

HEALTH Matters

A RESOURCE TO HELP KEEP YOU INFORMED

CHEP

(Canadian Hypertension Education Program)

Approximately one in five Canadians are affected by hypertension, a major risk factor for heart and vascular disease and an important cause of death. Since 2000, CHEP has annually updated, disseminated and evaluated the hypertension recommendations. Their goal: reduce the burden of cardiovascular disease in Canada through optimized hypertension management. In 2010 Canadian Hypertension Society, CHEP and Blood Pressure Canada will merge to create Hypertension Canada, a single national hypertension organization. Dial in to www.hypertension.ca for a complete review of the recommendations.

2010 CHEP Theme: Need for health care professionals to stay informed through updates at www.htnupdate.ca

What's New and What's old but still important in 2010:

What's New!

- the use of ABPM in and out of the physician's office (ABPM are designed to take multiple readings and may be more accurate than routine manual office blood pressure measurement in predicting target organ damage and ambulatory blood pressure readings)
- new guidelines for dietary sodium restrictions now in line with Health Canada (which can drop blood pressure as much as a pill can (Table 1))
- increased emphasis on the use of single-pill combinations (Table 2) with more guidance on which combinations to use (see comment 1) Some combinations may be preferred than other
- recognizes that ARBs and ACEIs are equally effective for most indications

What's old but still important!

- Patients with diabetes are at high cardiovascular risk
- Most patients with diabetes have hypertension
- Treatment of hypertension with diabetes reduces total mortality, myocardial infarction, stroke, retinopathy and progressive renal failure rates.
- Treating hypertension in patients with diabetes reduces death and disability and reduces health care cost.
- Treat to Target
 - In most patients aim for < 140 systolic and < 90 diastolic
 - In diabetes and patients with CKD, Target < 130 systolic and < 80 diastolic
 - Home blood pressure and daytime ABPM < 135/85
- The use of a combination ACE inhibitor and ARB should only be considered in selected and closely monitored people with advanced heart failure and proteinuric nephropathy.
- HBPM readings are more accurate predictor of cardiovascular risk than office readings

Table 1: Dietary Salt

Age	Salt Restriction
≤ 50	<1500mg
51-70	<1300mg
>70	<1200mg

(Restricting to 200mg or 10% per serving is a good way to start when trying to decrease salt consumption)

Comment 1; In 2009 the ACCOMPLISH trial evaluated if benazepril (an ACEI) /amlodipine(DHP CCB) was better than benazepril/thiazide diuretic in hypertensive individuals 55 or older who were at high cardiovascular risk (findings: 20% more effective in reducing CV morbidity and mortality). Following the compelling results of the ACCOMPLISH trial, CHEP 2010 recommends to consider the results of the ACCOMPLISH trial when selecting a combination in appropriate population with high CV risk factors.

ABPM=automated blood pressure monitor; ARB= angiotensin receptor blocker; ACEI=angiotensin converting enzyme inhibitor; CKD=chronic kidney disease.HBPM= Home Blood Pressure Monitor

If you have requests, suggestions or comments for future issues, your feedback may be directed to suzie@medicalartsparmacy.ca

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Combining antihypertensive medications with different mechanisms of action stands to reason considering hypertension is a multifactorial disease for blood pressure that is more than 20mmHg systolic or 10mmHG diastolic above target (from 2008 CHEP recommendations). CHEP recommends selecting among first-line therapies (ACEIs, ARBs, CCBs, beta-blockers in patients younger than 60 years old and thiazide diuretics) when combining medications. When treating elderly patients who are more prone to a BP drop or adverse effects (such as frail elderly or nursing home residents) it is wise to start with just ONE first-line drug. For patients over 60, beta-blocker may be indicated when there is an other indication such as angina, prior myocardial infarction and or heart failure.

Isolated systolic blood pressure (>140mmHg) occurs more frequently in the elderly secondary to decreased compliance of the large arteries, which becomes less able to absorb pressure in systole and less able to kickback during diastole. The increased pulse pressure increases risk for cardiovascular disease. Therefore when compared with isolated diastolic hypertension, isolated systolic hypertension is more likely to cause complications such as cardiovascular and cerebrovascular events.

Keep in mind that the treatment of hypertension in the elderly should be similar to younger patients, with initial therapy to include a thiazide (hydrochlorothiazide) or thiazide-like diuretic (indapamide). There is little effectiveness when using hydrochlorothiazide in a patient with a CrCl < 30ml/min and indapamide in a patient with a CrCl < 20ml/min. For patients with comorbid disease states, choice of medications will be determined based on these factors or compelling indications.

Table 2: Single-Pill Combinations for Hypertension

CLASS	DRUG	DOSE
Beta-blocker/Diuretic	atenolol/chlorthalidone (Tenoretic, & generics)	50/25 mg, or 100/25mg once daily AM
Beta-blocker/Diuretic	pindolol/hydrochlorothiazide (Visazide)	10/25mg, or 10/50mg once daily AM
ACE Inhibitor/CCB	trandolapril/verapamil (Tarka)	trandolapril 1-4mg/day plus verapamil 180-480mg. Once daily or BID
ACE Inhibitor/Diuretic	clizaryl/hydrochlorothiazide (Inhibace Plus, & generics)	5/12.5mg once daily AM
ACE Inhibitor/Diuretic	enalapril/hydrochlorothiazide (Vaseretic)	5/12.5mg or 10/25mg once daily AM
ACE Inhibitor/Diuretic	lisinopril/hydrochlorothiazide (Zestoretic)	10/12.5mg, 20/12.5mg or 20/25mg once daily AM
ACE Inhibitor/Diuretic	perindopril/indapamide (Coversyl Plus, Coversyl Plus LD Coversyl Plus HD)	4/1.25 mg daily ac in AM 2/0.0625 mg daily ac in AM 8/2.5 mg daily ac in AM
ACE Inhibitor/Diuretic	quinapril/hydrochlorothiazide (Accuretic)	10/12.5mg, 20/12.5mg or 20/25mg once daily AM
ACE Inhibitor/Diuretic	ramipril/hydrochlorothiazide (Altace HCT)	2.5/12.5mg, 5/12.5mg, 10/12.5mg, 5/25mg or 10/25mg once daily AM
ARB/Diuretic	candesartan/hydrochlorothiazide (Atacand Plus)	16/12.5mg, 32/12.5mg or 32/25mg once daily AM
ARB/Diuretic	eposartan/hydrochlorothiazide (Teveten Plus)	600/12.5mg once daily AM
ARB/Diuretic	irbesartan/hydrochlorothiazide (Avalide)	150/12.5, 300/12.5 or 300/25mg once daily AM
ARB/Diuretic	losartan/hydrochlorothiazide (Hyzaar, Hyzaar Ds)	Hyzaar 50/12.5mg, 100/12.5mg or Hyzaar DS 100/25mg once daily AM,
ARB/Diuretic	olmesartan/hydrochlorothiazide (Olmotec Plus)	20/12.5mg, 40/12.5mg or 40/25mg once daily AM
ARB/Diuretic	telmisartan/hydrochlorothiazide	80/12.5mg or 80/25mg once daily AM
ARB/Diuretic	valsartan/hydrochlorothiazide (Diovan-HCT)	80/12.5mg, 160/12.5mg, 320/12.5mg, 160/25mg or 320/25mg once daily AM
Direct Renin Inhibitor/ Diuretic	aliskiren/hydrochlorothiazide (Rasilez HCT)	150/12.5mg, 150/25mg, 300/12.5mg or 300/25mg once daily AM

ACE Inhibitor= Angiotensin Converting Enzyme Inhibitor; ARB= Angiotensin Receptor Blocker; CCB= Calcium Channel Blocker.

The newsletters can be found at www.medicalartsparmacy.ca