

Priority Health's ACE/ARB Guidelines and JNC-7 Reference Card



PRIORITY HEALTH

ARB Formulary Brands:

Avapro

Avalide

Cozaar

Hyzaar

Diovan

Diovan HCT

Educational Grant Provided By:

Bristol-Myers Squibb Company

sanofi~synthelabo

2003 Bristol-Myers Squibb Sanofi~Synthelabo Partnership

ACE/ARB Guidelines:

***Patients must fail a generic ACE before approval will be granted for a branded ACE.**

- **Generic ACE's include:** captopril/capozide, enalapril/HCTZ, and lisinopril/HCTZ.
- **Branded ACE's include:** Altace (ramipril), Lotensin/HCTZ (benazepril), and Mavik (trandolapril). Altace will be approved for patients who are 55 and over or are diabetic without failure on a generic ACE.

***Patients naive to ARB's must show failure on an ACE before approval will be granted.**

***Patients with a diagnosis of diabetes are exempt from the ARB Stepped Care Program.**



Reference Card From the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)

EVALUATION

CLASSIFICATION OF BLOOD PRESSURE (BP)*		
CATEGORY	SBP mmHg	DBP mmHg
Normal	<120	<80
	and	
Prehypertension	120–139	or 80–89
	or	
Hypertension, Stage 1	140–159	or 90–99
	or	
Hypertension, Stage 2	≥160	or ≥100

* See *Blood Pressure Measurement Techniques* (reverse side)
 Key: SBP = systolic blood pressure DBP = diastolic blood pressure

DIAGNOSTIC WORKUP OF HYPERTENSION

- Assess risk factors and comorbidities.
- Reveal identifiable causes of hypertension.
- Assess presence of target organ damage.
- Conduct history and physical examination.
- Obtain laboratory tests: urinalysis, blood glucose, hematocrit and lipid panel, serum potassium, creatinine, and calcium. Optional: urinary albumin/creatinine ratio.
- Obtain electrocardiogram.

ASSESS FOR MAJOR CARDIOVASCULAR DISEASE (CVD)

RISK FACTORS

- Hypertension
- Obesity (body mass index ≥ 30 kg/m²)
- Dyslipidemia
- Diabetes mellitus
- Cigarette smoking
- Physical inactivity
- Microalbuminuria, estimated glomerular filtration rate <60 mL/min
- Age (>55 for men, >65 for women)
- Family history of premature CVD (men age <55, women age <65)

ASSESS FOR IDENTIFIABLE CAUSES OF HYPERTENSION

- Sleep apnea
- Drug induced/related
- Chronic kidney disease
- Primary aldosteronism
- Renovascular disease
- Cushing's syndrome or steroid therapy
- Pheochromocytoma
- Coarctation of aorta
- Thyroid/parathyroid disease



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TREATMENT

PRINCIPLES OF HYPERTENSION TREATMENT

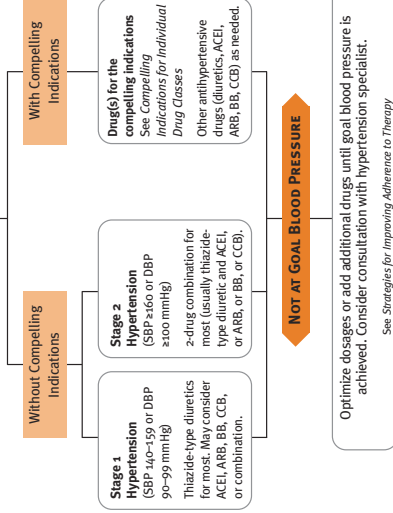
- Treat to BP <140/90 mmHg or BP <130/80 mmHg in patients with diabetes or chronic kidney disease.
- Majority of patients will require two medications to reach goal.

ALGORITHM FOR TREATMENT OF HYPERTENSION

LIFESTYLE MODIFICATIONS

Not at Goal Blood Pressure (<140/90 mmHg)
 (<130/80 mmHg for patients with diabetes or chronic kidney disease)
 See *Strategies for Improving Adherence to Therapy*

INITIAL DRUG CHOICES



BLOOD PRESSURE MEASUREMENT TECHNIQUES

METHOD	NOTES
In-office	Two readings, 5 minutes apart, sitting in chair. Confirm elevated reading in contralateral arm.
Ambulatory BP monitoring	Indicated for evaluation of "white coat hypertension." Absence of 10–20 percent BP decrease during sleep may indicate increased CVD risk.
Patient self-check	Provides information on response to therapy. May help improve adherence to therapy and is useful for evaluating "white coat hypertension."

CAUSES OF RESISTANT HYPERTENSION

- Improper BP measurement
- Excess sodium intake
- Inadequate diuretic therapy
- Medication
 - Inadequate doses
 - Drug actions and interactions (e.g., nonsteroidal anti-inflammatory drugs (NSAIDs), illicit drugs, sympathomimetics, oral contraceptives)
 - Over-the-counter (OTC) drugs and herbal supplements
- Excess alcohol intake
- Identifiable causes of hypertension (see reverse side)

COMPELLING INDICATIONS FOR INDIVIDUAL DRUG CLASSES

COMPELLING INDICATION	INITIAL THERAPY OPTIONS
• Heart failure	THIAZ, BB, ACEI, ARB, ALDO ANT
• Post myocardial infarction	BB, ACEI, ALDO ANT
• High CVD risk	THIAZ, BB, ACEI, CCB
• Diabetes	THIAZ, BB, ACEI, ARB, CCB
• Chronic kidney disease	ACEI, ARB
• Recurrent stroke prevention	THIAZ, ACEI

Key: THIAZ = thiazide diuretic, ACEi = angiotensin converting enzyme inhibitor, ARB = angiotensin receptor blocker, BB = beta blocker, CCB = calcium channel blocker, ALDO ANT = aldosterone antagonist

STRATEGIES FOR IMPROVING ADHERENCE TO THERAPY

- Clinician empathy increases patient trust, motivation, and adherence to therapy.
- Physicians should consider their patients' cultural beliefs and individual attitudes in formulating therapy.

The National High Blood Pressure Education Program is coordinated by the National Heart, Lung, and Blood Institute (NHLBI) at the National Institutes of Health. Copies of the JNC 7 Report are available on the NHLBI Web site at <http://www.nhlbi.nih.gov> or from the NHLBI Health Information Center, P.O. Box 30105, Bethesda, MD 20824-0105; Phone: 301-592-8573 or 240-629-3255 (TTY); Fax: 301-592-8563.

PRINCIPLES OF LIFESTYLE MODIFICATION

- Encourage healthy lifestyles for all individuals.
- Prescribe lifestyle modifications for all patients with prehypertension and hypertension.
- Components of lifestyle modifications include weight reduction, DASH eating plan, dietary sodium reduction, aerobic physical activity, and moderation of alcohol consumption.

MODIFICATION	RECOMMENDATION	AVG. SBP REDUCTION RANGE*
Weight reduction	Maintain normal body weight (body mass index 18.5–24.9 kg/m ²).	5–20 mmHg/10 kg
DASH eating plan	Adopt a diet rich in fruits, vegetables, and lowfat dairy products with reduced content of saturated and total fat.	8–14 mmHg
Dietary sodium reduction	Reduce dietary sodium intake to ≤100 mmol per day (2.4 g sodium or 6 g sodium chloride).	2–8 mmHg
Aerobic physical activity	Regular aerobic physical activity (e.g., brisk walking) at least 30 minutes per day, most days of the week.	4–9 mmHg
Moderation of alcohol consumption	Men: limit to <2 drinks* per day Women and lighter weight persons: limit to ≤1 drink* per day.	2–4 mmHg

*1 drink = 1/2 oz or 15 mL ethanol (e.g., 12 oz beer, 5 oz wine, 1.5 oz 80-proof whiskey).

† Effects are dose and time dependent.



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