

# Practice Guidelines

## PHARMACOLOGIC TREATMENT OF HYPERTENSION: ACP AND AAFP RELEASE RECOMMENDATIONS FOR ADULTS 60 YEARS AND OLDER

Hypertension is a common chronic condition occurring in almost 65% of persons older than 60 years. Proper treatment can lower the risk of cardiovascular, renal, and cerebrovascular disease, as well as mortality; however, there is debate regarding ideal blood pressure (BP) targets. Comorbid conditions should also be considered when choosing a BP target in persons 60 years and older. The American College of Physicians (ACP) and American Academy of Family Physicians (AAFP) have made recommendations for all clinicians to treat hypertension in this patient population, based on the benefits and harms of higher (less than 150 mm Hg) and lower (140 mm Hg or less) systolic BP targets.

### Higher vs. Lower BP Targets

#### Benefits

Although trials have shown that treating high BP in older persons is beneficial, the evidence was based primarily on persons with moderate or severe hypertension (BP greater than 160 mm Hg) initially who later reached levels greater than 140 mm Hg with treatment. Based on high-quality evidence, all-cause mortality, stroke, and cardiac events are reduced in persons with initial BP levels of at least 160 mm Hg who later attained BP levels lower than 150 mm Hg.

High-quality evidence from a subgroup analysis evaluating trials of persons attaining BP levels less than 140 mm Hg vs. levels of 140 mm Hg or greater indicated that the risk reduction was comparable for mortality and cardiac events; however, stroke reduction was marginally better in persons attaining levels of 140 mm Hg or greater.

Based on moderate-quality evidence, a target BP of 130 to 140 mm Hg in persons with a history of stroke or transient ischemic attack (TIA) lowered the recurrence of stroke; however, cardiac events and all-cause mortality were not reduced.

No studies evaluated how comorbidities might affect the possible benefits of more aggressive BP treatment, and data were insufficient regarding treatment in persons with diastolic hypertension, but without systolic hypertension.

#### Harms

In four of 10 studies, lower BP targets were associated with a greater number of persons withdrawing because of adverse effects. Based on moderate-quality evidence, there were no differences in cognitive decline or dementia, fractures, or quality of life when comparing higher and lower BP targets. No information on electrolyte abnormalities, which commonly occur with hypertension treatment, was provided, nor did any studies evaluate the effects of comorbidities on harms.

#### Recommendations

To lower the risk of mortality, stroke, and cardiac events in persons with a persistent BP level of 150 mm Hg or greater, treatment should be aimed at attaining a level of less than 150 mm Hg. High-quality evidence showed a reduction in these events at this target, with most persons experiencing benefit, regardless of the presence of diabetes mellitus. Studies in which patients' baseline mean BP levels were higher than 160 mm Hg indicated the best and most consistent benefit.

Medications for hypertension treatment include thiazide-type diuretics, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, calcium channel blockers, and beta blockers.

To reduce the risk of stroke recurrence, starting or increasing medications should be considered in persons with a history of stroke or TIA to achieve a BP of less than 140 mm Hg. Based on moderate-quality evidence, a target of 130 to 140 mm Hg vs. higher targets in this population does reduce recurrent stroke without any statistically significant effect on cardiac events or all-cause mortality.

To lower the risk of stroke or cardiac events, starting or increasing medications should be considered to obtain a BP level less than 140 mm Hg in some persons with high cardiovascular risk. This decision should be individualized, taking into account comorbidities, other medications used, adverse effects, and expense. Typically, factors associated with increased cardiovascular risk

*Source:* Adapted from Am Fam Physician. 2017;95(9):588-589.

include known vascular disease, diabetes, metabolic syndrome, chronic kidney disease with an estimated glomerular filtration rate less than 45 mL per min per 1.73 m<sup>2</sup>, and older age. The SPRINT study, which used a target of 120 mm Hg vs. 140 mm Hg in high-risk patients, showed a statistically significant reduction in cardiovascular events and all-cause mortality in persons without diabetes or a history of stroke, and an initial baseline BP of less than 140 mm Hg. However, the ACCORD study, which was limited to patients with type 2 diabetes, did not find a statistically significant reduction in nonfatal myocardial infarction or stroke, or death from cardiovascular causes. Stroke events were reduced; however, there were more serious adverse effects with a target of less than 120 mm Hg than with less than 140 mm Hg.

For all recommendations, treatment goals should be determined after discussing the benefits and harms of each BP target with patients.

### Clinical Considerations

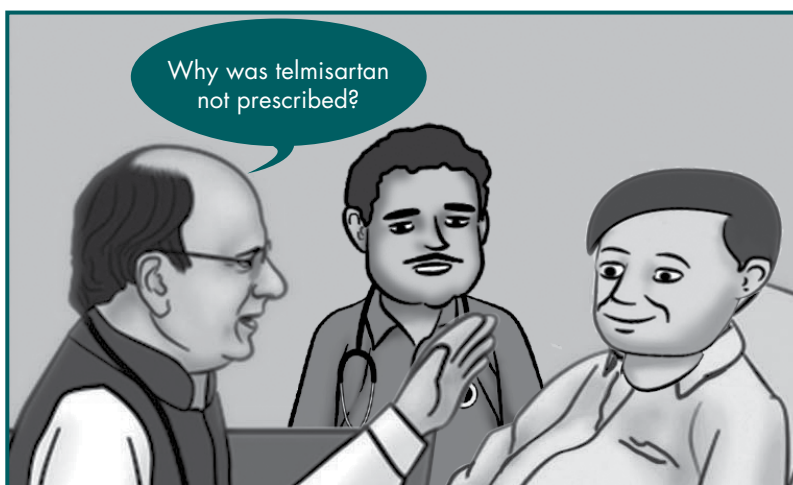
Before initiating or altering treatment, an accurate BP measurement should be obtained. Because elevated BP does occur in office settings for some patients, several measurements in the office may be needed. Ambulatory and home monitoring can also be considered. Nonpharmacologic treatment consisting of dietary or lifestyle changes and increased physical activity can be considered before prescribing medication or combined with medications. Because persons who are 60 years and older are often taking other medications, the burden of additional treatment and possible medication interactions should be assessed when making treatment decisions for hypertension. Generic medications should be prescribed whenever possible. When making treatment decisions, physicians should keep in mind that evidence in persons with frailty or comorbidities is limited.



# Make sure

## DURING MEDICAL PRACTICE

**SITUATION:** A patient with hypertension and type 2 diabetes and moderately increased albuminuria showed progression to chronic kidney disease (CKD).



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**LESSON:** Make sure that all patients with hypertension at risk for CKD are given the renoprotective drugs. In addition to providing 24-hour BP control, clinical studies in patients with diabetes show that telmisartan improves renal endothelial function, prevents progression from microalbuminuria to macroalbuminuria, slows the decline in glomerular filtration rate and reduces proteinuria in overt nephropathy.

*Cardiovasc Diabetol. 2010;9:60.*