Cardiovascular Disease

Summary of the 2017 ACC/AHA Guideline for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults

- BP should be categorized as normal, elevated, or stage 1 or 2 hypertension to prevent and treat high BP (pg. e21)
  - Normal <120/<80
  - Elevated 120-129/<80
  - Stage 1 HTN 130-139/80-89
  - Stage 2 HTN >140/>90

- Prevalence estimates for awareness, treatment, and control of hypertension are usually based on self-reports of the hypertension diagnosis (awareness), use of BP-lowering medications in those with hypertension (treatment), and achievement of a satisfactory SBP/DBP during treatment of hypertension (control). (pg. e22)

- BP in the Office: for diagnosis and management of high BP, proper methods are recommended for accurate measurement and documentation (pg. e23)
  - Properly prepare the patient
  - Use proper technique for BP measurements
  - Take the proper measurements needed for diagnosis and treatment of elevated BP/hypertension
  - Properly document accurate BP readings
  - Average the readings
  - Provide BP readings to patient

- Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension and for titration of BP-lowering medication, in conjunction with telehealth counseling or clinical interventions. (pg. e24)
  - Home blood pressure monitoring patient training should occur under medical supervision.
  - Verify use of automated validated devices (cuff size, memory storage).
  - Patient should be instructed to remain still, sit correctly, take multiple readings and record all readings accurately.
  - Ambulatory Blood Pressure Monitoring (ABPM) is used to obtain out-of-office BP readings at set intervals, usually over a period of 24 hours, and is often used to supplement BP readings obtained in office settings.
  - USPSTF reported that ABPM provided a better method to predict long-term CVD outcomes than did office BPs.

- White coat hypertension is characterized by elevated office BP but normal readings when measured outside the office with either ABPM or HBPM. (pg. e26)

- In contrast, masked hypertension is characterized by office readings suggesting normal BP but out-of-office (ABPM/HBPM) readings that are consistently above normal.
• In sustained hypertension, BP readings are elevated in both office and out-of-office settings.

• Causes of Hypertension (pg. e28)
  o Genetic predisposition
  o Environmental Risk Factors: Poor diet, physical inactivity, and excess intake of alcohol, alone or in combination, are the underlying cause of a large proportion of hypertension.
  o Physical Fitness: Epidemiological studies have demonstrated an inverse relationship between physical activity and physical fitness and level of BP and hypertension. Even modest levels of physical activity have been associated with a decrease in the risk of incident hypertension.

• Non-pharmacological Interventions: Correcting the dietary aberrations, physical inactivity, and excessive consumption of alcohol that cause high BP is a fundamentally important approach to prevention and management of high BP, either on their own or in combination with pharmacological therapy. (pg. e35)
  o Weight loss is recommended to reduce BP in adults with elevated BP or hypertension who are overweight or obese.
  o A heart-healthy diet, such as the DASH (Dietary Approaches to Stop Hypertension) diet, that facilitates achieving a desirable weight is recommended for adults with elevated BP or hypertension.
  o Sodium reduction is recommended for adults with elevated BP or hypertension.
  o Potassium supplementation, preferably in dietary modification, is recommended for adults with elevated BP or hypertension, unless contraindicated by the presence of CKD or use of drugs that reduce potassium excretion.
  o Increased physical activity with a structured exercise program is recommended for adults with elevated BP or hypertension.
  o Adult men and women with elevated BP or hypertension who currently consume alcohol should be advised to drink no more than 2 and 1 standard drinks per day, respectively.

• Pharmacological Treatment: Pharmacological agents, in addition to lifestyle modification, provide the primary basis for treatment of high BP. A large number of clinical trials have demonstrated that antihypertensive pharmacotherapy not only lowers BP but reduces the risk of CVD, cerebrovascular events, and death. (pg. e39)
  o Use of BP-lowering medications is recommended for secondary prevention of recurrent CVD events in patients with clinical CVD and an average SBP of 130 mm Hg or higher or an average DBP of 80 mm Hg or higher, and for primary prevention in adults with an estimated 10-year atherosclerotic cardiovascular disease (ASCVD) risk of 10% or higher and an average SBP 130 mm Hg or higher or an average DBP 80 mm Hg or higher.
  o Use of BP-lowering medication is recommended for primary prevention of CVD in adults with no history of CVD and with an estimated 10-year ASCVD risk.

This guideline summary is not all-inclusive of available guideline content. Please reference the full guideline for comprehensive content.