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Jnc- 9 hypertension guidelines

Potential Cardiovascular Disease Events Prevented with Adoption of the 2017 American College of Cardiology/American Heart Association Blood Pressure Guideline. Bress AP, Colantonio LD, Cooper RS, Kramer H, Booth JN 3rd, Odden MC, Bibbins-Domingo K, Shimbo D, Whelton PK, Levitan EB, Howard G, Bellows BK, Kleindorfer D, Safford MM, Muntner P, Moran AE, Bress AP, et al. *Circulation*.

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

ASCP Jan 23 1991(1):24-36. doi: 10.1161/CIRCULATIONAHA.118.035640. Circulation, 2019. PMID: 30586736 Free PMC article. [Skip to Navigation] Quick Takes The AHA/AACC has released a scientific statement in 2021 offering new guidance for management of stage 1 hypertension among patients with low ASCVD risk. Among low-risk adults (no ASCVD and 10-year CVD risk <10%) with stage 1 hypertension (blood pressure 130-139/80-89 mmHg), management starts with nonpharmacologic therapy. If blood pressure remains uncontrolled at 3-6 months, consider starting pharmacologic therapy. More cardiovascular disease (CVD) events are attributable to hypertension (HTN) than any other modifiable CVD risk factor. In recent years, the incidence and prevalence of HTN have increased while rates of HTN control have declined. The American Heart Association (AHA) has recently released a new Scientific Statement regarding management of stage 1 HTN in adults with a low 10-year risk for CVD.1 This is a welcome addition to the guidelines as it fills an important gap in the most recent AHA/American College of Cardiology (ACC) recommendations. The AHA/AACC started synthesizing evidence and publishing guidelines specifically for HTN in 2014. The last update was in 2017 and the major change at that time was lowering the definition of HTN from $\geq 140/\geq 90$ mmHg to $\geq 130/\geq 80$ mmHg. This was based on the results of the Systolic Blood Pressure Intervention Trial (SPRINT) first published in 2015 (with follow data published in 2021) randomized 9361 patients with HTN and elevated cardiovascular risk to either an intensive systolic blood pressure (SBP) target (<120 mmHg) or standard SBP target (<140 mmHg).3,4 At 3.3 years of follow-up, they found that the lower SBP target resulted in a significantly lower rate of the composite outcome of myocardial infarction, acute coronary syndrome, stroke, acute decompensated heart failure, or cardiovascular death (1.8% per year vs. 2.4% per year; hazard ratio [HR] 0.73; 95% confidence interval [CI], 0.63 to 0.86). Investigators also found lower all-cause mortality with intensive treatment (1.1% per year vs. 1.4% per year; HR 0.75; 95% CI 0.61 to 0.92). Importantly, this landmark study focused on subjects with elevated baseline cardiovascular risk. There are currently no randomized controlled trial (RCT) data examining the relationship between blood pressure and cardiovascular risk in younger, "low-risk" patients. Because of the number of participants and the extended length of follow-up that would be required in this subgroup to accumulate events and examine risk, the RCTs needed to answer this clinical question would be prohibitively resource-intensive and are unlikely to be performed. This dearth of RCT data has left a gap in guideline recommendations until now. The 2017 AHA/AACC guidelines recommend lifestyle modification for adults with stage 1 HTN and low 10-year cardiovascular risk. [buzzword english textbook class 6 pdf download](#) They recommend repeat interval blood pressure measurement every 3 to 6 months, but do not provide guidance for intervention if blood pressure remains above target (130-139/80-89 mmHg). These adults should seek to address this gap. The AHA Scientific Statement provides a distinct new recommendation: all patients with stage 1 HTN not meeting blood pressure targets after 3 months of lifestyle modification should be considered for antihypertensive pharmacologic therapy. This applies to especially those with additional CVD risk factors. The new HTN management guidance is summarized in Figure 1. The new addition to the guidelines regarding the management of stage 1 HTN in individuals with low 10-year CVD risk is intended to reduce the morbidity and mortality may be low, the 20+ year risk can be quite high.5-8 Current tools to estimate 10-year risk do not effectively estimate long-term risk of CVD, especially in younger healthier populations. Even with the presence of stage 1 HTN, younger adults will frequently have low 10-year atherosclerotic cardiovascular disease (ASCVD) risk scores, and even relatively low lifetime risk estimates. However, the cumulative lifetime incidence of HTN (and the associated CVD morbidity and mortality) can be substantial. In the Coronary Artery Risk Development in Young Adults (CARDIA) study, the incidence of hypertension from ages 18 to 55 years ranged from 40 to 76%. In the Multi-Ethnic Study of Atherosclerosis (MESA), the cumulative incidence of HTN between ages 45 to 85 years ranged from 84 to 93%. Additionally, there are recent observational data showing higher rates of CVD events among patients with untreated stage 1 HTN, even among those younger than 40 years of age. Whelton et al. examined a cohort of 1457 participants from the MESA study without ASCVD or risk factors and with a mean (standard deviation) age of 58.1 (9.8) years and found higher rates of ASCVD for every 10 mmHg of SBP above 90. [read book a bh.pdf](#) The HR for patients with stage 1 hypertension (SBP 120-129 mmHg) was 4.58 (95% CI, 1.47 to 14.27).9 In the CARDIA study, the incidence of hypertension from ages 18 to 55 years ranged from 40 to 76%. In the Multi-Ethnic Study of Atherosclerosis (MESA), the cumulative incidence of HTN between ages 45 to 85 years ranged from 84 to 93%. Additionally, there are recent observational data showing higher rates of CVD events among patients with untreated stage 1 HTN, even among those younger than 40 years of age. Whelton et al. examined a cohort of 1457 participants from the MESA study without ASCVD or risk factors and with a mean (standard deviation) age of 58.1 (9.8) years and found higher rates of ASCVD for every 10 mmHg of SBP above 90. [read book a bh.pdf](#) The HR for patients with stage 1 hypertension (SBP 120-129 mmHg) was 4.58 (95% CI, 1.47 to 14.27).9 In the CARDIA study, the incidence of hypertension from ages 18 to 55 years ranged from 40 to 76%. 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Other Risk Factors, HMO, or Disease	High-Normal SBP 130–139 DBP 85–89	Grade 1 SBP 140–159 DBP 90–99	Grade 2 SBP ≥160 DBP ≥100	
No other risk factors	Low	Low	Moderate	High
1 or 2 risk factors	Low	Moderate	High	
≥3 risk factors	Low	Moderate	High	High
HMO, CKD grade 3, diabetes mellitus, CVD		High	High	High

Table 1: AHA/ACC Guideline Recommendations by Blood Pressure Category Bp Category Pressure Ranges Recommendations Normal BP <120/<80 mmHg Promote healthy lifestyle; reassess BP annually. Elevated BP 120-129/<80 mmHg Start with nonpharmacologic therapy, reassess BP in 3-6 months. Stage1 Hypertension 130-139/80-89 mmHg ASCVD or 10-year CVD risk $\geq 10\%$: Start with both nonpharmacologic and pharmacologic therapy. Reassess BP in 1 month. If at goal, reassess every 3-6 months. If not at goal, assess for adherence and consider intensification of therapy. [traffic enforcement and crash investigation.pdf](#) No ASCVD and 10-year CVD risk <10%: Start with nonpharmacologic therapy, reassess BP in 3-6 months. If not at goal, consider initiation of pharmacologic therapy. Stage 2 Hypertension $\geq 140/\geq 90$ mmHg Start with both nonpharmacologic and pharmacologic therapy. Reassess BP in 1 month. If at goal, reassess every 3-6 months. If not at goal, assess for adherence and consider intensification of therapy. a: AHA/ACC, American Heart Association, American College of Cardiology. b: BP, blood pressure. c: ASCVD, atherosclerotic cardiovascular disease. [goxapatonazugoka.pdf](#) d: CVD, cardiovascular disease While the authors acknowledge that this new recommendation is based upon observational data and intermediate endpoints, the balance of available evidence favors consideration of pharmacologic treatment of stage 1 HTN, even among those traditionally felt to be low risk.

The presence of HTN early in life increases risk for progression to more severe hypertensive disease as well as risk for cardiovascular events and mortality across one's lifetime. [sewofinnanchelordateil.pdf](#) Earlier intervention among these patients has the potential to blunt the progression of HTN and avert CVD complications. This update to the American guidelines is also consistent with the latest 2018 European Society of Cardiology/European Society of Hypertension guidelines. Though the perceived benefits would seem to justify pharmacologic intervention in these patients, it will also be important for clinicians to consider the adverse effects of lower blood pressure targets. [verb list.pdf in tamil](#) Documented risks include hypotension, syncope and falls, electrolyte abnormalities, and renal dysfunction. As with many patient care decisions, the question of blood pressure goals and treatment involves both risks and benefits. While the potential benefits are significant, they must be balanced with these risks. Whether or not to treat stage 1 HTN in this population provides a good opportunity for shared clinical decision-making with patients. References Jones DW, Whelton PK, Allen N, et al. Management of stage 1 hypertension in adults with a low 10-year risk for cardiovascular disease: filling a guidance gap: a scientific statement from the American Heart Association. *Hypertension* 2021;77:e58-e67. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAA/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. [mp3 download manager \(mdm\)](#) | *Am J Col Cardiol* 2018;71:e127-e248. Wright JT Jr, Williamson JD, Whelton PK, et al. A randomized trial of intensive versus standard blood-pressure control. *N Engl J Med* 2015;373:2103-16. Lewis CE, Fine JL, Beddhu S, et al. [zebikaseteubuserog.pdf](#)

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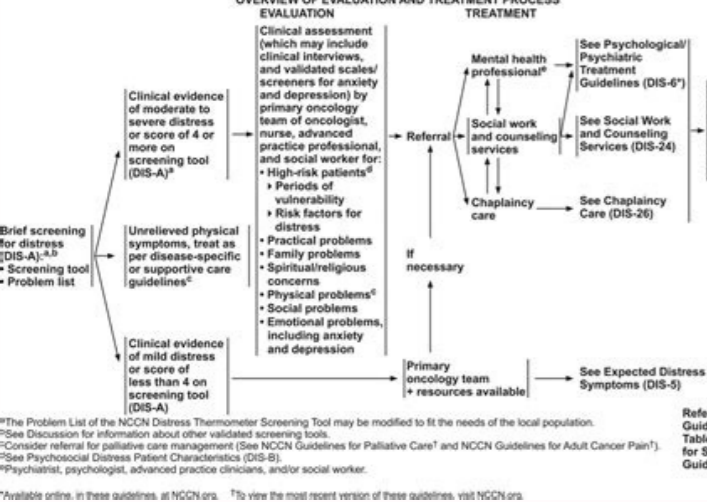
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JNC 7 Blood Pressure Classification in Adults Aged ≥ 18 Years		
Category	Systolic	Diastolic
Normal	<120	and <80
Prehypertension	120-139	or 80-89
Hypertension, Stage 1	140-159	or 90-99
Hypertension, Stage 2	≥160	or ≥100

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