

# Hypertension in the Geriatric Population

## A Patient-Centered Approach



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### KEYWORDS

• Hypertension • Elderly • Frailty • Guidelines • Goal blood pressure

### KEY POINTS

- Goal blood pressure for healthy individuals age 60 to 80 years should be less than 140/90 mm Hg. Results of ongoing, randomized, controlled trials may modify this goal.
- Patients with multiple comorbidities, frailty, and/or diminished functional or cognitive status and those older than 80 years may be treated to a goal of less than 150/90 mm Hg.
- Lifestyle modifications should always be incorporated into antihypertensive therapy.
- The thiazide diuretic chlorthalidone should be the first-line agent for most older, hypertensive patients.

### INTRODUCTION

The aging of the “baby boomer” population in conjunction with older individuals living longer means that the aging demographic imperative is a current reality. In 2011, the first of 77 million baby boomers turned 65 and approximately 10,000 Americans turn 65 on a daily basis. Three out of 4 adults older than the age of 65 have 3 or more chronic conditions such as diabetes (DM), obesity, cardiovascular disease, congestive heart failure, atrial fibrillation, stroke, cognitive impairment, renal insufficiency, and, not the least of which, hypertension. With the oldest old, those over 85 years of age, estimated to be the fastest growing part of the population over the next 40 years, the impact of hypertension and its consequences will be enormous.

When addressing the complexities of hypertension in older individuals, several considerations are apparent. When, or even if, treatment should be initiated and/or continued? What is the target blood pressure (BP) and should this be adjusted for

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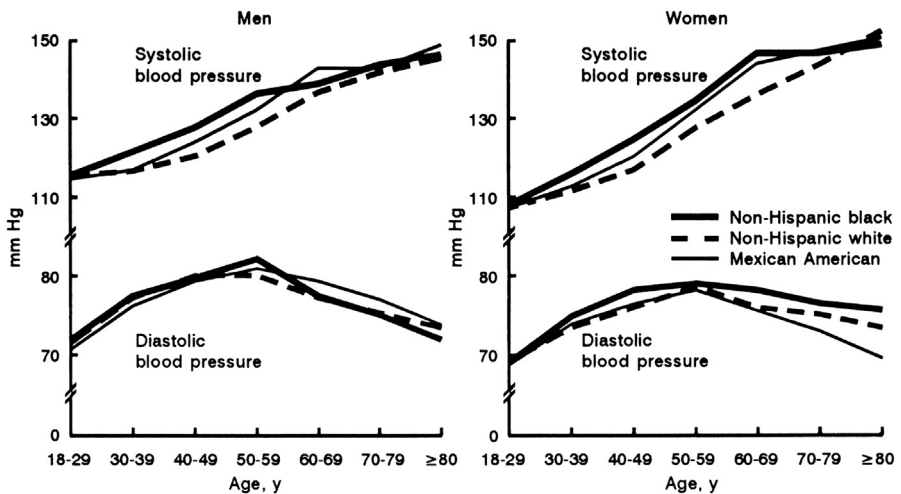
comorbidities? Are benefits greater in those individuals who are less frail or have better functional status or gait speed than in those who do not? Does the risk of adverse outcomes ever outweigh the benefit? What is the role for nonpharmacologic interventions (exercise, a low-salt diet, and weight loss)? How much of a role does therapeutic inertia on the part of treating physicians play? Should time to benefit be taken into account, especially in those with a limited life expectancy or poor prognosis? Have obstructive sleep apnea and nocturnal hypertension been addressed as potential contributors? Finally, has a goals-of-care discussion taken place with the patient and his or her family in addressing these issues? To address these questions, along with what therapy is to be initiated and how aggressively, one must understand the various mechanisms contributing to hypertension in the older individual.

## EPIDEMIOLOGY

Although not considered to be part of the normal aging process, there is a clear age-related increase in BP and in the prevalence of hypertension. According to the Framingham Heart Study,<sup>1</sup> in men and women with normal BP at age 55, 85% will develop hypertension over the next 20 to 25 years of follow-up. The results of the National Health and Nutrition Epidemiologic surveys also document the extremely high prevalence of hypertension among older Americans.<sup>2</sup> Based on their definition of hypertension—the average of 3 readings of 140 mm Hg systolic or greater and/or 90 mm Hg diastolic or greater or receiving antihypertensive medications—the overall prevalence of hypertension for those 65 years of age and older ranged from 50% to 75%. For women over age 75, the prevalence exceeded 75%.

## PATHOPHYSIOLOGY

Hypertension in the geriatric population is typically characterized by a high systolic BP (SBP) in the setting of a normal or even decreased diastolic BP (Fig. 1). Both



**Fig. 1.** Systolic and diastolic blood pressure readings by age for non-Hispanic black, non-Hispanic white, and Hispanic men and women from the Third National Health and Nutrition Evaluation Survey. (From Burt VL, Whelton P, Rocella EJ, et al. Prevalence of hypertension in the US adult population. Results from the Third National Health and Nutrition Examination Survey, 1988-1991. *Hypertension* 1995;25(3):305-13; with permission.)

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