The Burden of Uncontrolled Hypertension

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Hypertension is Associated With Increased Risks

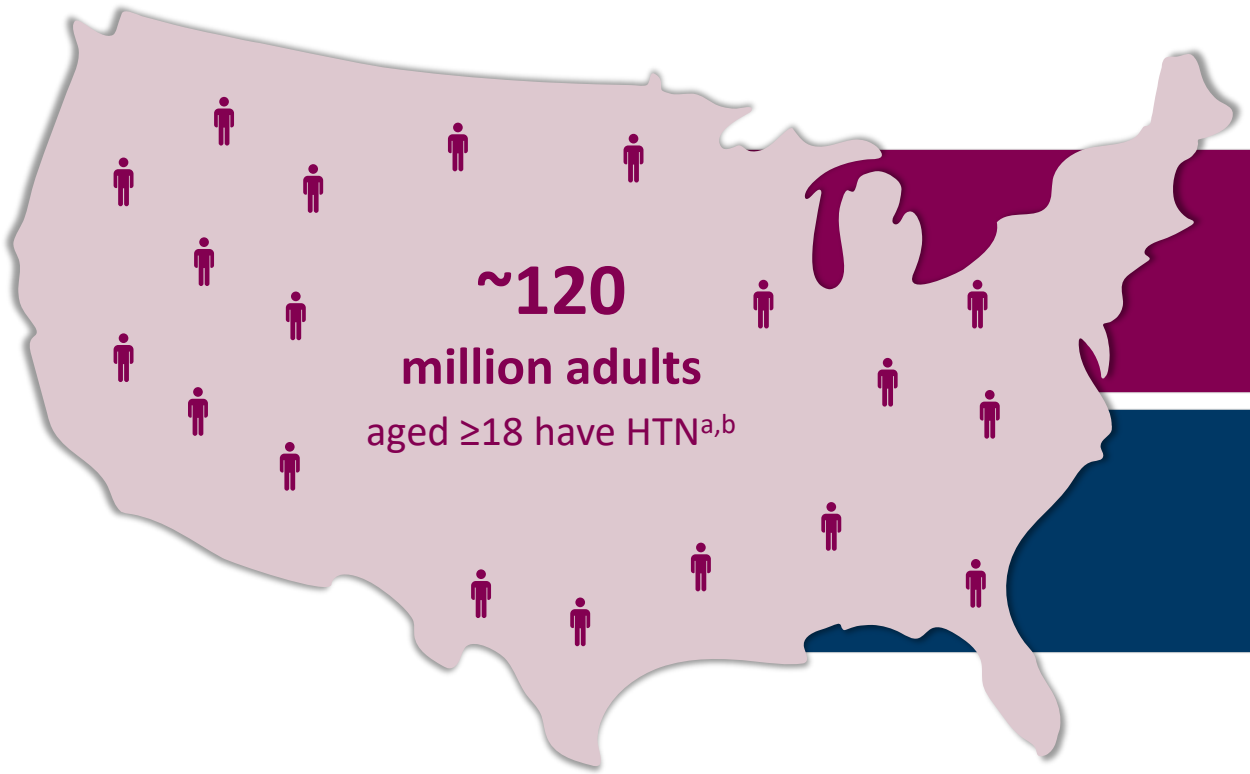
According to the AHA/ACC 2025 Guideline,

> Hypertension is the **most prevalent modifiable CVD risk factor and is the leading cause of death and disability worldwide**… Higher BP is associated with an elevated risk for total CVD, coronary heart disease, HF, aortic and peripheral vascular disease, kidney disease, ischemic and hemorrhagic stroke, dementia, and cognitive impairment.

ACC = American College of Cardiology; AHA = American Heart Association; BP = blood pressure; CVD = cardiovascular disease; HF = heart failure.

Jones DW, et al. *J Am Coll Cardiol.* 2025;86(18):1567-1678.

A Majority of US Adults With Hypertension are Not Achieving BP Goals



~93 million → are uncontrolled (BP ≥130/80 mm Hg)[c]

~33 million → remain uncontrolled despite antihypertensive treatment

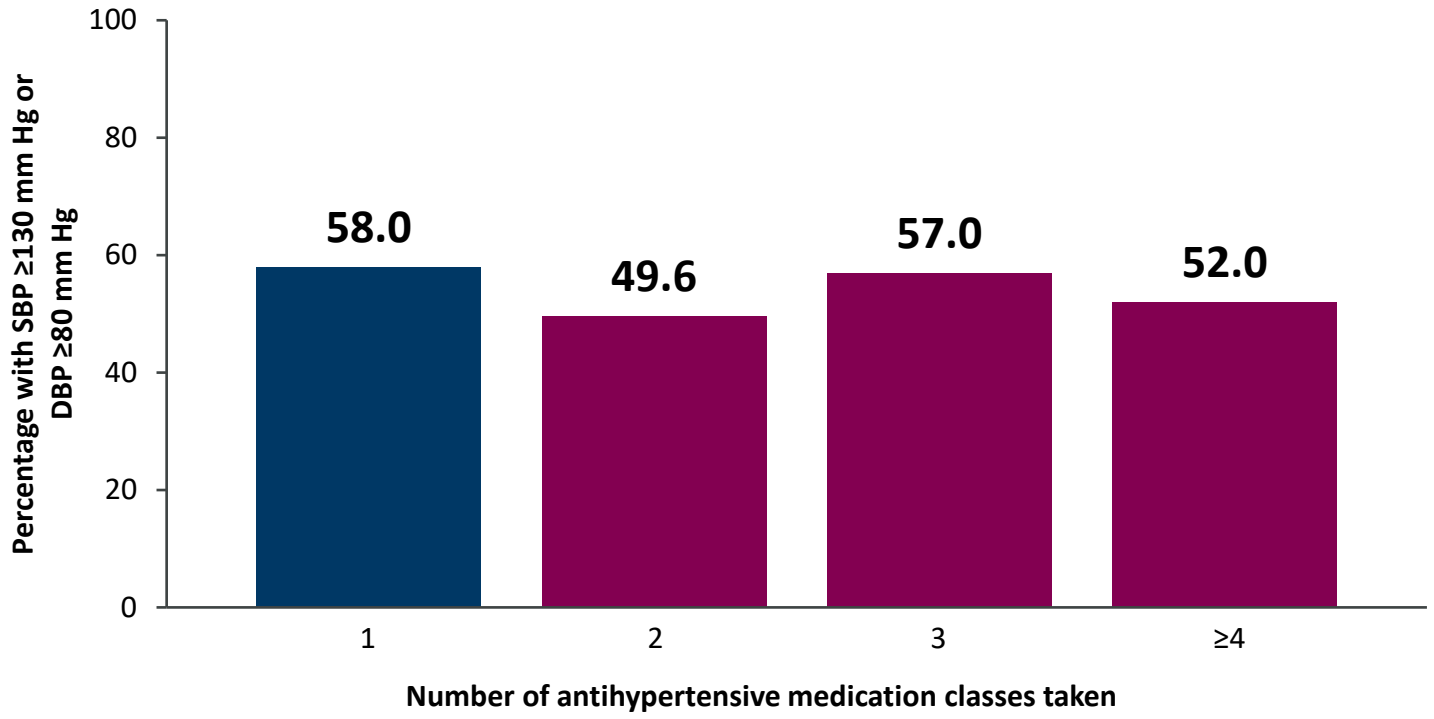
[a]HTN prevalence and control estimates among US adults aged ≥18 years of age, applying criteria from the AHA/ACC 2017 HTN Clinical Practice Guideline utilizing data sourced by NHANES 2017-2020; [b]BP ≥130/80 mm Hg or currently using antihypertensive medication; [c]Percentage consisting of adults recommended lifestyle modification only, as well as adults recommended for both medication and lifestyle modification. Among adults recommended for both medication and lifestyle modification, 71.6% (67.9 million) of adults were uncontrolled.

ACC = American College of Cardiology; AHA = American Heart Association; BP = blood pressure; HTN = hypertension; NHANES = National Health and Nutrition Examination Survey; US = United States.

Million Hearts. Estimated hypertension prevalence, treatment, and control among US adults. Accessed June 15, 2026. https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html

Half of US Adults Taking ≥2 Antihypertensive Agents May Have Uncontrolled Hypertension[1,2]

Percentage of US adults taking antihypertensive medication with SBP ≥130 mm Hg or DBP ≥80 mm Hg[1,a,b]



~1 in 2

US adults taking ≥2 antihypertensive medications of different classes **may not be controlled[1]**

[a]This analysis pooled data from 2009 through 2014 NHANES survey cycles. The analysis was restricted to participants ≥20 years old who self-reported taking antihypertensive medication and had at least 1 class of antihypertensive medication identified during a pill bottle review conducted as part of the NHANES examination and had ≥3 BP measurements obtained during their study exam (N=4158)[2]; [b]Only SBP ≥130 mm Hg was used for adults ≥65 years of age without diabetes mellitus, CKD, history of CVD or 10-year predicted CVD risk <10% in the 2018 AHA Scientific Statement.[2]

AHA = American Heart Association; CKD = chronic kidney disease; CVD = cardiovascular disease; DBP = diastolic blood pressure; NHANES = National Health and Nutrition Examination Survey; SBP = systolic blood pressure.

1. Carey RM, et al. *Hypertension*. 2019;73(2)(suppl):424-431; 2. Carey RM, et al. *Hypertension*. 2019;73(2):424-431.

Uncontrolled HTN is Associated With Increased Risks[1,2]

EnligHTN Study in US Patients[1a,b]

Among patients taking ≥2 antihypertensives, inadequately controlled HTN[b] compared with controlled HTN[b] was associated with a higher risk of [c]:

All-cause mortality

~1.3×

(aHR: 1.25;
95% CI, 1.06–1.47)

MI

~1.8×

(aHR: 1.78;
95% CI, 1.48–2.12)

Stroke

~2.2×

(aHR: 2.17;
95% CI, 1.79–2.64)

ESRD

~2.5×

(aHR: 2.54;
95% CI, 1.79–3.59)

ARIC Study in US Patients[2d]

Patients with midlife HTN had a higher risk of dementia[e]

Dementia

~1.4×

(HR: 1.39;
95% CI, 1.22–1.59)

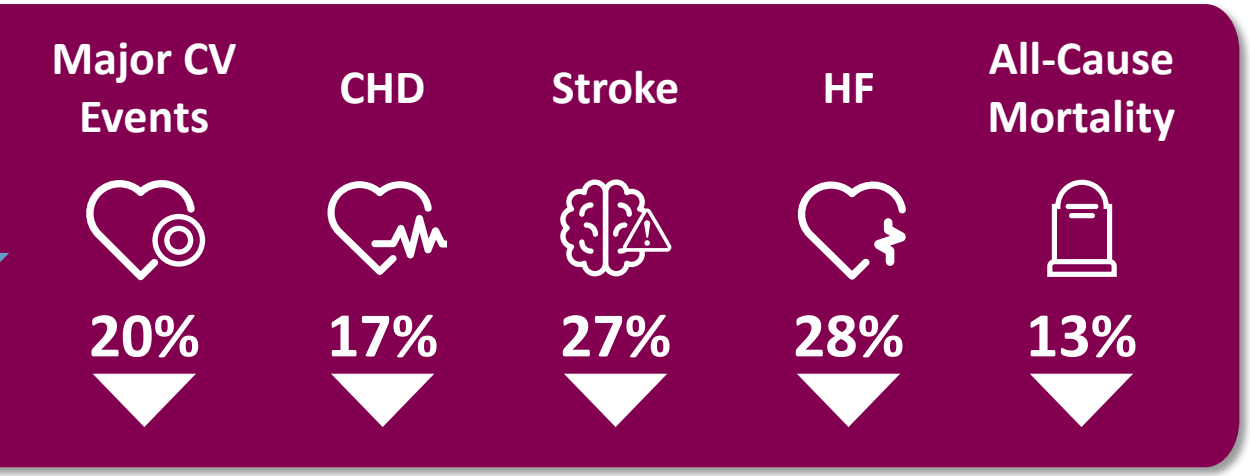
[a]EnligHTN is an observational, longitudinal, multinational, cohort study of over 240,000 patients with HTN that assessed clinical characteristics and real-world disease burden in patients with controlled or inadequately controlled HTN using secondary de-identified claims and EMR data of patients with HTN, including IQVIA Ambulatory EMR-US linked with IQVIA PharMetrics® Plus claims. Patient characteristics were summarized by country. Patients were included if they were ≥18 years, diagnosed with HTN between 2018 and 2023, treated with ≥2 antihypertensive medications for ≥30 days, and ≥1 day of follow-up and excluded if they had secondary causes of HTN[1]; [b]In US patients (N=41,994), controlled HTN (n=12,864; 31%) was defined as BP <130/80 mm Hg and inadequately controlled HTN (n=29,130, 69%) was defined as BP >130/80 mm Hg[1]; [c]Evaluated by multivariable Cox proportional hazards model adjusted for disease risk score. aHR >1 corresponds with a higher risk of the adverse outcome in patients with icHTN vs cHTN[1]; [d]ARIC (Atherosclerosis Risk in Communities) is a prospective cohort study of over 15,000 patients recruited from 1987–1989 through 2011–2013 that evaluated the associations between midlife vascular risk factors and 25-year incidence of dementia. The study recruited participants from 4 ARIC US field communities aged 44 to 66 years. The dates of this analysis were from April 2015 to August 2016. Patient demographics, vascular risk factors (obesity, smoking, diabetes, prehypertension, HTN, and hypercholesterolemia), and APOE ε4 genotype were measured at baseline. After the baseline visit, participants had 4 additional in-person visits. Dementia was assessed from longitudinal cognitive evaluations (visits 2, 4, and 5), complete neuropsychological battery (visit 5), informant interviews, and computer algorithmic diagnoses generated standardized definitions of dementia[2]; [e]Evaluated by Cox proportional hazards regression models and a discrete time analysis binary model with a complementary log-log link.[2]

aHR = adjusted hazard ratio; BP = blood pressure; cHTN = controlled hypertension; EMR = electronic medical record; ESRD = end-stage renal disease; HR = hazard ratio; HTN = hypertension; icHTN = inadequately controlled hypertension; MI = myocardial infarction.

1. McCormack T, et al. Presented at: European Society of Cardiology (ESC) Congress; August 29-September 1, 2025; Madrid, Spain; 2. Gottesman RF, et al. *JAMA Neurol.* 2017;74(10):1246-1254.

Reducing Blood Pressure Significantly Lowers Risks[1,2]

Every 10 mm Hg SBP reduction significantly reduces the risk of CV events and mortality[1a]



Intensive SBP lowering may **reduce the risk of dementia[2b]**

17%

Reducing blood pressure can improve adverse outcomes for patients with hypertension[1,2]

[a]Systematic review and meta-analysis of 123 randomized trials (published between 1966 and 2015) that evaluated the effects of BP lowering on CV disease and mortality across various baseline BP levels and comorbidities in 613,815 participants. Data were extracted for major CV disease events (defined as fatal and non-fatal MI, sudden cardiac death, revascularization, fatal and non-fatal stroke, and fatal and non-fatal HF), CHD (fatal and non-fatal MI and sudden cardiac death, excluding silent MI), stroke (fatal and non-fatal, excluding transient ischemic attacks), HF (new diagnosis of HF, hospital admission, or death), renal failure (ESRD resulting in dialysis, transplantation, or death), and all-cause mortality. The relative risks for events were as follows: major CV events: 20% (RR, 0.80; 95% CI, 0.77–0.83); CHD: 17% (RR, 0.83; 95% CI, 0.78–0.88); stroke: 27% (RR, 0.73; 95% CI, 0.68–0.77); HF: 28% (RR, 0.72; 95% CI, 0.67–0.78); all-cause mortality: 13% (RR, 0.87; 95% CI, 0.84–0.91)[1]; [b]SPRINT MIND was a multicenter randomized clinical trial that compared 2 strategies for managing SBP in older adults with hypertension who were at increased risk of cardiovascular disease (n=9361). Eligible participants were adults aged ≥50 years with screening SBP between 130 and 180 mm Hg. Participants were at increased cardiovascular risk if they had clinical or subclinical cardiovascular disease, chronic kidney disease (eGFR <60 mL/min/1.73 m^2), a Framingham Risk Score ≥15%, or were aged ≥75 years. Participants were randomized 1:1 to either an SBP goal of <120 mm Hg (the intensive treatment group) or an SBP goal of <140 mm Hg (the standard treatment group). The median intervention period was 3.34 years. Median follow-up was 5.11 years. Adjudicated probable dementia occurred in 149 participants in the intensive treatment group vs 176 in the standard treatment group (7.2 vs 8.6 cases per 1000 person-years; HR 0.83; 95% CI: 0.67–1.04).[2]

BP = blood pressure; CHD = coronary heart disease; CV = cardiovascular; eGFR = estimated glomerular filtration rate; ESRD = end-stage renal disease; HF = heart failure; HR = hazard ratio; MI = myocardial infarction; RR = relative risk; SBP = systolic blood pressure.

1. Ettehad D, et al. *Lancet*. 2016;387(10022):957-967; 2. Williamson JD, et al; SPRINT MIND Investigators for the SPRINT Research Group. *JAMA*. 2019;321(6):553-561.