



## Letter to Editor

# Revising blood pressure classification guidelines: A call for normal lower limits in the “American college of cardiology/American heart association task force on clinical practice guidelines for hypertension”

Ersin Akpinar\*

Cukurova University Faculty of Medicine, Professor of Clinical Family Medicine, Adana, Turkey

**Received:** 20 December, 2023

**Accepted:** 29 December, 2023

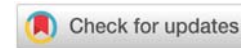
**Published:** 30 December, 2023

\***Corresponding author:** Ersin Akpinar, Cukurova University Faculty of Medicine, Professor of Clinical Family Medicine, Adana, Turkey, E-mail: [akpinar@cu.edu.tr](mailto:akpinar@cu.edu.tr), [ersin.akpinar@gmail.com](mailto:ersin.akpinar@gmail.com)

**Keywords:** Blood pressure classification; Lower limits; Guidelines revision; American College of Cardiology/American Heart Association (ACC/AHA) European Society of Cardiology/European Society of Hypertension (ESC/ESH)

**Copyright License:** © 2023 Akpinar E. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

<https://www.peertechzpublications.org>



## Abstract

The existing blood pressure classification guidelines established by the American College of Cardiology/American Heart Association (ACC/AHA) and European Society of Cardiology/European Society of Hypertension (ESC/ESH) lack specified lower limits for the “Normal” category. This paper underscores the imperative need for revisiting these guidelines to incorporate defined lower limits for the “Normal” classification. The absence of such lower limits hinders the precision of clinical practice and undermines the comprehensive assessment of blood pressure in individuals. By advocating for the inclusion of lower limits, this paper aims to enhance the accuracy of blood pressure categorization, thereby providing clinicians with more nuanced guidance and fostering improved cardiovascular health outcomes.

## Introduction

Blood pressure measurement is a fundamental aspect of clinical practice, serving as a critical indicator of cardiovascular health. The American College of Cardiology/American Heart Association (ACC/AHA) and European Society of Cardiology/European Society of Hypertension (ESC/ESH) guidelines have significantly contributed to standardizing blood pressure classification [1,2]. However, these guidelines lack defined lower limits for the “Normal” category, potentially leading to misinterpretation of extremely low blood pressure values. In this paper, we advocate for the inclusion of lower limits within the “Normal” range to enhance the accuracy of blood pressure assessment.

### Current blood pressure classification guidelines

The current guidelines, as per the ACC/AHA and ESC/ESH [1-7], categorize blood pressure as follows:

- **Normal:** Less than 120/80 mm Hg;
- **Elevated:** Top number (systolic) between 120-129 and bottom number (diastolic) less than 80;
- **Stage 1:** Systolic between 130-139 or diastolic between 80-89;
- **Stage 2:** Systolic at least 140 or diastolic at least 90 mm Hg;

### Proposed revision: inclusion of lower limits for normal

We propose revising the guidelines to include defined lower limits for the “Normal” category. This modification will serve several purposes:

**Enhanced accuracy:** The inclusion of lower limits will provide a clear range within which blood pressure is considered normal. Extremely low values, such as Systolic < 90 mm Hg

and Diastolic < 60 mm Hg, should be identified as abnormal and prompt further evaluation.

### Akpinar's proposed revision of hypertension classification including lower limits for normal

**NORMAL:** Systolic: 90 mm Hg – 119 mm Hg

**Diastolic:** 60 mm Hg – 79 mm Hg

**Clinical guidance:** A clearer classification will guide healthcare professionals in assessing patients' blood pressure accurately, minimizing the risk of underdiagnosing or overlooking low blood pressure, which may be indicative of health issues.

### Conclusion

In the context of organ perfusion, it is crucial to note that for somatically healthy individuals, a blood pressure range of Systolic: 90 mm Hg – 119 mm Hg and Diastolic: 60 mm Hg – 79 mm Hg is generally considered adequate. However, it is imperative to recognize that in the presence of somatic diseases, the requirements for adequate blood pressure can vary significantly. Moreover, it should be highlighted that the classification of lower blood pressure as 'normal,' as per the guidelines of the American College of Cardiology/American Heart Association (ACC/AHA) and European Society of Cardiology/European Society of Hypertension (ESC/ESH), may not universally align with optimal organ perfusion. Excessively low blood pressure levels, labeled as 'normal' in these guidelines, may pose serious risks, including the potential for lethality. Therefore, clinical practitioners should exercise discretion and consider the individual's health status when interpreting and applying these proposed guidelines, ensuring that blood pressure levels are maintained within a safe and physiologically appropriate range.

The ACC/AHA and ESC/ESH guidelines for blood pressure classification have been instrumental in clinical practice. However, we propose that these guidelines be revised to incorporate lower limits for the "Normal" category. This modification will facilitate more accurate blood pressure assessment, ensuring that extremely low values are not overlooked and that individuals with potentially concerning blood pressure levels receive appropriate attention and care.

### References

- Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, Dennison Himmelfarb C, DePalma SM, Gidding S, Jamerson KA, Jones DW, MacLaughlin EJ, Muntner P, Ovbigele B, Smith SC Jr, Spencer CC, Stafford RS, Taler SJ, Thomas RJ, Williams KA Sr, Williamson JD, Wright JT Jr. 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. *J Am Coll Cardiol.* 2018 May 15;71(19):e127-e248. doi: 10.1016/j.jacc.2017.11.006. Epub 2017 Nov 13. Erratum in: *J Am Coll Cardiol.* 2018 May 15;71(19):2275-2279. PMID: 29146535.
- Casey DE Jr, Thomas RJ, Bhalla V, Commodore-Mensah Y, Heidenreich PA, Kolte D, Muntner P, Smith SC Jr, Spertus JA, Windle JR, Wozniak GD, Ziaeian B. 2019 AHA/ACC Clinical Performance and Quality Measures for Adults With High Blood Pressure: A Report of the American College of Cardiology/American Heart Association Task Force on Performance Measures. *J Am Coll Cardiol.* 2019 Nov 26;74(21):2661-2706. doi: 10.1016/j.jacc.2019.10.001. PMID: 31732293; PMCID: PMC7673043.
- High blood pressure redefined for first time in 14 years: 130 is the new high. American Heart Association/American College of Cardiology guidelines. November 13, 2017. Accessed October 12, 2023. <https://newsroom.heart.org/news/high-blood-pressure-redefined-for-first-time-in-14-years-130-is-the-new-high>
- Estimated hypertension prevalence, treatment, and control among U.S. adults. Centers for Disease Control and Prevention. Accessed September 30, 2023. <https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html>
- Qaseem A, Wilt TJ, Rich R. Pharmacologic treatment of hypertension in adults aged 60 years or older to higher versus lower blood pressure targets: a clinical practice guideline from the American College of Physicians and the American Academy of Family Physicians. *Ann Intern Med.* 2018; 168(7): 530–532.
- Goel H, Tayel H, Nadar SK. Aiming higher in hopes to achieve lower: the European Society of Cardiology/European Society of Hypertension versus the American College of Cardiology/American Heart Association guidelines for diagnosis and management of hypertension. *J Hum Hypertens.* 2019 Sep;33(9):635-638. doi: 10.1038/s41371-019-0227-6. Epub 2019 Aug 20. PMID: 31431680.
- Messerli FH, Bangalore S. The Blood Pressure Landscape: Schism Among Guidelines, Confusion Among Physicians, and Anxiety Among Patients. *J Am Coll Cardiol.* 2018 Sep 11;72(11):1313-1316. doi: 10.1016/j.jacc.2018.07.026. PMID: 30190010.

Discover a bigger Impact and Visibility of your article publication with Peertechz Publications

#### Highlights

- ❖ Signatory publisher of ORCID
- ❖ Signatory Publisher of DORA (San Francisco Declaration on Research Assessment)
- ❖ Articles archived in worlds' renowned service providers such as Portico, CNKI, AGRIS, TDNet, Base (Bielefeld University Library), CrossRef, Scilit, J-Gate etc.
- ❖ Journals indexed in ICMJE, SHERPA/ROMEO, Google Scholar etc.
- ❖ OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting)
- ❖ Dedicated Editorial Board for every journal
- ❖ Accurate and rapid peer-review process
- ❖ Increased citations of published articles through promotions
- ❖ Reduced timeline for article publication

Submit your articles and experience a new surge in publication services

<https://www.peertechzpublications.org/submission>

Peertechz journals wishes everlasting success in your every endeavours.