

Guidelines for Management of Hypertension in HIV (reviewed 1/3/06)

The Joint National Committee VII (JNC VII) report released in 2003 categorizes BP as follows:

	SBP (mm Hg)	DBP (mm Hg)
Normal	<120	<80
Prehypertension	120-139	or 80-89
Stage 1 hypertension	140-159	or 90-99
Stage 2	≥160	or ≥100

I Lifestyle Changes

- With prehypertension or hypertension, lifestyle changes should be emphasized.
- Lifestyle changes consist of
 - 1) Weight loss in overweight and obese individuals
 - 2) The DASH diet which is high in potassium and calcium
 - 3) Dietary sodium reduction to 2.4 g/day
 - 4) Physical activity
 - 5) Moderation of alcohol consumption

II Diagnosis

- Blood pressure should be measured with patient in chair (rather than on exam table) with feet on floor and with the arm supported at heart level after 5 minutes of rest.
- The bladder of the blood pressure cuff should encircle at least 80% of the arm.
- At least 2 measurements should be made at different clinic visits before a diagnosis of HTN is made.
- For blood pressures measured at home, blood pressure >135/85 is considered hypertensive.

III Therapy

- In clinical trials, antihypertensive treatment has been associated with 35-40% reduction in stroke, 20-25 percent reduction in MI, and over 50% reduction in CHF. By lowering the SBP by 12mm Hg in 11 patients with stage 1 hypertension and one additional CAD risk factor, one death will be prevented for every 10 years of treatment.
- For the majority of patients with hypertension, a thiazide diuretic should be the first line of therapy.
- For stage 2 hypertension, it may be appropriate to initiate therapy with more than one drug since a patient will most likely not achieve goal blood pressure on monotherapy.
- The goal of therapy for most patients is BP<140/90 except in patients with chronic renal insufficiency, diabetes, or proteinuria where the goal blood pressure is <130/80.
- There are some “compelling indications” where a non-diuretic may offer benefit such as:
 - 1) Ischemic heart disease →beta blockers (BBs), long-acting calcium channel blockers (CCBs)
 - 2) Heart failure→BBs, ACE inhibitors (ACEIs)
 - 3) Diabetes→ACEIs, angiotensin receptor blockers (ARBs), thiazide diuretics, BBs, CCBs
 - 4) Chronic kidney disease (GFR<60 or proteinuria) –ACEIs, ARBS (tolerate increase of 35% in creatinine on treatment unless hyperkalemia intervenes)
 - 5) Left ventricular hypertrophy- ARBs or ACEIs
- In African Americans there is an improved response to diuretics or CCB vs. BBs, ACEIs, or ARBs.
 - There is increasing evidence that a beta blocker should not be used as the first line agent for hypertension unless there is a “compelling indication” as listed above, given higher event rates with beta blockers in comparison to other first line drugs.

IV Drug Interactions

- There are important drug interactions between calcium channel blockers (especially amlodipine, nifedipine, and verapamil) and PIs and NNRTIs.
- Carvedilol interacts with both PIs and NNRTIs.
- Beta blockers should be used with caution with atazanavir due to the possibility of additive prolongation of the PR interval.

- Further details regarding these and other drug interactions can be found at www.hiv-druginteractions.org.
- The full JNC VII report on hypertension can be found at: www.nhlbi.nih.gov/guidelines/hypertension