

## ***Virtual Mentor***

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### **STATE OF THE ART AND SCIENCE**

#### **Treating Hypertension**

Audiey C. Kao, MD, PhD

Hypertension is the primary reason for millions of doctor's visits each year. In the past there were few drugs to treat hypertension; physicians today, however, have more than 60 different medications at their disposal.

In the past year, several important peer-reviewed papers were published that provide practical guidelines for hypertension prevention and management and evidence on different classes of antihypertensive drugs' relative efficacy in lowering the incidence of coronary heart disease and other cardiovascular events such as stroke.

New guidelines from the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) highlight several important issues, including the following:<sup>1</sup>

1. In persons older than 50, systolic blood pressure (BP) of more than 140 mm Hg is a much more important cardiovascular disease (CVD) risk factor than diastolic BP.
2. The risk of CVD, beginning at 115/75 mm Hg, doubles with each increment of 20/10 mm Hg.
3. Individuals with a systolic BP of 120 to 139 mm Hg or a diastolic BP of 80 to 89 mm Hg should be considered as prehypertensive and encouraged to adopt health-promoting lifestyle modifications such as weight reduction, dietary sodium reduction, and regular physical activity.
4. Thiazide-type diuretics should be prescribed for most patients with uncomplicated hypertension, either alone or combined with drugs from other classes.
5. Most patients with hypertension require 2 or more antihypertensive medications to achieve goal BP (140/90 mm Hg, or <130/80 mm Hg for patients with diabetes or chronic kidney disease).
6. If BP is more than 20/10 mm Hg above goal BP, consideration should be given to initiating therapy with 2 agents, 1 of which usually should be a thiazide-type diuretic.

Results from 2 large randomized clinical trials comparing the outcomes of different classes of antihypertensive drugs seemed to offer conflicting data about the initial medication of choice. Data from the ALLHAT study,<sup>2</sup> indicated that thiazide-type

diuretics (chlorthalidone) were better than angiotensin-converting enzyme inhibitors (amlodipine) or calcium channel blockers (lisinopril) in preventing 1 or more major forms of CVD, and they are less expensive. In the ANBP-2 trial, however,<sup>3</sup> data revealed that angiotensin-converting enzyme inhibitors (enalapril) led to better CVD outcomes than diuretics (hydrochlorthiazide).

Given these apparently conflicting clinical results, what is a physician to make of the new guidelines from the JNC 7? Recent expert commentaries on the ALLHAT and ANBP-2 studies<sup>4, 5</sup> provide some useful analyses and the following guidance for physicians:

1. Don't get caught up in the debate of which antihypertensive drug is better. In fact, the diuretic and ACE examined in the 2 trials were different.
2. These clinical studies describe population averages, and the treatment of individual patients with hypertension requires attention to the medical history and clinical response of each.
3. Diuretics can reduce the risk of CVD despite concerns by some physicians of their adverse metabolic effects such as elevating blood sugar or total cholesterol.
4. Since most patients require more than 1 medication to control their blood pressure, it is likely that a patient will benefit from both a diuretic and an angiotensin-converting enzyme inhibitor.

### References

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Audiey C. Kao, MD, PhD is the editor in chief of *Virtual Mentor*.

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