



Hipertensión y riesgo vascular

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REVIEW

Optimal blood pressure targets in 2014 – Does the guideline recommendation match the evidence base?



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Abstract Various scientific societies have recently published practice guidelines for the diagnosis and management of arterial hypertension with no clear consensus on a blood pressure target. This article reviews those recommendations and critically examines if they are based on sound evidence.

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Objetivos óptimos de presión arterial en 2014 – ¿Coinciden las recomendaciones de las guías con la evidencia publicada?

Resumen Varias sociedades científicas han publicado recientemente guías de práctica clínica para el diagnóstico y manejo de la hipertensión arterial sin un claro consenso sobre un objetivo de presión arterial. Este artículo revisa esas recomendaciones y ofrece una visión crítica sobre su sustentación en evidencia publicada.

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Introduction

In the recent years, various scientific societies have published practice guidelines for the diagnosis and management of arterial hypertension.^{1–3} However, there appears to be no clear consensus on a BP target, highlighting that the “one size fits all” approach is probably not appropriate. Our aim

is to review the recommendation regarding blood pressure targets by various national and international hypertension societies and to critically examine whether these recommendations are based on sound evidence.

Guideline recommendations for specific blood pressure targets

Blood pressure targets by major national and international societies are summarized in [Table 1](#).

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Table 1 Blood pressure targets by specific guidelines for all hypertensive and for subgroup of patients.

	General targets	Elderly	Diabetic patients	Chronic kidney disease
Join National Committee 8 – 2014 ²	<140/90 mmHg	<150/90 mmHg (for older than 60 years)	<140/90 mmHg	<140/90 mmHg
European Society of Cardiology/European society of Hypertension ³ – 2013	<140/90 mmHg	140–150/90 mmHg (for older than 80 years)	<140/85 mmHg	SBP < 140 mmHg, no recommendation about DBP
ACC/AHA/CDC – 2014 ⁷	<140/90 mmHg	No specific recommendation	No specific recommendation	No specific recommendation
NICE guidelines – 2011 ¹⁶	140/90 mmHg	150/90 mmHg (for 80 years and older)	No specific recommendation	No specific recommendation
ASH/ISH – 2014 ⁹	<140/90 mmHg	<150/90 mmHg (for 80 years and older)	<140/90 mmHg	<130/80 mmHg (only if albuminuria is present in patients with CKD)

American guidelines

2014 evidence-based guideline for the management of high blood pressure in adults (from the panel members of the Joint National Committee 8)

Historically, the Joint National Committee (JNC) has had a more aggressive approach for BP targets. The JNC 7, published in 2003,⁴ introduced the concept of pre-hypertension as a new subset of patients in whom lifestyle modification and close follow-up may be beneficial. The next iteration of the JNC-7 termed the 2014 Evidence-Based Guideline for the Management of High Blood Pressure² recommends systolic blood pressure (SBP) ≥ 150 mmHg or diastolic blood pressure (DBP) ≥ 90 mmHg to start pharmacologic treatment in the general population 60 years or older, a departure from prior JNC and other major guideline society recommendations. In addition, the guidelines recommend a target of <150/90 mmHg for this age group, which is again a departure from prior JNC as well as other guideline society recommendations. For subjects between 30–59 years of age, the recommended target is <140/90 mmHg. The target of <140/90 mmHg is also recommended for patients with CKD or diabetes.

Despite the above, the 2014 guidelines are controversial since there is no unanimity among members of the group especially with regards to the target SBP of <150 mmHg in patients 60 years or older. The reasons for such disagreement were based on several factors. First, the fact that setting a higher target might reduce the intensity of treatment in a significant group of patients at risk of cardiovascular disease. Second, the evidence to support the target of <150 mmHg is weak at best. Finally, the potential of reversing the decade-long progress in

reducing cardiovascular disease mortality, in particular stroke mortality, raised concerns among these members of the panel who did not endorse this goal.⁵

Scientific advisory from the American Heart Association/American College of Cardiology/Centers for Disease Control

The purpose of the scientific advisory was to describe the value of treatment algorithm and its utility in approaching hypertensive patients based on the current guidelines, more than exploring the available evidence in diagnostic and therapeutic targets. However, they recommend a target BP > 140/90 mmHg to start treatment for hypertensive adults while at the same time recognizing that different targets might be appropriate for certain populations, including African-Americans, elderly subjects or patients with systolic/diastolic dysfunction, diabetes or CKD, but without providing evidence nor specific targets for these subgroups.^{6,7}

American Heart Association (AHA)/American College of Cardiology (ACC) guidelines on lifestyle management

Another US guideline that discusses hypertension management is the AHA/ACC Guidelines on Lifestyle Management to reduce cardiovascular risk published in 2013. This provides a more general recommendation, without specific BP targets. The guideline recommends specific dietary measures if SBP ranges between 120 to 159 and DPB between 80 and 95 mmHg in adults with hypertension.⁸

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