
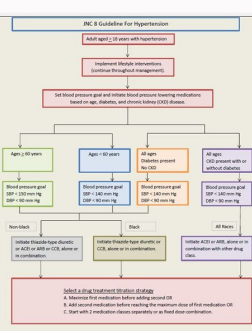


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## Hypertension (JNC 8 Guidelines)

*Preferred*

ACE inhibitors
ARBs
CCBs
Thiazides

*CKD ≤75 years*

ACE inhibitors
OR
ARBs

*African Descent w/o CKD*

CCBs
Thiazides

## JNC8

Grade	Strength of Recommendation
A	Strong Recommendation There is high certainty based on evidence that the net benefit* is substantial.
B	Moderate Recommendation There is moderate certainty based on evidence that the net benefit is moderate to substantial or there is high certainty that the net benefit is moderate.
C	Weak Recommendation There is at least moderate certainty based on evidence that there is a small net benefit.
D	Recommendation against There is at least moderate certainty based on evidence that it has no net benefit or that risks/harms outweigh benefits.
E	Expert Opinion ("There is insufficient evidence or evidence is unclear or conflicting, but this is what the committee recommends.") Net benefit is unclear. Balance of benefits and harms cannot be determined because of no evidence, insufficient evidence, unclear evidence, or conflicting evidence, but the committee thought it was important to provide clinical guidance and make a recommendation. Further research is recommended in this area.
N	No Recommendation for or against ("There is insufficient evidence or evidence is unclear or conflicting.") Net benefit is unclear. Balance of benefits and harms cannot be determined because of no evidence, insufficient evidence, unclear evidence, or conflicting evidence, and the committee thought no recommendation should be made. Further research is recommended in this area.

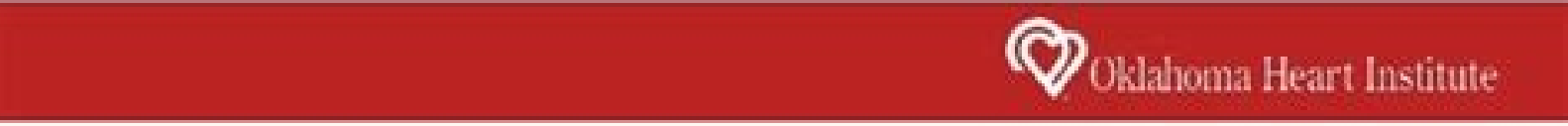
\*Net benefit is defined as benefits minus the risks/harms of the service/intervention.

Type of Evidence	Quality Rating*
Well-designed, well-executed RCTs that adequately represent populations to which the results are applied and directly assess effect on health outcomes. Highly certain about the estimate of effect; further research is unlikely to change our confidence in the estimate of effect.	High
Well-designed, well-executed RCTs with minor limitations affecting confidence in, or applicability of, the results. Moderately certain about the estimate of effect; further research may have an impact on our confidence in the estimate of effect and may change the estimate.	Moderate
RCTs with major limitations. Non-randomized controlled studies and observational studies with major limitations affecting confidence in, or applicability of, the results. Physiological studies in humans. Low certainty about the estimate of effect; further research is likely to have an impact on our confidence in the estimate of effect and is likely to change the estimate.	Low

Abbreviations: RCT, randomized controlled trial.  
\*The evidence quality rating system used in this guideline was developed by the National Heart, Lung, and Blood Institute's (NHLBI) Evidence-Based Methodology Lead (with input from NHLBI staff, external methodology team, and guideline panels and work groups) for use by all the NHLBI CVD guideline panels and work groups during this project. As a result, it includes the evidence quality rating for many types of studies, including studies that were not used in this guideline. Additional details regarding the evidence quality rating system are available in the online Supplement.

## JNC-8 Handouts



# JNC 8 Hypertensive Guidelines: The Controversy Begins

**Wayne N. Leimbach, Jr. MD, FACC.**

Clinical Associate Professor of Medicine  
University of Oklahoma College of Medicine - Tulsa

Director of the Cardiac Catheterization Laboratories  
Oklahoma Heart Institute at Hillcrest Medical Center

BLOOD PRESSURE CLASSIFICATION	SBP mmHg	DBP mmHg
NORMAL	<120	and <80
PREHYPERTENSION	120-139	or 80-89
STAGE 1 HYPERTENSION	140-159	or 90-99
STAGE 2 HYPERTENSION	≥160	or ≥100

Your doctor may recommend using lubrication during sex. The target systolic pressure in this population is less than 140 mm Hg, and the target diastolic pressure is less than 90 mm Hg. For persons 18 years or older with chronic kidney disease (CKD) or diabetes mellitus, the treatment threshold and target blood pressures are the same as those for the general population younger than 60 years (i.e., threshold systolic pressure of 140 mm Hg or threshold diastolic pressure of 90 mm Hg; target systolic pressure of less than 140 mm Hg; target diastolic pressure of less than 90 mm Hg). Sign up for the free AFP email table of contents. The treatment will depend on the diagnosis. Sign Up Now The pain may begin the first time you have sex, or it can begin later. For some causes, your doctor may recommend surgery. To see the full article, log in or purchase access. Patients should be treated to a target systolic pressure of less than 150 mm Hg and a target diastolic pressure of less than 90 mm Hg. Treatment does not need to be adjusted if it results in a systolic pressure lower than 140 mm Hg, as long as it is not associated with adverse effects on health or quality of life. In the general population younger than 60 years, pharmacologic treatment should be initiated when the systolic pressure is 140 mm Hg or higher, or when the diastolic pressure is 90 mm Hg or higher. The Eighth Joint National Committee (JNC 8) recently released evidence-based recommendations on treatment thresholds, goals, and medications in the management of hypertension in adults. In the general population of adults 60 years and older, pharmacologic treatment should be initiated when the systolic pressure is 150 mm Hg or higher, or when the diastolic pressure is 90 mm Hg or higher. Referral to a physician with expertise in treating hypertension may be necessary for patients who do not reach the target blood pressure using these strategies. Adults with CKD and hypertension should receive an ACE inhibitor or ARB as initial or add-on therapy, based on moderate evidence that these medications improve kidney-related outcomes in these patients. Guideline source: Eighth Joint National Committee Evidence rating system used? Anxiety or fear of the pain may also occur. Many conditions can cause it. This information provides a general overview and may not apply to everyone. NoPublished source: Journal of the American Medical Association, December 18, 2013. Available at: by the AAFP, July 2014. 2 Please note: This information was current at the time of publication. Am Fam Physician. 2014 Oct 1;90(7):online. See related article on dyspareunia. Dyspareunia (DIS-puh-ROO-nee-uh) is pain that occurs during sex. Normal changes after childbirth or after menopause can make sex painful. A person viewing it online may make one printout of the material and may use that printout only for his or her personal, non-commercial reference. It may feel like a muscle spasm that makes entry into the vagina difficult. But medical information is always changing, and some information given here may be out of date. Your doctor will do a pelvic exam. Blood pressure should be monitored and the treatment regimen adjusted until the target blood pressure is reached. Infections, skin conditions, and scar tissue in the vagina can all cause pain during sex. The pain may be near or in the opening of the vagina or deep inside your pelvis. This material may not otherwise be downloaded, copied, printed, stored, transmitted or reproduced in any medium, whether now known or later invented, except as authorized in writing by the AAFP. YesLiterature search described? Copyright © 2014 by the American Academy of Family Physicians. In the general black population, including those with diabetes, initial treatment should include a thiazide diuretic or calcium channel blocker. Talk to your family doctor to find out if this information applies to you and to get more information on this subject. This content is owned by the AAFP. You may need to have other tests, such as an ultrasound or a blood draw, to help your doctor find the cause. Your doctor will find out what is causing your pain. Contact afpserv@afp.org for copyright questions and/or permission requests. Other health-related information is available from the AAFP online at . Similarly, there is no evidence from randomized controlled trials showing that treatment to a systolic pressure of less than 140 mm Hg improves health outcomes in adults with diabetes and hypertension. In the general nonblack population, including those with diabetes, initial anti-hypertensive treatment should include a thiazide diuretic, calcium channel blocker, angiotensin-converting enzyme (ACE) inhibitor, or angiotensin receptor blocker (ARB). There is no evidence that treating patients with CKD to a lower blood pressure goal slows the progression of the disease. You may need to see a physical therapist. Am Fam Physician. 2014 Oct 1;90(7):503-504. Related editorial: JNC 8: Relaxing the Standards\* In the general population, pharmacologic treatment should be initiated when blood pressure is 150/90 mm Hg or higher in adults 60 years and older, or 140/90 mm Hg or higher in adults younger than 60 years.\* In patients with hypertension and diabetes, pharmacologic treatment should be initiated when blood pressure is 140/90 mm Hg or higher, regardless of age.\* Initial antihypertensive treatment should include a thiazide diuretic, calcium channel blocker, ACE inhibitor, or ARB in the general nonblack population or a thiazide diuretic or calcium channel blocker in the general black population.\* If the target blood pressure is not reached within one month after initiating therapy, the dosage of the initial medication should be increased, or a second medication should be added. From the AFP Editors Hypertension is one of the most important preventable contributors to disease and death in the United States, leading to myocardial infarction, stroke, and renal failure when it is not detected early and treated appropriately. YesGuideline developed by participants without relevant financial ties to industry? Other conditions of the uterus, bladder, or colon also can cause pain during sex. Your doctor will ask questions about your pain, such as where it is, what makes it worse, and if you have other symptoms. This handout is provided to you by your family doctor and the American Academy of Family Physicians. If the target blood pressure is not reached within one month after initiating therapy, the dosage of the initial medication should be increased or a second medication should be added (thiazide diuretic, calcium channel blocker, ACE inhibitor, or ARB; do not combine an ACE inhibitor with an ARB). Get Permissions MOST RECENT ISSUE Jan 2022 Access the latest issue of American Family Physician Read the Issue Don't miss a single issue. A third drug should be added if necessary; however, if the target blood pressure cannot be achieved using only the drug classes listed above, antihypertensive drugs from other classes can be used (e.g., beta blockers, aldosterone antagonists). For regularly updated information on a variety of health topics, please visit familydoctor.org, the AAFP patient education website.

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