Practice Guidelines

Blood Pressure Targets in Adults With Hypertension: Guidelines From the AAFP

Key Points for Practice

- Blood pressure targets of 140 mm Hg systolic and 90 mm Hg diastolic offer similar reduction in cardiovascular and all-cause mortality as lower targets and have fewer adverse effects.
- Lower blood pressure targets lead to a reduction in myocardial infarction, with a number needed to treat of 137 over 3.7 years.
- After achieving initial blood pressure control, shared decision-making can be used to determine whether lower blood pressure targets should be considered.

From the *AFP* Editors

Nearly one-third of people in the United States are affected by hypertension, which is a leading cause of premature death. The aim of hypertension treatment is to reduce mortality and morbidity while minimizing harms from medical interventions. Numerous guidelines recommend different blood pressure targets, obscuring the risk-benefit ratio.

The American Academy of Family Physicians (AAFP) updated a recent systematic review with a literature review of subsequent studies to recommend blood pressure targets for primary care management of hypertension.

Primarily Focus on 140/90 mm Hg

Using a blood pressure target of 140/90 mm Hg reduces cardiovascular and all-cause mortality as much as lower targets. Studies in the lower blood pressure target group included target systolic pressures between 120 and 130 mm Hg and diastolic pressures between 65 and 80 mm Hg.

See full guideline at https://www.aafp.org/afp/aafphypertensionguideline.html.

This series is coordinated by Michael J. Arnold, MD, contributing editor.

A collection of Practice Guidelines published in *AFP* is available at https://www.aafp.org/afp/practguide.

CME This clinical content conforms to AAFP criteria for CME. See CME Quiz on page 618.

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Adverse effects increase with more aggressive blood pressure targets. Serious adverse events such as death, disability, and life-threatening complications are not increased with lower targets. Other adverse effects such as syncope and hypotension are increased with a number needed to harm of 33 over 3.7 years. Meeting lower blood pressure targets requires an average of one additional medication.

A subsequent multicenter trial with more than 8,500 participants also demonstrated similar mortality with lower blood pressure targets.

Consider Lower Targets to Reduce Myocardial Infarction

Although lower blood pressure targets do not improve mortality, they do appear to reduce cardiovascular events. Specifically, targets of 130/80 mm Hg or lower reduce myocardial infarction with a number needed to treat of 137 over 3.7 years. Similar reduction in myocardial infarction was noted in the subsequent trial, although early discontinuation may exaggerate the benefit.

Although trials focusing solely on systolic blood pressure targets also demonstrated a reduction in stroke incidence (relative risk = 0.80; 95% CI, 0.67 to 0.94), this benefit was not seen when studies with diastolic targets were also included.

This reduction of myocardial infarction may be important to some patients. Shared decision-making looking at other risk factors and considering adverse effects can tailor treatments to patient values, goals, and preferences.

Barriers to Implementation

Although the evidence supports this stepped care model for primary prevention, this guidance differs from many specialty organization recommendations. This disparity can produce confusion and mixed messages.

Cardiovascular prevention is affected by social determinants of health, especially because management includes dietary and physical activity recommendations. Screening tools and resource

databases from the AAFP's EveryOne Project (www.aafp.org/everyone) can aid in identifying and addressing these concerns.

Implementation Techniques

Blood pressure control depends on accurate measurement. Based on expert opinion, recommendations are for an appropriate-sized cuff on a bare arm at heart level with the patient's feet on the floor to help standardize measurements. Standardizing at least five minutes of rest and 30 minutes without caffeine before measurement can further reduce variability. Home blood pressure monitoring can distinguish white coat and masked hypertension.

The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the U.S. Navy, Uniformed Services University of the Health Sciences, U.S. Department of Defense, or the U.S. government.

Editor's Note: These recommendations by the AAFP provide some nuance to the decision of blood pressure targets in hypertension. Based on mortality, the standard target of 140/90 mm Hg is equivalent to lower targets, making this our primary goal. Because lower targets lead to reduced myocardial infarction despite increases in adverse events, this may be a beneficial trade for some patients. This guideline provides a stepped framework for patient treatment and clarifies the risks and benefits of different targets.—Michael J. Arnold, MD, Contributing Editor

Guideline source: American Academy of Family Physicians

Evidence rating system used? Yes

Systematic literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

Recommendations based on patient-oriented outcomes? Yes

Available at: https://www.aafp.org/afp/aafphypertensionguideline.html

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