Clinical Practice Guidelines for Hypertension

The hypertension guidelines are based on the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, NIH Publication No. 03-5233, May 2003. This CPG is not intended to replace your clinical medical judgment. A physician's medical decisions should be based on current medical knowledge and practices, taking into consideration the clinical circumstances of each individual patient.

Goals

To provide guidelines for:

- Early and ongoing control of high blood pressure through lifestyle management and pharmacotherapy to reduce complications, improve outcomes and life expectancy
- Preserving the myocardium
- Minimizing the need for future coronary revascularization
- Achieving optimal pharmacotherapy with minimal or no side effects
- Minimizing the need for acute services (ER encounters, urgent care and hospitalizations)

Assessment and Diagnosis

- Major Risk Factors
  - Smoking
  - Dyslipidemia
  - Diabetes mellitus
  - Age > 60 years
  - Gender: males and postmenopausal females
  - Family history for males < age 55 and females < age 65
- Target Organ Damage/Clinical Cardiovascular Disease
  - Heart disease: left ventricular hypertrophy, angina/prior myocardial infarction, prior coronary artery bypass graft, heart failure
  - Stroke or TIA
  - Nephropathy
  - Peripheral arterial disease
  - Hypertensive retinopathy
- Stages *
  - Normal =< 120/80 mm Hg
  - Prehypertension = 120/139/80-89 mm Hg
  - Stage 1 = 140-159/90-99 mm Hg
  - Stages 2 and 3 = ≥ 160/≥ 100 mm Hg
• **Risk Groups**
  - Risk Group A - no major risk factors, no target organ damage or clinical cardiovascular disease
  - Risk Group B - at least one major risk factor, not including diabetes but no target organ damage or clinical cardiovascular disease
  - Risk Group C - target organ damage and/or clinical cardiovascular disease and/or diabetes with or without other risk factors

  *In contrast to the classification provided in the JNC 6 report, a new category designated prehypertension has been added. Patients with prehypertension are at increased risk for progression to hypertension.*

---

**Therapy**

• **Management**
  - Lifestyle modifications:
    - Smoking cessation
    - Weight reduction
    - Diet Modification: sodium restriction, reduction of saturated fat and cholesterol
    - Alcohol restriction
    - Prescribed exercise program
    - Calcium, Magnesium and Potassium intake maintenance
  - Pharmacotherapy if blood pressure remains uncontrolled:
    - Start with diuretic or beta-blocker unless contraindicated
    - Consider combination drugs
    - Consider other agents or a second agent, if no response

  *See attached Algorithm for the Treatment of Hypertension*

  *Treatment and goal blood pressure varies depending on blood pressure stage and risk group. Lifestyle modification should be definitive therapy for some patients and adjunctive therapy for all patients recommended for pharmacotherapy. For diabetics, please refer to the Diabetes Clinical Practice Guideline.*

---

**Patient Education**

• **General Counseling**
  - Explanation of hypertension
  - Symptoms of worsening hypertension and what to do
  - Self-monitoring
  - Explanation of treatment/plan of care
  - Clarification of patient responsibilities
  - Importance of lifestyle modification
  - Importance of compliance with the treatment/plan of care

• **Activity Recommendations**
  - Recreation, leisure and work activity
  - Exercise

• **Medications**
  - Potential side effects and what to do if they occur
Specialist Involvement

- Specialist involvement may be indicated when the following findings are present:
  - Difficulties in achieving or maintaining control of hypertension
  - Hospitalization
  - Worsening target organ damage and/or clinical cardiovascular disease