

The following is a synopsis of [2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guidelines for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults](#) published in 2017 by the writing committee of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.



## What is already known on this topic?

Hypertension, or high blood pressure, remains a leading cause of death worldwide, accounting for more cardiovascular disease (CVD) related deaths than any other modifiable risk factors. It comes in second, only to cigarette smoking, as a leading preventable cause of death in the US, according to latest studies.

Many adult patients with hypertension have other modifiable risk factors, such as smoking cigarettes, having diabetes, being overweight or obese, and/or being physically inactive. Additionally, hypertension increases as one ages, and, if close blood relatives have high hypertension, that individual is at an increased risk for developing it. Uncontrolled hypertension will cause major CVDs like heart attacks and strokes and can increase the risk for kidney disease and peripheral vascular disease.

Practice guidelines provide recommendations for health professionals to improve the overall quality of care for their patients. The American College of Cardiology and American Heart Association (ACC/AHA) Task Force on Clinical Practice Guidelines continuously develop and update these guidelines based on systematic review of scientific and clinical evidence.

## What is added by this article?

The guidelines is a resource for the clinical and public health practice communities, providing guidance for prevention, detection, evaluation, and management of hypertension.

## Risk and Cutoff Measures

The authors indicate that a growing number of individuals have hypertension, therefore facing a heightened risk of CVD. The authors explain that the risk of suffering an associated event at a given time was up to 50% higher among patients with systolic and diastolic readings of 120 to 129 mmHg and 85 to 89 mmHg respectively, compared with those who had measures below 120 to 129 mmHg. This was consistent between the sexes and among different ethnicities.

Over the past decades, the baseline for blood pressure readings in the general population have been changing. With this development, this article suggests new cutpoints for blood pressure classifications. New categories of blood pressure in adults are defined by the following systolic and diastolic readings, respectively.

- Normal blood pressure levels are less than 120 mmHg and less than 80 mmHg
- Elevated blood pressure readings range 120 to 129 mmHg and less than 80 mmHg
- Stage 1 hypertension is any reading from 130 mmHg and 80 to 89 mmHg
- Stage 2 hypertension is any reading greater than or equal to 140 mmHg and 90 mmHg

In comparison, previous cutpoints for the normal range were less than 120 mmHg and 80 mmHg for systolic and diastolic, respectively. Blood pressure readings of 120 to 139 mmHg and 80 to 90 mmHg were considered prehypertension. Stage 1 hypertension had systolic and diastolic readings of over 140

to 159 mmHg and 90 to 99 mmHg and stage 2 had systolic and diastolic readings of over 160 mmHg and 100 mmHg respectively.

A mix of non-pharmacologic and pharmacologic treatment is recommended for most US adults with hypertension.

## Pharmacologic Treatment

The authors suggested that to facilitate CVD screening and medication initiation for hypertension, a baseline of all patients should be identified. Furthermore, the authors indicated treating hypertension with antihypertensive medication based on blood pressure level alone is cost effective; however, using a combination of cardiovascular risk and blood pressure level guiding treatment is more efficient and cost effective at reducing the risk of CVD.

Treatments may be based on specific conditions and age; however, the authors suggest that all patients initiating a new or adjusted drug regimen should have follow-up evaluation for adherence and response to the treatment, likely at monthly intervals, until the control is achieved. For patients with special health considerations, the cutpoints for systolic and diastolic readings remain similar to those recommended in this paper. Though, the authors suggest that some conditions require special treatment and follow-up planning.

## Nonpharmacological Treatment

Nonpharmacologic interventions to reduce hypertension include weight loss for overweight or obese patients, including diet modifications in conjunction with increased physical activity. Diet modifications may include choosing a heart healthy diet with sodium restrictions and potassium supplementation within the diet. Additionally, adding in limits on saturated fats, with a subsequent increase in fruits, vegetables, and grains, may have added benefit. As it relates to alcohol consumption, men should be limited to two beverages, and women counterparts to one beverage per day. It is also suggested that structured exercise programs can help increase physical activity in a healthy, and safe, manner.

## What are the implications of these findings?

For the first time in more than a decade, new cutpoints for the classification of blood pressure in adults have been released. Prior to the publication of this new guideline, awareness and treatment in adults were based on the

systolic and diastolic cutpoints of 140 mmHg and 90 mmHg. The authors suggest that the new cutpoints mean that there is a higher number of US adults who will be recommended for antihypertensive treatment recommendations. Of the newly identified hypertension patients, a majority will only require lifestyle interventions.

The new guidelines offer an opportunity for health professionals to better understand the blood pressure control targets that are needed to achieve better health of the population and reduce the risk of heart disease and stroke. It will take time to better understand and implement the new guidelines and determine how they will affect national processes.

With a growing amount of information being put forward as guidelines and recommendations, it will be important to begin collaborating and communicating between different guideline-developing organizations. It is also time to begin looking at the impact of this guideline on clinical practice, cost, and patient outcomes. In sum, the important message for health professionals is that using standardized approaches for treatment or protocols based on evidence-based guidelines, helps improve blood pressure control, cardiovascular health, and health outcomes.

## Resources

American College of Cardiology

*ASCVD Risk Estimator Plus*

<http://tools.acc.org/ASCVD-Risk-Estimator/>

Centers for Disease Control and Prevention

*Best Practices for Cardiovascular Disease Prevention*

Programs guide

<https://www.cdc.gov/dhds/pubs/guides/best-practices/index.htm>

American Heart Association

*My Life Check – Life's Simple 7*

[http://www.heart.org/HEARTORG/Conditions/My-Life-Check--Lifes-Simple-7\\_UCM\\_471453\\_Article.jsp#](http://www.heart.org/HEARTORG/Conditions/My-Life-Check--Lifes-Simple-7_UCM_471453_Article.jsp#.Wnn7gZM-dmA)

[Wnn7gZM-dmA](http://www.heart.org/HEARTORG/Conditions/My-Life-Check--Lifes-Simple-7_UCM_471453_Article.jsp#.Wnn7gZM-dmA)

*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.*