | Comments (response usually seen within 4 weeks) | Usual Low Dose (for hypertension) | \$ Cost 30 Days |
|--|--|---|---|
| Hydrochlorothiazide HYDRODIURIL (HCT) 25 [¢] , 50 [¢] mg tab B/D | <ul style="list-style-type: none"> low-dose (12.5mg-25mg) effective with minimal side & metabolic effects (lipid & electrolytes). DI: digoxin ↑ toxicity if K+ low ↑ lithium level, NSAID, steroids. •6.25mg enough to augment other agents •scored low-dose of 12.5mg available in combo select ACEIs & ARBs (Accuretic, Inhibace^{Plus}, Vaseretic, Prinzide, Zestoretic; Atacand^{Plus}, Avalide, Diovan^{HCT}, Hyzaar, Micardis^{Plus}) & 25mg with some ACEI/ARB/β-blockers | 12.5-25mg OD (Less diuresis if CrCl less than 30ml/min) | 4 Diuretics: 3 months dispensed in Sask. |
| Chlorthalidone HYGROTON 50 [¢] , 100 [¢] mg tab B/D | <ul style="list-style-type: none"> Advantage: best outcome evidence SHEP, ALLHAT & more potent & longer acting than HCT Disadvantage: low dosage requires quartering or halving of tablets or every other day dosing scored tablet; • 25[¢] mg avail. combo with atenolol (Tenoretic 50/25 or 100/25) but higher cost | 12.5-25mg OD SHEP, ALLHAT (or 25mg EOD) | 4 |
| Indapamide LOZIDE 1.25, 2.5mg tab B/D | <ul style="list-style-type: none"> less effect than higher-dose HCT on lipids & glucose metabolism. •may be preferred in patients with hyperlipidemia or diabetes • combination with perindopril ↓ stroke PROGRESS high cost for a diuretic but low cost for an antihypertensive | 1.25-2.5mg OD | 9-12 |
| Combination Diuretics •for Low Dose consider using ½ tablet or every other day dosing; K+ sparing combo often not necessary with low-dose HCT | | | |
| Aldactazide-25[¢] (also -50 [¢]) D | •HCT(25mg) & spironolactone(25mg) •aldosterone antagonist; K+ sparing | 1 tab EOD-OD | 5 |
| Dyazide[¢] tablet D | •HCT(25mg) & triamterene(50mg) •triamterene: K+ sparing; Rare: nephritis, urolithiasis | ½ - 1 tab OD | 4 |
| Moduret[¢] tablet D | •HCT(50mg) and amiloride(5mg) •K+ sparing •use ½ tab for low dose Use only if K+ sparing needed | ½ tab EOD-OD | 5 |

ROLE: 1st line: **Uncomplicated, Diabetes with normal albuminuria, LVH & Isolated Systolic HTN.** *First Among Equals* ^{CND 2003}; *Thiazide Diuretics for Most* ^{JNC 7}
 Alternate 1st line: RENAL disease. 2nd line: SYSTOLIC dysfunction. Effective in blacks.

Contraindications: anuria, severe sulpha allergy, gout (symptomatic hyperuricemia) & hyponatremia.

- Furosemide LASIX** - used especially for diuresis in patients with ↓ renal function or nephrotic syndrome; Dose 20-240mg/day. Typically: 20mg po od (\$4) 40[¢]mg po od (\$5) C/D
- Metolazone ZAROXOLYN** - used with furosemide for diuresis in patients with ↓ renal function or nephrotic syndrome; Dose 1.25-5mg/day; Typically: 2.5mg po od (\$8) 5mg po od (\$14) B/D
- Spironolactone ALDACTONE** -used for diuresis in pts with cirrhosis/SYSTOLIC Dysfunction ^{HF Class III-IV}; Dose 12.5-200mg/day; Typically: 25[¢]mg po od (\$5) 50mg po od (\$8) •NOT contain sulpha C/D

Miscellaneous Antihypertensives

| NAME: Generic /Pregnancy Rating TRADE (Dosage strength & forms) | Comments | Usual Dosage (Max/day) | \$ Cost x 30 days |
|---|--|---------------------------|---|
| Central Alpha Agonists • 2 nd or 3 rd line agents; SE = sedation; may worsen depression | | | |
| Clonidine CATAPRES 0.1 [¢] , 0.2 [¢] mg tab DIXARIT 0.025 mg tab C | <ul style="list-style-type: none"> AVOID in HF/heart block/autonomic neuropathy rebound HTN on withdrawal; sedation •DI: cyclosporine, mirtazapine, TCA's may use for acute BP ↓ (e.g. Initial 0.2mg, then 0.1mg q1h) onset: 30-60 min; peak effect: 2-4 hr; can repeat q1-2hr (Max: 0.6-0.8mg) | 0.1mg BID (0.2mg TID) | 0.1-0.2mg po BID 20-30 |
| Methyldopa ALDOMET 125, 250, 500mg tab APO-METHAZIDE 15, 25 250mg + 15, 25 mg HCT B | <ul style="list-style-type: none"> 1st line for hypertension in PREGNANCY SE: sedation, dry mouth, impotence, depression, hepatotoxic, lupus like Sx & ↓ platelets/RBC avail. in with HCT (15, 25mg) DI: levodopa^{↓BP}, TCAs^{↑BP} | 125mg BID (500mg QID) | 250mg po BID Aldoril-15 po BID 17 20 |
| Alpha Blockers • 3 rd line agent; option in pts with prostatism ²⁰ ; SE = sedation, orthostatic hypotension, nasal congestion & priapism; Doxazosin pulled from ALLHAT study (see Note) | | | |
| Doxazosin CARDURA 1, 2 [¢] , 4 [¢] mg tab C | •once daily; postural hypotension so start with 1 mg | 2-8mg HS (16 mg HS) | 2mg po HS 24 |
| Prazosin MINIPRESS 1 [¢] , 2 [¢] , 5 [¢] mg tab C | •multiple daily dosing | 0.5mg BID (5mg TID) | 2mg po BID 23 |
| Terazosin HYTRIN 1, 2.5, 10mg tab C | •once daily. HYTRIN STARTER PACK 1mg x7, 2mg x7, 5mg x14 = \$33 | 1mg HS (10mg BID) | 5mg po HS 23 |
| Other Agents • 2 nd or 3 rd line agents - vasodilators | | | |
| Hydralazine APRESOLINE 10 [¢] , 25, 50mg tab C | SE : Lupus syndrome, reflex tachycardia & edema •AVOID in left ventricular hypertrophy | 10mg QID (50mg QID) | 25mg po QID 31 |
| Minoxidil LONITEN 2.5 [¢] , 10 [¢] mg tab C | SE : reflex tachycardia, edema, pericardial effusion, lupus, rash | 2.5mg BID (50mg BID) | 10mg po BID 59 |

¢=scored tablet COST=markup & dispensing fee DI=drug interaction HCT=hydrochlorothiazide HF=heart failure HTN=hypertension ISH=isolated systolic hypertension (ISH) SE=side effect = ↓ dose for renal dysfx
 Note: doxazosin (α blocker) arm of **ALLHAT** study was stopped early due to ↑ HF & stroke compared to chlorthalidone (even though BP lowering effect similar) EDS=Exception Drug Status covered by NIH 9

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- ¹ Major Outcomes in High-Risk Hypertensive Patients Randomized to Angiotensin-Converting Enzyme Inhibitor or Calcium Channel Blocker vs Diuretic. The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (**ALLHAT**). The ALLHAT Officers and Coordinators for the ALLHAT Collaborative Research Group. JAMA. 2002;288:2981-2997.
- ² 2001 Canadian Hypertension Recommendations: What's New & What's Not so New but is Still Important. CJHP 2002;55:4651.
- ³ FA McAlister, M Levine, KB Zarnke, et al. The 2000 recommendations for the management of hypertension. Can J Cardiol 2001; 17(5):543-559.
- ⁴ 1999 Canadian recommendations for the management of hypertension. CMAJ 1999;161(Suppl):S1-S16.
- ⁵ **1999 World Health Organization**—International Society of Hypertension Guidelines:Management of Hypertension. J Hypertens 1999;17:151-183.
- ⁶ **6th Report-Joint National Committee** on Prevention, Detection, Evaluation & Treatment of High Blood Pressure. Arch Intern Med **1997**;157:2413-46.
- ⁷ Drugs for hypertension. Med Lett Drugs Ther 2001;43:17-22.
- ⁸ Drugs in Pregnancy & Lactation, 6th Ed. Briggs GE, et al. Wilkins; Baltimore, MD.
- ⁹ Micromedex 2004 →//hcs.micromedex.com.
- ¹⁰ Hansten & Horn's Drug Interactions: Analysis & Management-Facts & Comparisons 2004.
- ¹¹ **Treatment Guidelines: Drugs for Hypertension** from The Medical Letter Feb **2003**.
- ¹² The **2004** Canadian Hypertension Education Program **Recommendations** www.chs.md
- ¹³ ALLHAT Working Group. Major cardiovascular events in hypertensive patients randomized to doxazosin vs chlorthalidone: the antihypertensive and lipid-lowering treatment to prevent heart attack trial (**ALLHAT**). JAMA 2000;283:1967-75.
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- ¹⁵ **Treatment Guidelines: Drugs for Treatment of Heart Failure** from The Medical Letter April **2003**
- ¹⁶ The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (The **JNC 7**); JAMA. **2003** May;289(19):2560-72.
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- ¹⁸ Carter BL, Ernst ME, Cohen JD. Hydrochlorothiazide versus chlorthalidone: evidence supporting their interchangeability. Hypertension. 2004 Jan;43(1):4-9. Epub 2003 Nov 24.
- ¹⁹ Davis BR, Furberg CD, Wright JT Jr, Cutler JA, Whelton P; ALLHAT Collaborative Research Group. Setting the record straight. Ann Intern Med. 2004 Jul 6;141(1):39-46.
- ²⁰ McConnell JD, et al. The Long-Term Effect of Doxazosin, Finasteride, and Combination Therapy on the Clinical Progression of Benign Prostatic Hyperplasia. N Engl J Med. 2003 Dec 18;349(25):2387-2398.