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May Is National High Blood Pressure Education Month

NHLBI Issues New High Blood Pressure Clinical Practice Guidelines

The National Heart, Lung, and Blood Institute (NHLBI) today released new clinical practice guidelines for the prevention, detection, and treatment of high blood pressure. The guidelines, which were approved by the Coordinating Committee of the NHLBI's National High Blood Pressure Education Program (NHBPEP), feature altered blood pressure categories, including a new "prehypertension" level which covers about 22 percent of American adults or about 45 million persons.

The new guidelines also streamline the steps by which doctors diagnose and treat patients, and recommend the use of diuretics as part of the drug treatment plan for high blood pressure in most patients.

Called "The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure," the guidelines will appear in the May 21, 2003, issue of *The Journal of the American Medical Association (JAMA)*. But, due to their importance, they will be available on May 14, 2003, on the *JAMA* Web site (jama.com) in an expedited version.

The guidelines were prepared by a special committee of the NHBPEP, which represents 46 professional, voluntary, and Federal organizations, and reviewed by 33 national hypertension experts and policy leaders. The NHBPEP issues new guidelines when warranted by scientific advances. The last guidelines were issued in November 1997.

"Since 1997, much more has been learned about the risk of high blood pressure and the course of the disease," said NHLBI Director Dr. Claude Lenfant. "Americans' lifetime risk of developing hypertension is much greater than we'd thought. For instance, those who do not have hypertension at age 55 have a 90 percent risk of going on to develop the condition.

"We also now know that damage to arteries begins at fairly low blood pressure levels—those formerly considered normal and optimal," he continued. "In fact, studies show that the risk of death from heart disease and stroke begins to rise at blood pressures as low as 115 over 75, and that it doubles for each 20 over 10 millimeters of mercury (mm Hg) increase. So the harm starts long before people get treatment.

"Unless prevention steps are taken, stiffness and other damage to arteries worsen with age and make high blood pressure more and more difficult to treat. The new

prehypertension category reflects this risk and, we hope, will prompt people to take preventive action early."

"The past six years have brought results from more than 30 clinical studies worldwide, many of which were funded by the NHLBI," said Dr. Aram V. Chobanian, Dean of Boston University School of Medicine in MA and Chair of the Joint National Committee that produced the new guidelines. "These findings have been remarkably consistent in demonstrating the critical importance of lowering blood pressure, irrespective of age, gender, race, or socio-economic status. The data allow us to create a set of recommendations that are easier to use than past guidelines, which should in turn make it easier for clinicians to treat their patients' hypertension."

High blood pressure is a major risk factor for heart disease and the chief risk factor for stroke and heart failure, and also can lead to kidney damage. It affects about 50 million Americans—one in four adults. Treatment seeks to lower blood pressure to less than 140 mm Hg systolic and less than 90 mm Hg diastolic for most persons with hypertension (less than 130 systolic and less than 80 diastolic for those with diabetes and chronic kidney disease).

The guidelines include new data on U.S. control, awareness, and treatment rates for high blood pressure. According to a national survey, 70 percent of Americans are aware of their high blood pressure, 59 percent are being treated for it, and 34 percent of those with hypertension have it under control. Those percentages represent a slight improvement over rates for 10 years ago, when 68 percent of Americans were aware of their high blood pressure, 54 percent were being treated for it, and 27 percent of those with hypertension had it under control. By contrast, about 25 years ago, 51 percent were aware of their high blood pressure, 31 percent were being treated, and 10 percent of those with hypertension had it under control.

"Though improved, the treatment and control rates are still too low," said Chobanian. "The new guidelines zero in on this problem, recommending factors that often lead to inadequate control such as not prescribing sufficient medication. The guidelines stress that most patients will need more than one drug to control their hypertension and that lifestyle measures are a crucial part of treatment.

"Another key factor is the need for clinicians to pay more attention to systolic blood pressure in those age 50 and older," he continued. "From mid-life on, systolic hypertension is a more important cardiovascular risk factor than diastolic. It's also much more common and harder to control."

Key aspects of the new guidelines include:

- A new "prehypertension" level and merging of other categories. The new report changes the former blood pressure definitions to: normal, less than 120/less than 80 mm Hg; prehypertension, 120-139/80-89 mm Hg; stage 1 hypertension, 140-159/90-99 mm Hg; stage 2 hypertension, at or greater than 160/at or greater than 100 mm Hg. The 1997 categories were optimal, normal, high-normal, and hypertension stages 1, 2, and 3.

"Stages 2 and 3 were combined because their treatment is essentially the same," said Chobanian. "The new prehypertension category should alert people to their real risk from high blood pressure."

The guidelines do not recommend drug therapy for those with prehypertension unless it is required by another condition, such as diabetes or chronic kidney disease. But the report advises them — and encourages those with normal blood pressures — to make any needed lifestyle changes. These include losing excess weight, becoming physically active, limiting alcoholic beverages, and following a heart-healthy eating plan, including cutting back on salt and other forms of sodium. The report also recommends that, for overall cardiovascular health, persons quit smoking.

As in the 1997 guidelines, the new report recommends Americans follow the DASH — Dietary Approaches to Stop Hypertension — eating plan, which is rich in vegetables, fruit, and nonfat dairy products. Clinical studies have shown that DASH significantly lowers blood pressure. The decreases are often comparable to those achieved with blood pressure-lowering medication.

- Simplified and strengthened drug treatment recommendations. The guidelines recommend use of a diuretic, either alone or in combination with another drug class, as part of the treatment plan in most patients. The report notes that even though many studies have found diuretics to be effective in preventing hypertension's cardiovascular complications, they are currently not being sufficiently used.

The guidelines also list other drug classes that have been shown to be effective in reducing hypertension's cardiovascular complications and that may be considered to begin therapy: angiotensin converting enzyme (ACE) inhibitors, angiotensin receptor blockers, beta-blockers, and calcium channel blockers. The report also gives the "compelling indications" — or high-risk conditions — for which such drugs are recommended as initial therapy.

- Use of additional drugs for severe hypertension or to lower blood pressure to the desired level. According to the new report, most persons will need two, and at times three or more, medications to lower blood pressure to the desired level.
- The guidelines also recommend clinicians work with patients to agree on blood pressure goals and develop a treatment plan.

"No treatment will work unless patients stay on it, no matter how careful the clinician," said NHBPEP Coordinator Dr. Ed Roccella. "The guidelines incorporate information from behavioral studies and offer advice to clinicians on how to motivate patients to stick with their treatment. It's crucial to build trust and make sure patients understand their treatment and feel able to voice their concerns."

To raise awareness about the dangers of high blood pressure, NHLBI is developing special Web pages and educational materials for health care professionals, patients, and the public. These include an updated "Your Guide To Lowering High Blood Pressure" Web page, which can be found at www.nhlbi.nih.gov/hbp.

"The bottom line is that Americans must change how they think about blood pressure," said Roccella. "The sooner they take action, the better. It's vital that they adopt a heart-healthy lifestyle early, even if their blood pressure is normal.

"May is National High Blood Pressure Education Month, a good time for people to take stock of their heart health — along with the steps necessary to protect it," he added.

Information and resources regarding National High Blood Pressure Education Month are available at <http://www.nhlbi.nih.gov/hbp/index.html>. The guidelines and related information are available at <http://www.nhlbi.nih.gov/guidelines/hypertension/index.htm>.

To interview an NHLBI spokesperson about the new guidelines, call the NHLBI Communications Office at (301) 496-4236. To interview Dr. Chobanian, call Gina DiGravio at the Boston University School of Medicine's Corporate Communications Office at (617) 638-8491.

NHLBI is part of the National Institutes of Health (NIH), the Federal Government's primary agency for biomedical and behavioral research. NIH is a component of the U.S. Department of Health and Human Services. NHLBI press releases and other materials including information about high blood pressure, high blood cholesterol, and heart disease, are available online at www.nhlbi.nih.gov.