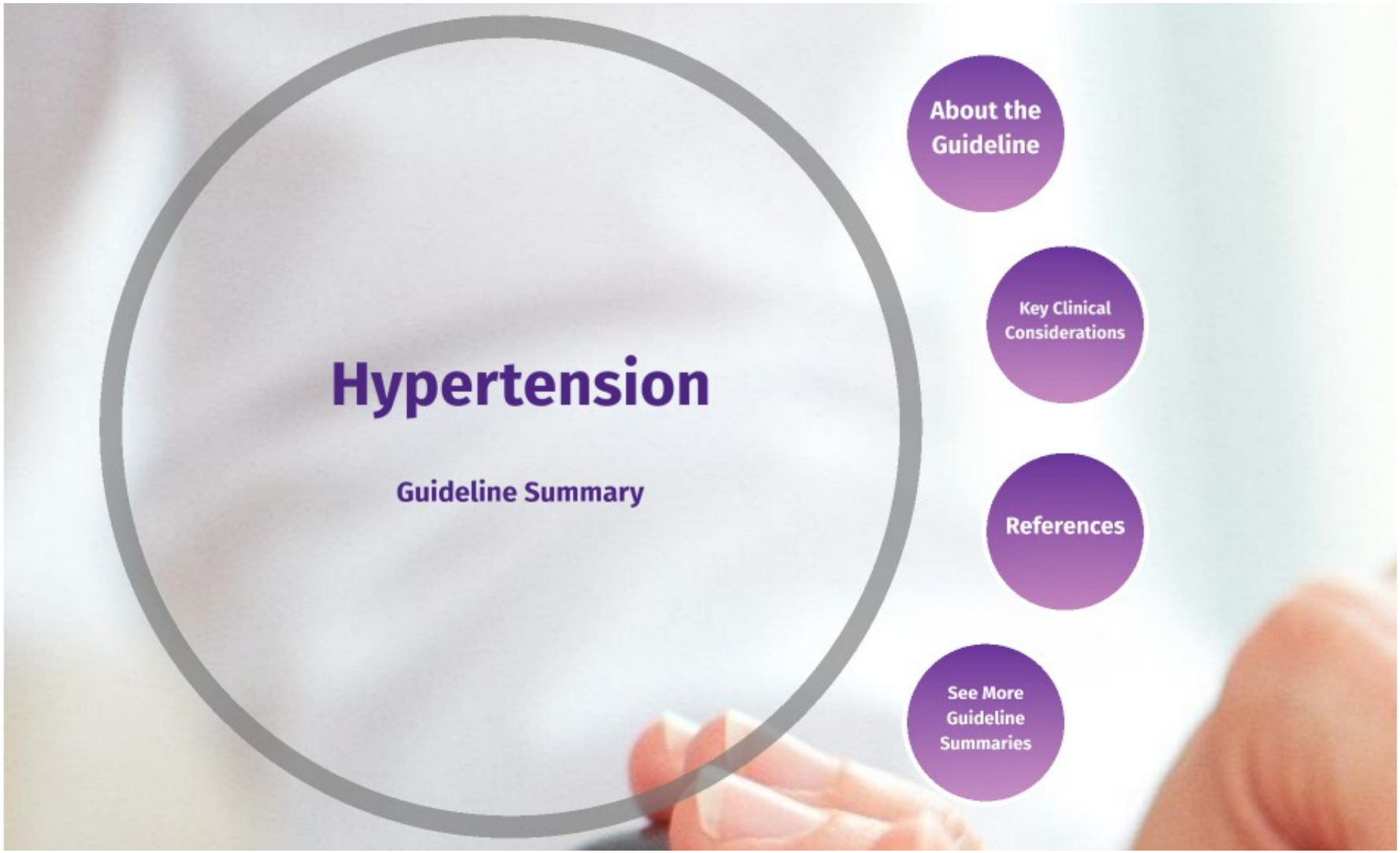

Hypertension
Wolters Kluwer
Lippincott
NursingCenter
Copyright © 2018, Wolters Kluwer


Hypertension
Guideline Summary
About the Guideline
Key Clinical Considerations
References
See More Guideline Summaries


About the Guideline
• Developed by the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines
• Serves as an update to "The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure" (JNC 7) published in 2003.
• Note: In June 2013, the National Heart, Lung and Blood Institute (NHLBI) announced it would no longer be involved in developing clinical guidelines. At the time, the Joint National Committee on Prevention, Detection, Evaluation and Treatment of high blood pressure (JNC) was working on the JNC-8 publication and declined partnership with the ACC/AHA. The 2014 JNC-8 was published in December 2013. In 2017, the ACC/AHA published the guideline being summarized here. The JNC-8 guideline will be summarized separately.
About the Guideline (cont'd.)

About the Guideline (cont'd.)

- The major difference between the two guidelines is the 2017 ACC/AHA recommendation to initiate therapy for treatment of HTN in those with CVD or ASCVD risk factors for SBP ≥ 130 and DBP ≥ 80 as compared to a BP of ≥ 140/90 in this same population in the JNC-8 guideline. In those without risk factors the threshold for initiation of treatment is a BP > 140/90 for both the JNC-8 and 2017 ACC/ AHA HTN guidelines.

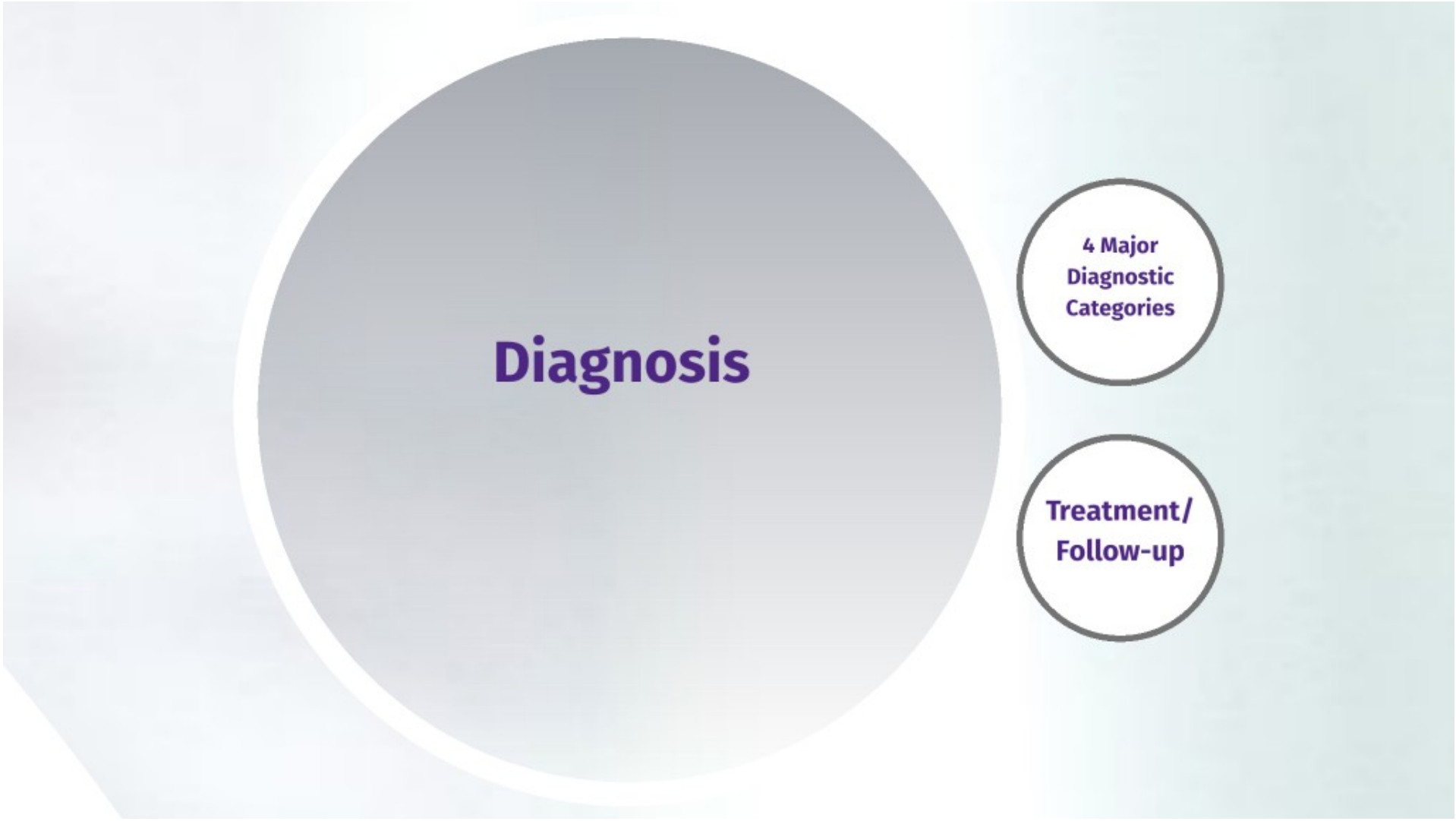
- This document summarizes the major recommendations in 3 categories:

    1) Diagnosis
    2) Initiating therapy
    3) Management.

- The term prehypertension has been eliminated from this guideline.

- Continued research is necessary to determine the risk of harm compared to the benefit of treatment in the management of hypertension.


Key Clinical Considerations
Hypertension is a major risk factor for morbidity and mortality worldwide and is associated with increased risk of cerebrovascular disease, cerebral vascular accident (CVA), and chronic kidney disease. It is estimated that approximately 874 million people worldwide have a SBP of 140 mmHg or greater (Whelton et al., 2017). Given that HTN is second only to cigarette smoking as a preventable cause of death in the United States (Danaei et al., 2009), it is imperative that healthcare professionals continue to research effective ways to not only prevent the development of hypertension but create management strategies that limit harm and prevent co-morbidities associated with HTN.
Diagnosis
Initiating Therapy
Management
Management of Common Conditions and Co-morbidities
Key Definitions
Risk Reduction in the Development of HTN


Diagnosis
4 Major Diagnostic Categories
Treatment/ Follow-up

4 Major Diagnostic Categories

- Normal: Less than 120/80
- Elevated: 120-129/80
- Stage 1 Hypertension: 130-139/80-89
- Stage 2 Hypertension: Greater than or equal to 140/90

Treatment/Follow-up

- Normal BP: Encourage healthy lifestyle to maintain normal BP, re-evaluate annually.
- Elevated BP: Recommend healthy lifestyle changes, re-evaluate in 3-6 months.
- Stage 1 HTN: Assess 10-year ASCVD risk
  - If ASCVD risk less than 10%, recommend healthy lifestyle changes, re-evaluate in 3-6 months.
  - If ASCVD risk greater than 10% or if patient has history of CVD, DM or CKD, recommend healthy lifestyle changes, initiate pharmacologic treatment and re-evaluate monthly until target BP met.
- Stage 2 HTN: Recommend healthy lifestyle changes, initiate pharmacologic therapy (2 agents) and re-evaluate monthly until target BP met.

Link to ASCVD risk calculator: http://www.cvriskcalculator.com/
(Estimated 10-year risk of myocardial infarction, CVA or coronary artery disease death, Goff et al., 2013)

Recommendation: Incorporate out-of-office BP measurements for both diagnosis of HTN and to make adjustments to pharmacologic therapies in conjunction with healthcare team. This is a change from current practice with the intent to identify masked HTN and white coat hypertension.

Initiating Therapy

Recommendations:

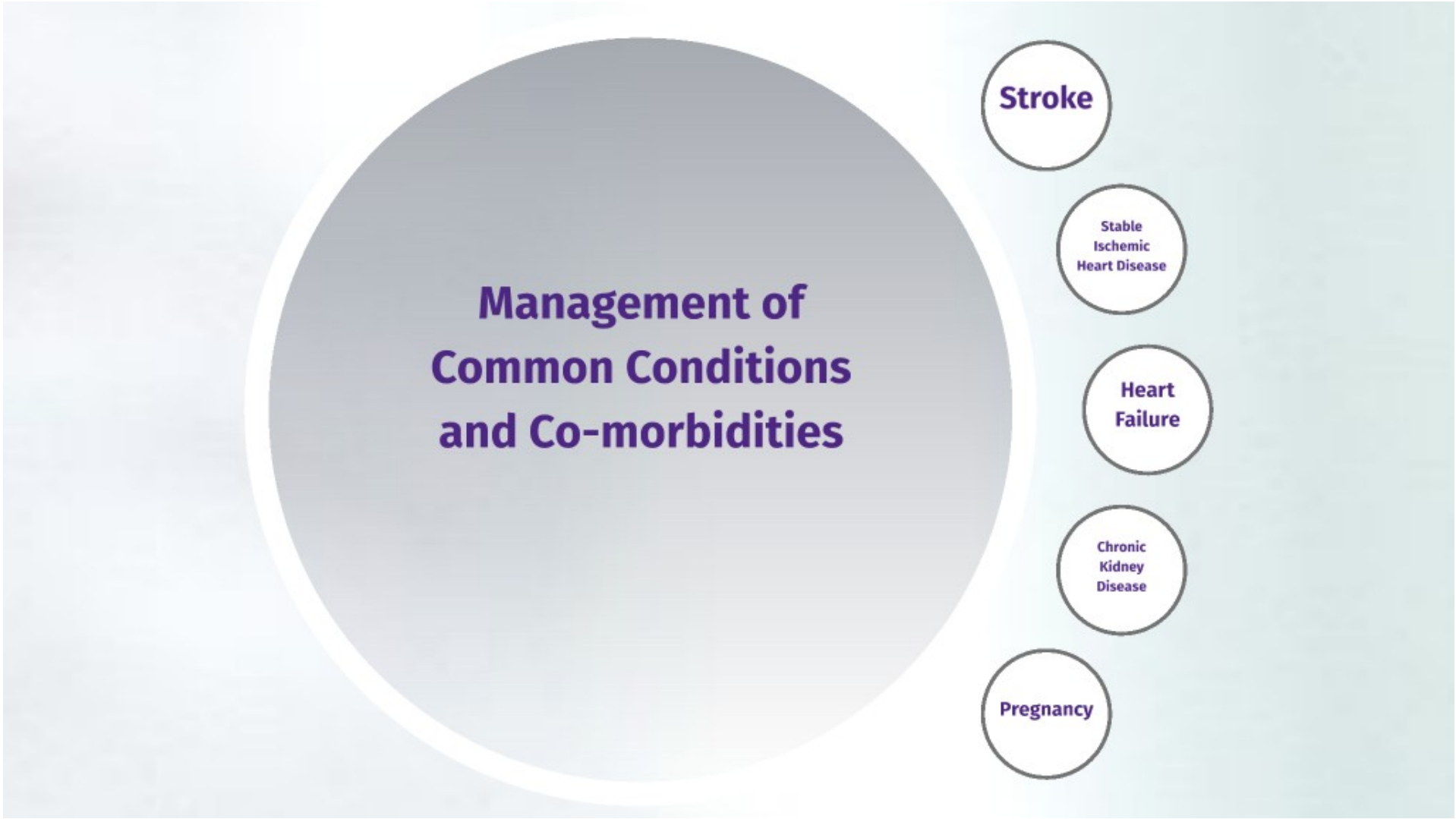
- Healthy lifestyle changes: Utilize non-pharmacologic interventions for lowering blood pressure in those with elevated blood pressure or HTN.
  - Non-pharmacologic measures include (Whelton et al., 2017):
    - Weight loss with goal of ideal body weight (with each kg reduction in body weight, expect 1 mmHg reduction in BP)
    - Heart healthy diet (such as the DASH [Dietary Approaches to Stop Hypertension] diet), sodium reduction, potassium supplementation when not contraindicated)
    - Increased physical activity to include 90-150 minutes of aerobic or resistance training per week or 3 sessions/ week of isometric resistance exercises
    - Moderation of alcohol intake with goal of reducing to 2 or fewer drinks daily for men or 1 or fewer drinks daily for women

- Initiate pharmacologic therapy:
  - In patients with SBP ≥ 130 or DBP ≥ 80 and CVD or estimated 10-year ASCVD risk of 10% or higher
  - In patients with SBP ≥ 140 or DBP ≥ 90 and no CVD or 10-year ASCVD risk of less than 10%

Management

Recommendations:

- Target BP of less than 130/80 in patients with CVD and ASCVD risk of 10% or higher
- Target BP of less than 130/80 may be reasonable in low-risk patients
  - First-line pharmacologic agents in those warranting treatment should include one the following:
    - Thiazide diuretics
    - Calcium channel blockers (CCBs)
    - Angiotensin-converting enzyme (ACE) inhibitors or
    - Angiotensin II receptor blockers (ARBs)
  - In those with Stage 2 HTN and BP > 20/10mmHg above target, initiate 2 first line agents from different classes
- Caution should be used when treating older patients to avoid hypotension or orthostatic hypotension.
- In black patients, CCBs are more effective in preventing heart failure and stroke compared with ACE inhibitors and thus should be considered when choosing pharmacologic agents in this population.


Management of Common Conditions and Co-morbidities
Stroke
Stable Ischemic Heart Disease
Heart Failure
Chronic Kidney Disease
Pregnancy

Stroke

- For prevention of stroke in the general population, CCBs and thiazide diuretics are more effective than BB in the treatment of HTN.

- Following acute ischemic stroke, in those treated with tPA or in those with SBP > 120 mmHg or DBP > 120 mmHg, it is recommended that BP be reduced rapidly to hypertensive range; anti-hypertensives should be restarted after the first 24 hours following acute stroke for neurologically intact patients with persisting HTN.

- Elevated blood pressure increases the risk of recurrent stroke.

Stable Ischemic Heart Disease

- Recommendations include considering beta-blockers or CCBs, both agents have antihypertensive and antianginal components.

Heart Failure

- In heart failure with reduced ejection fraction, avoid nondihydropyridine CCBs.

- In heart failure with preserved ejection fraction, prescribe ACE inhibitors or ARBS and beta-blockers to treat hypertension after management of volume overload.

Chronic Kidney Disease

- ACE inhibitors or ARBs are the preferred agent in those with CKD 3 or CKD 1 or 2 and microalbuminuria.

Pregnancy

- Treat with methyldopa, nifedipine, and/or labetalol; do not use ACE-I, ARBs or direct renin inhibitors.

Key Definitions

Hypertensive Urgency

- SBP > 180 mmHg and/or DBP > 120 mmHg
- Evaluate for medication adherence and titrate or re-initiate therapy as clinical indicated

Hypertensive Emergency

- SBP > 180 mmHg with target organ damage and/or DBP > 120 mmHg with target organ damage
- Admit to intensive care unit for parenteral administration of BP-lowering agent and continuous monitoring of blood pressure and progressive or worsening target organ damage.

Risk Reduction in the Development of HTN

Modifiable risk factors: obesity/overweight, alcohol, physical inactivity, dietary (high sodium intake, low potassium intake), high cholesterol, tobacco use, diabetes mellitus.

Relatively Fixed risk factors: psychosocial stress, premature birth, low birth weight, chronic kidney disease, family history, increased age, male sex, low socioeconomic factors, obstructive sleep apnea.

Hypertension increases the risk of the following conditions: Atrial fibrillation, stroke, small vessel ischemic disease and cortical white matter abnormalities (associated with dementia), sexual dysfunction, peripheral vascular disease.

References

Cifu, A.S., & Davis, A.M. (2017). JAMA Clinical Guidelines Synopsis. Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. The Journal of the American Medical Association, 218(21), 2132-2134. doi:10.1001/jama.2017.18706

Danaei, G., Ding, E.L., Mozaffarian, D., Taylor, B., Rehm, J., Murray, C.J.L. & Ezzati, M. (2009). The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors. PLoS Med 6(4): e1000058. doi.org/10.1371/journal.pmed.1000058

Goff, D.C, Lloyd-Jones, D.M., Bennett, G., Coady, S., D'Agostino, R.B., Gibbons, R.,...Wilson, P.W.F. (2013). 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk. Circulation,1. doi.org/10.1161/01.cir.0000437741.48606.98. Article of origin for: Calculate your 10-year risk of heart disease or stroke using the ASCVD algorithm published in 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk. Available at: http://www.cvriskcalculator.com

Whelton, P.K., Carey, R.M., Aronow, W.S., Casey, D.E., Collins, K.J., Dennison Himmelfarb, C.,... Wright, J.T. (2017). 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Hypertension, 71(2). doi.org/10.1161/HYP.0000000000000065


See More Guideline Summaries
Visit https://www.NursingCenter.com/guideline-summaries
Access the full pracice guideline @ http://hyper.ahajournals.org/content/early/2017/11/10/HYP.0000000000000065


Hypertension
Wolters Kluwer
Lippincott
NursingCenter
Copyright © 2018, Wolters Kluwer