ORAL ANTIHYPERTENSIVES Summary/Guidelines Comparison Chart

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	Generic/ TRADE / Strength	Comments/ Drug Interactions [11] DI	Side Effects [8,10]	2004 CND Guidelines by CLASS Indications ✓ ContraIndication CI	Initial Dose (MAX dose)	Usual Dose $/30days
DIURETIC	**Hydrochlorothiazide HCT** HYDRODIURIL 25ς,50ς mg tab	**12.5**-25mg effective & less SEs •evidence for ↓ morbidity/mortality; •Ineffective→**CrCl**<30ml/min (Avoid if Cl<10ml/min). If Scr>150umol/l → **LASIX** for volume control. **DI**: digoxin↑toxicity if K+low ↑lithium level, NSAID, steroid Low dose 12.5mg combinations avail.→ Accuretic, Inhibace Plus, Vaseretic, Zestoretic; Atacand Plus, Avalide, Diovan HCT, Hyzaar, Micardis Plus	**Low doses well tolerated** but rash, allergic sulfa rx, photosensitivity rx, ↑(calcium, uric acid, glucose, cholesterol,TG) ↓(Na, K+ esp. with salbutamol, magnesium, zinc), pancreatitis & sexual dysfunction.	***Diuretics: First among equals*** [12] **1st line⇨uncomplicated HTN,ISH,LVH & DIABETES** normal albuminuria (HCT <25mg) **Alt 1st line⇨ RENAL** Dysfunction; **2nd line⇨SYSTOLIC** Dysfunction. **Useful**: ↓ bone loss; effective in blacks **CI:** gout (symptomatic hyperuricemia), sulfa allergy, anuria, hyponatremia	6.25-12.5mg OD (25mg OD HTN: 50-100mg other)	12.5-25mg OD $4 **Diuretics:3 months** dispensed in Sask.
	Chlorthalidone HYGROTON 50ς,100ς mg tab	similar to HCT; best trial evidence @ 12.5-25mg od SHEP, ALLHAT (minimal lipid & lyte changes,more potent & longer acting than HCT)			12.5-25mg OD	12.5-25mg OD $4
	Indapamide LOZIDE 1.25,2.5mg tab	less effect on lipid/glucose;still THIAZIDE type;?more effect if ↓CrCl	**Indapamide**→ headache,dizziness		1.25mg OD (5mg OD)	1.25-2.5mgOD $12
	Spironolactone 25ς,100ς mg tab **ALDACTONE**	If renal dysfunction→↑Scr,↑BUN,↑K & hyperchloremic acidosis. **DYAZIDE** tabς →HCT 25mg/triamterene 50mg; **MODURET**→HCT 50ς mg/amiloride 5mg	↑K+ esp. if CrCl<30ml/min & in diabetics,↓Na, rash, gynecomastia & abnormal menstruation	✓CHF Class III-IV, **BP, hyperaldosteronism, edema,cirrhosis** **Alt 1st line⇨SYSTOLIC Dysfx**	12.5mg OD (100mg BID)	25-50mg OD $5-8
β BLOCKER	**Metoprolol LOPRESOR, BETALOC** 25ς,50ς,100ς mg tab; **SR**:100,200mg tab	•**β1 cardioselective**→,acebutolol, atenolol, bisoprolol & metoprolol •Evidence in **CHF** → bisoprolol, carvedilol & metoprolol •ISA Intrinsic Sympathetic Activity →acebutolol,oxprenolol & pindolol (less bradycardia, lipid changes & cold extremities but **NOT** recommended in angina/Hx MI[8]) •Non-selective β blockers nadolol,oxprenolol,pindolol,propranolol,sotalol & timolol **DI**: amiodarone, antidiabetics, CCB synergistic, cimetidine ↑β blocker, clonidine HTN crisis, digoxin↓HR,insulins, NSAIDS ↑BP & phenobarbital↓β blocker	fatigue,insomnia,dreams vivid,↓ HR, impotence,↓ exercise tolerance, dizzy; worsens→ PAD,CHF, Raynauds; cold extremities, bronchospasm, headache, mask & delay Sx hypoglycemia, ↑TG, ↓HDL, hallucinations, depression; & sudden withdraw→exacerbate angina/MI **acebutolol** also→positive antinuclear antibody test & lupus	**1st line⇨ ANGINA , MI , LVH <55yr , uncomplicated HTN for age ≤60yr; +ACEI for SYSTOLIC Dysfunction; Alt⇨DIABETICS (cardioselective agents)** **Useful**: migraine, tremors, atrial arrhythmias, perioperative hypertension & thyrotoxicosis **CI:** asthma/COPD; 2nd/3rd degree heart block, uncompensated HF & severe PAD	12.5-50mg OD (200mg BID)	50mg BID $13 100mg SR OD $16
	Acebutolol MONITAN, SECTRAL 100ς,200ς,400ς mg tab				100mg OD (400mg BID)	200mg BID $22 400mg OD $22
	Atenolol TENORMIN 25,50ς,100ς mg; **TENORETIC**/ chlorthalidone 50/25ς,100/25ς tab				25mg OD (200mg OD)	50-100mg OD $15-20
	Propranolol INDERAL Reg:10ς,20ς,40ς,80ς,120ς mg tab **LA**:60,80,120,160mg cap	•? ↑ CNS SE;↑lipids;**Use**:GI bleed,thyrotoxicosis,migraine & anxiety			10-40mg BID (320mg LA OD)	80mg BID $12 160mg LA OD $38
	Bisoprolol ☎ MONOCOR 5ς,10mg tab; **Carvedilol** ☎ COREG 3.125,6.25,12.5&25mg tab; **Nadolol** CORGARD 40ς,80ς,160ς mg tab;**Oxprenolol** TRASICOR 40ς,80ς mg,**SR** 80,160mg tab; **Pindolol** VISKEN 5ς,10ς,15ς mg tab,VISKAZIDE 10/25ς mg,10/50ς mg(/**HCT**) tab;**Sotalol** SOTACOR 80ς,160ς mg tab; **Timolol** BLOCADREN 5ς,10ς,20ς mg tab					
ACEI	**Lisinopril ZESTRIL,PRINIVIL** 5ς,10,20mg tab; **ZESTORETIC** 10/12.5mg;20/12.5mg;20/25(/**HCT**) tab	If ↑ **K** >5.6 or ↑ **SCr** rise >30% over baseline may warrant discontinuation.[1] Fosinopril **MONOPRIL** accumulates less in renal failure. Less effective in African Americans unless add a THIAZIDE [2,8] **DI**: diuretics K sparing→↑K,lithium↑levels,NSAIDS↓effect & potassium↑K	cough 10%,dry/nonproductive,loss of taste, rash esp.captopril (sulfa), headache, dizziness, ↓BP diuretics/volume depletion, fatigue, ↑K+ K supplements/K sparing diuretics/↓renal fx ;acute renal failure with bilateral renal artery stenosis,angioedema 0.5%, hepatotoxicity, dysguesia,pancreatitis & blood dyscrasias.	**1st line ⇨uncomplicated HTN, LVH & DIABETICS & SYSTOLIC Dysfx & MI, RENAL Dx., Past CVA/TIA** combo c HCT **& ALL Coronary Artery Disease pts.** **CI:** artery stenosis (solitary kidney or bilateral), Hx angioedema,pregnancy↑fetal mortality 2nd/3rd trimester	2.5mg OD (40mg OD)	5-10mg OD $26-30 10/12.5mg OD $30 10→35mgOD CHF ATLAS
	Ramipril ALTACE 1.25,2.5,5,10mg cap				1.25mg OD (20mg OD)	5mg OD $34 10mg HS HOPE $41
	Captopril CAPOTEN 6.25,12.5,25ς,50ς,100ς mg tab	•short acting; option for initiation of Tx / hypertensive urgency			6.25mg BID (150mg TID)	25mg BID $24 50mg BID $37
	Benazepril LOTENSIN 5ς,10 od=$32ς,20ς mg tab;**Cilazapril** INHIBACE 1ς,2.5 od=$32ς,5ς mg tab,INHIBACE PLUS 5/12.5ς mg(/**HCT**) tab;**Enalapril** VASOTEC 2.5ς,5ς,10 od=$43,20mg tab,VASERETIC 5/12.5mg,10/25mg(/**HCT**) tab, **inj**; **Fosinopril** MONOPRIL 10 od=$27ς,20mg tab;**Perindopril** COVERSYL 2,4 od=$34ς,8mg tab,COVERSYL PLUS 4/1.25 indapamide mg;**Quinapril** ACCUPRIL 5ς,10 od=$38,20,40mg tab,ACCURETIC 10+20/12.5ς mg;20/25mg(/**HCT**) tab;**Trandolapril** MAVIK 0.5,1,2 od=$35,4mg cap					
ARB	**Irbesartan AVAPRO** 75,150,300mg tab; **AVALIDE** 150/12.5mg;300/12.5mg (/**HCT**) tab	If ↑ **K** >5.6 or ↑ **SCr** rise >30% over baseline may warrant discontinuation.[1] Less effective in African Americans unless add a THIAZIDE [8] **DI**: ↑ lithium;losartan→fluconazole&rifampin↓losartan,&↓uric acid level; telmisartan→ ↑ digoxin level; irbesartan→ fluconazole ↑'s irb effect. **COMBO**:ACE & ARB CALM→signif. ↓ BP but not sig. ↓ microalbuminuria vs lisinopril ARB's are priced ~$1.15 per tab/cap→use **scored tablets** ς to ↓ cost.	Well **tolerated** in general but fatigue, headache, rash ,↓BP diuretics/volume depletion, ↑K+ K supplements/K sparing diuretics/↓ renal fx & acute renal failure with bilateral renal artery stenosis, angioedema less than ACEI, dysguesia,pancreatitis & blood dyscrasias. Less cough,headache,dizziness than ACE	Delay diabetic nephropathy PRIME →**irbesartan**; RENAAL→**losartan**, Heart failure Val-HeFT→**valsartan**,HTN LIFE→**losartan** **1st line ⇨uncomplicated HTN,ISH,LVH & DIABETICS. Alt⇨ SYSTOLIC Dysfunction** **CI:** artery stenosis (solitary kidney or bilateral), Hx angioedema,pregnancy↑fetal mortality 2nd/3rd trimester	75mg OD (300mg OD)	150-300mg OD $46
	Losartan COZAAR 25,50,100mg tab **HYZAAR** 50/12.5mg (/**HCT**) tab **HYZAAR DS** 100/25mg (/**HCT**) tab				12.5-25mg OD (100mg OD)	50-100mg OD $48
	Valsartan DIOVAN 80,160mg cap/tab **DIOVAN HCT** 80 & 160/12.5mg , 160/25 (/**HCT**) tab				80mg OD (320mg OD)	80-160mg OD $45
	Candesartan cilexetil ATACAND 8ς,16ς CALM mg tab,ATACAND PLUS 16/12.5ς mg (/**HCT**) tab; **Eprosartan** TEVETEN 400,600mg, PLUS✗ 600/12.5mg tab; **Telmisartan** MICARDIS 40ς,80ς mg tab, PLUS 80/12.5mg (/**HCT**) tab					
CCB	**Felodipine RENEDIL PLENDIL** 2.5,5,10mg ext. release tab	•less negative inotropic effects than nifedipine •Don't crush/chew •safe HF **DI**:carbamazepine,?cyclosporin,fluconazole,**grapefruit** juice↑↑effect	dizzy,headache nifedipine12%, rash, flushing dose related,constipation verapamil 7%, peripheral edema esp. with dihydropyridines & ♀, ↑HR dihydropyridines,↓HR diltiazem,verapamil, gingival hyperplasia >20%, gynecomastia; dyspnea & pulmonary edema in pts. with LV dysfunction, as some may worsen CHF. **Diltiazem** also→ **lupus like rash** LA-Dihydropyridine→amlodipine, felodipine,nicardipine,nifedipine & nimodipine (Relatively:more peripheral vasodilation & less heart effect)	✓**Felodipine** HTN, ALT systolic Dysfx ✓**Amlodipine** HTN,Stable Angina, ALT systolic Dysfx ✓**Nifedipine** HTN:PA&XL form;**Stable Angina**:Reg& XL; **Coronary Artery Spasm**:Reg caps ✓**Diltiazem** HTN:SR ,CD & Tiazac; **Coronary Artery Spasm**:Reg; **Stable Angina**:All dosage forms→ titrate Reg. ✓**Verapamil** HTN: Reg&SR;**Stable Angina&Coronary Artery Spasm**: Reg; **A.Fib, SV arrhythmia, Cardiomyopathy- obstructive hypertrophic** **1st line uncomplicated, LVH & ISH LA-DHP Alt⇨DIABETICS & ANGINA.** **Useful:** A. Fib, SVT, Raynaud's & blacks. **CI**: SBP <90,recent MI or pulm. edema, sick sinus Sx or 2nd/3rd degree AV block; Systolic dysfx/CHF→ diltiazem,verapamil	2.5-5mg OD (20mg OD)	5-10mgOD HOT $31-42
	Amlodipine NORVASC 5ς,10mg tab	•long acting→long t½ **DI**:?cyclosporin,fluconazole,**grapefruit** juice↑effect •may be beneficial in diastolic dysfunction			2.5-5mg OD (10mg OD)	5-10mg OD $53-75
	Nifedipine ADALAT Reg 5,10mg cap **PA** 10,20mg tab **XL** 20,30,60mg tab	•negative inotropic potential •reflex ↑HR **DI**:cimetidine,digoxin,grapefruit juice •Reg. caps **NOT** for acute ↓ BP due to assoc. of ↑ MI/stroke			30mg XL OD (120mg XL OD)	30mg XL OD $42 20mg PA BID $35 60mg XL OD $62
	Diltiazem CARDIZEM CARDIZEM CD, TIAZAC Reg:30,60ς mg tab **SR**:60,90,120mg cap **CD/ER**:120,180,240,300,360 Tiazac mg cap	•negative inotropic **DI**:carbamazepine↑carb level,cimetidine↑diltiazem,**cyclosporin**↑cyclo level, digoxin↑dig level; lovastatin & simvastatin↑myopathy			120mg CD OD (420mg CD OD)	60mg TID $38 120mg CD OD $36 240mg CD OD $58
	Verapamil ISOPTIN Regular/ **SR** tab **Reg**:80,120mg tab **SR**:120,180ς,240ς mg tab **CHRONOVERA**:180, 240mg tablet	•Chronovera not uniquely beneficial (CONVINCE trial 2003) •most negative inotropic & chronotropic •**DI**: amiodarone, carbamazepine,**cyclosporine**,**digoxin**, grapefruit juice,rifampin,simvastatin& terazosin.			120mg SR OD (480mg SR OD)	80mg TID $31 180mg SR OD $30 240mg CV OD $39

ς=scored tablet ☎ Exception Drug Status Sk **Cost**=markup & fee **ACE**=angiotensin converting enzyme **ARB**=angiotensin receptor blocker **Alt**=alternative **CD**=controlled delivery **CNS**=central nervous system **DI**=drug interaction **Dx**=disease **HCT**=hydrochlorothiazide **HF**=heart failure **HR**=heart rate **HTN**=hypertension **Hx**=history **ISH**=isolated systolic htn **K**=potassium **LA**=Long-acting **LVH**=left ventricular hypertrophy **MI**=myocardial infarction **Na**=sodium **PAD**=peripheral arterial dx; **Rx**=reaction **SE**=side effect **SR**=sustained release **Sx**=symptom **TG**=triglycerides =↓dose for **renal dysfx**

Generic/ TRADE / Strength	Comments/ Drug Interactions [11] DI	Side Effects [8,10] SE	2004 CND[Guidelines by CLASS] Indications ✓ ContraIndication CI	Initial Dose (MAX)	Usual Dose $/30days
OTHER					
Clonidine CATAPRES 0.1ˢ,0.2ˢ mg tab	• used for acute ↓BP **DI**: cyclosporine,mirtazapine,TCA's **CENTRAL ALPHA AGONIST (2nd/3rd line)**→if others CI/ refractory HTN	**sedation,dry mouth**,↓HR,depression & **rebound HTN** on withdrawal	**CI**:CHF/heart block,diabetes[autonomic neuropathy]	0.1mg BID *(0.2mg TID)*	0.1-0.2mg BID $20-30
Methyldopa ALDOMET 125,250,500mg tab	**DI**: levodopa[↓BP],TCAs[↑BP] [**Methyldopa/HCT** APO-METHAZIDE 250/15,250/25; 1 tab po OD=$14]	sedation, dry mouth, impotence, depression, **hepatotoxic**, lupus like Sx & ↓ platelets/RBC	1st line HTN in pregnancy	125mg BID *(500mg QID)*	250mg BID $17
Prazosin MINIPRESS 1ˢ,2ˢ,5ˢ mg tab	**ALPHA BLOCKERS (2nd/3rd line)**→if others CI/ refractory HTN	sedation, dizziness, vertigo,headache, palpitations, ↑HR, fluid retention, weakness, nasal congestion & priapism. **First dose syncope** → minimize by gradual dose titration & give @HS	**Useful→ for prostatism** [8,19]	0.5mg BID *(5mg TID)*	2mg BID $23
Terazosin HYTRIN 1,2,5,10mg tab	**Doxazosin CARDURA** 1,2ˢ,4ˢmg tab ALLHAT removed → due to ↑**CHF/stroke**			1mg HS *(10mg BID)*	5mg HS $23
Hydralazine APRESOLINE 10ˢ,25,50mg tab	**VASODILATOR** reflex ↑HR,edema & renin Sx activation [often add β-blocker/diuretic]	↑↑HR,aggravate angina,headache,dizzy, fluid retention,lupus like[>200mg/d] & hepatitis	Alt Systolic Dysfx [hydralazine with isosorbide A-HeFT] **CI:** in left ventricular hypertrophy	10mg QID *(50mg QID)*	25mg QID $31
Labetalol TRANDATE 100ˢ,200ˢ mg tab	**ALPHA & BETA BLOCKADE** ↓BP more than other β-blockers	postural hypotension & **hepatotoxicity** [more than other β-Blockers 7]	Used in pregnancy **CI:** as per β-Blockers above	100mg BID *(400mg TID)*	200mg BID $28

2004 CND Recommendations: Disease & Risk Factors (consideration for ALLHAT) [2, 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20]

Lifestyle changes for DIET[↓Na,DASH], EXERCISE, ↓ alcohol use & stop SMOKING!

DISEASE or RISK FACTOR	1ST LINE INITIAL THERAPY	SECOND STEP THERAPY	NOTES & CAUTIONS
Uncomplicated Hypertension {Hypertension without other compelling indications}	**Thiazide** like diuretic (eg.HCT **or** chlorthalidone [12.5-25mg od]) β blocker (for age ≤60 years); ACE inhibitor,ARB[not rec. in blacks unless compelling indication 2,8] CCBs →LA-DHP{Consider: ASA[esp. if >50yr] & statins[↑risk pts]}	**COMBINATIONS** of 1st line drugs	α blockers not recommended as initial therapy (If used may consider additional antihypertensive agent). **Monitor** for Hypokalemia: seldom if using low dose thiazide (K^+ sparing diuretics rarely needed)
Isolated Systolic Hypertension (ISH)	**Thiazide** like diuretic (eg.HCT **or** chlorthalidone[12.5-25mg od]) Calcium channel blockers→LA-DHP , ARBs	**COMBINATIONS** of 1st line drugs	Hypokalemia→seldom if using low dose thiazide (K^+ sparing diuretics rarely needed)
Diabetes mellitus with nephropathy (albuminuria ≥ 30mg/day)	ACE inhibitor or ARBs (Evidence from IDNT [irbesartan]/RENAAL [losartan])	Addition of one or more: Thiazide (HCT ≤ 25mg od), β blocker(cardioselective [acebutolol, atenolol,bisoprolol & metoprolol]), Long acting calcium channel blockers (amlodipine had less kidney protection than ramipril or metoprolol [AASK])	If Scr 150 umol/l, use a loop diuretic rather than thiazide if needed to reduce edema. (If CrCl <30ml/min→thiazide diuretic less effective) May consider **ACEI + ARB** combination [CALM,COOPERATE]
Diabetes mellitus without nephropathy (albuminuria < 30mg/day)	ACE inhibitor, ARBs or Thiazide diuretic (Thiazides an option given ALLHAT results)	Combination of 1st line drugs or addition of: β blocker(cardioselective [acebutolol, atenolol,bisoprolol & metoprolol]), Long acting calcium channel blockers	Low dose **thiazides** have evidence for CV outcome benefits in diabetes & minimal effect on glucose. **ALLHAT** included **>15,000** patients[2,13] **with diabetes**, the largest antihypertensive trial ever in this population.
Diabetes mellitus without nephropathy & with systolic hypertension	ACE inhibitor or ARBs (or Thiazide diuretic [ALLHAT]) Alternatively→ Calcium channel blockers →LA-DHP		
Angina, stable	**β blocker** (strongly consider adding ACE inhibitors)	Long acting calcium channel blockers	Vasospastic angina→long acting CCB (avoid β-blocker). AVOID short-acting nifedipine.
Prior MI	**β blocker** and ACE inhibitors	Combinations of additional agents	
Systolic Dysfunction (Heart Failure)	**ACE inhibitor** (ARBs [if ACE contraindicated or not tolerated]), β blockers (bisoprolol, carvedilol [COMET], metoprolol), & spironolactone [Class III-IV].	ARBs or (Hydralazine + isosorbide dinitrate [A-HeFT 21]), Amlodipine or felodipine (helpful in diastolic dysfx; but ↑ HF [ALLHAT]),thiazide/loop diuretic as additive Tx.	AVOID non-dihydropyridine calcium channel blockers (eg. diltiazem & verapamil)
Past Cerebrovascular Accident or TIA	ACE inhibitor & diuretic Combination (↓ BP after acute phase to ↓ recurrent cerebrovascular events)	Antihypertensives may ↑ death in **acute** TIA/stroke,but ↓ long term risk. Evidence supports {chlorthalidone or amlodipine [ALLHAT]}, {perindopril + indapamide [PROGRESS]},{losartan +/- HCT [LIFE]},{ramipril [HOPE]}&{diltiazem [NORDIL]}.	
Renal disease	ACE inhibitor (diuretics as additive therapy)	Combinations of agents (including ACEI + ARB) (If ACE intolerance→Angiotensin receptor blocker)	AVOID ACE if bilateral renal artery stenosis. Loop diuretics with advanced disease.
Left Ventricular Hypertrophy (LVH) **Dyslipidemia** **Peripheral Arterial Disease (PAD)**	LVH: ACE inhibitor,ARBs, LA-DHP, diuretics, β blocker[<55yr] Dyslipidemia & PAD -Does Not affect initial treatment In LVH patients→ losartan ↓ stroke (NOT CV death or MI) vs atenolol (5%vs6.7%; NNT=59) [LIFE Lancet 2002]	Does not affect initial treatment recommendation	LVH→AVOID hydralazine & minoxidil. PAD→AVOID β blocker in pts with **severe** disease. PAD → CCB useful option (eg. Raynaud's).

ACE=angiotensin converting enzyme **ARB**=angiotensin receptor blocker **CCB**=calcium channel blocker **HCT**=hydrochlorothiazide **HF**=heart failure **TIA**=transient ischemic attack **LA-DHP** Long-Acting Dihydropyridines: amlodipine, felodipine, nifedipine, nimodipine.

Drugs which ↑ BP:appetite suppressants,caffeine,cocaine & other illicit drugs,cyclosporin,erythropoietin,fludrocortisone,licorice in chewing tabacco,nasal decongestant,nicotine,NSAID's & COX-2,oral contraceptives,steroids [adrenal],sympathomimetics,tacrolimus & venlafaxine.

CONTRAINDICATIONS:**DIURETICS**: symptomatic gout, sulpha allergy, anuria, hyponatremia. **β-BLOCKERS**: asthma, 2nd or 3rd degree heart block,severe bradycardia, uncompensated heart failure, severe PAD.
ACEI / ARB: bilateral artery stenosis (or solitary kidney stenosis if only 1 kidney), history of angioedema, pregnancy-especially 2nd & 3rd trimester.
CCB: systolic BP <90, recent MI with pulmonary edema, sick sinus syndrome or 2nd/3rd degree AV block, systolic dysfunction/HF(especially diltiazem & verapamil).

MONITOR: urinalysis, CBC, lytes, calcium, BUN/Scr, ECG, fasting glucose & lipids. {Baseline: rule out secondary causes ie. Mineralocorticoid esp. if K^+ is low; assess end-organ damage & identify CV risk factors}

PROBLEM COMBO'S: ◆**hydralazine and diuretic** ⇨stimulate renin & sympathetic activity unless used with β-blocker ◆**verapamil or diltiazem** with a **β-blocker** ⇨negative effects on heart (e.g. ↓ heart rate & ↓ cardiac output)
◆**β-blocker and clonidine** ⇨ concern about rebound hypertension if clonidine withdrawn abruptly ◆**CCBs and α-blockers** ⇨ potential for excessive hypotension; increased risk of falls, etc.

SYNERGISTIC COMBO'S: **AB ⇔ CD** **DIURETICS**→with **β**-Blocker & ACEI, ARB **β-BLOCKER**→with diuretics & CCB (+ACEI if post MI/HF) **ACEI or ARB**→with diuretic & CCB **CCB**→ with **β**-Blocker & ACEI

RISK Factors:[13,22] ↑ **Cholesterol**: ↑LDL ([↑ApoB/ApoA1 ratio studied in INTERHEART]), **Smoking**, **Diabetes**, ↑**BP** esp. systolic, **Abdominal obesity**: **waist/hip ratio** (♂ ≥0.95; ♀ ≥0.9), BMI >25, Waist size [15] (♂ >102cm,40inch; ♀ >88cm,35inch), **stress & depression; lack** of **vegetables**, **fruits, exercise** (30-45mins 3-5x/week or more) **& alcohol** (0-2drinks/d ♂=14/week ♀=9/week); Low HDL ≤1, Family history of premature heart disease [15] (Age: ♂ <55, ♀ <65), Age (♂ >55, ♀ >65) & Microalbuminuria [15].

TARGETS **UNCOMPLICATED HTN**⇨**BP 140/90** **ISH**⇨**SBP 140-160** **HOME BP Measurement**⇨**BP 135/85** **RENAL Dysfunction/DIABETES** [no proteinuria]⇨**BP 130/80** **RENAL Dysfunction/DIABETES** [proteinuria >1g/d]⇨**BP 125/75**

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