



PCNA Position Statement on High Blood Pressure

The Issue

High blood pressure is a major public health epidemic in the United States. There are 76.4 million adult Americans with hypertension as defined by a blood pressure “140/90 mm Hg or greater.” (*Circulation* 2012;125:e12-e230). High blood pressure is associated with an increased risk of numerous chronic conditions such as stroke, kidney disease, coronary heart disease and heart failure. It is one of the nation’s leading causes of death, responsible for roughly one in six deaths among adults annually.

The estimated cost of high blood pressure (direct and indirect) for 2008 is 50.6 billion dollars. Data from NHANES 1999-2006 show that approximately 8% of US adults have undiagnosed hypertension. In a study of NHANES 1999-2000, people with prehypertension were 1.65 times more likely to have above-normal cholesterol levels, overweight/obesity or diabetes, than those with normal blood pressure levels. (*Arch Intern Med.* 2004;164:2113–2118). Compared with normal BP (< 120/80 mmHg), prehypertension was associated with a 1.5 to 2-fold increased risk for major CVD events in those < 60, 60 to 79, and ≥ 80 years of age (*JAMA* 2005;294:466-472).

Hypertension prevalence among Black Americans is among the highest in the world, and is increasing. From 1988 to 1994 through 1999 to 2002, hypertension prevalence among blacks increased from 35.8% to 41.4%. Prevalence is particularly high in black women at 44%. (*Arch Intern Med* 2005;165:2098-2104).

Data from the Framingham Heart Study indicate that high blood pressure is associated with shorter overall life expectancy as well as shorter life expectancy free of cardiovascular disease (CVD) and more years lived with CVD. At age 50, total life expectancy is 5.1 years longer for men with normal blood pressure, and 4.9 years longer for women with normal blood pressure, than in those with hypertension. (*Hypertension.* 2005;46:280; 46:280–286). Fortunately, for those with high blood pressure, adequate blood pressure control rates improved from 27.3% to 50.1% between 1988-1994 and 2007-2008.

Prevention of high blood pressure and more adequate control of those with established high blood pressure is key to reducing death and disability from cardiovascular disease and stroke. Analysis of NHANES/NCHS data from 1999–2004 through 2007–08 revealed substantial increases in awareness and treatment of hypertension. Control rates increased in both sexes in non-Hispanic blacks and Mexican Americans.

The Facts

- Blood pressure risk begins at 115/75 mmHg. Each increment of 20/10 mmHg doubles the risk of CVD. Normal blood pressure is considered to be <120/80 mmHg.
- Persons who are normotensive at age 55 have a 90% lifetime risk for developing hypertension. Only 34% of all individuals with hypertension have blood pressures controlled below 140/90 mmHg.
- Pre-hypertension (BP 120-130/80-89 mmHg) signals the need for increased education of the public to reduce blood pressure in order to prevent hypertension and CVD. 25% of the US population age 20 and older has “prehypertension”.
- Excess intake of salt (sodium chloride) has a major role in the pathogenesis of elevated blood pressure. The benefits of sodium reduction in persons with poorly controlled blood pressure are profound. A recent trial showed that reducing sodium intake by 4600 mg/day lowered blood pressure by 22.7/9.1 mmHg.
- Lifestyle modification including weight loss, exercise, sodium restriction, moderate alcohol consumption and a diet rich in fruits and vegetables lowers systolic blood pressure. Such interventions are associated with both the prevention of hypertension and more adequate control of blood pressure.
- Home blood pressure monitoring offers feedback to both health care providers and patients helping them determine an adequate diagnosis and better control.
- Nurses have played a very prominent role in HTN prevention and control through public and patient education, case management and community outreach efforts. Nurses have been very involved in the majority of the hypertension clinical trials

National Salt Reduction Initiative

The Preventive Cardiovascular Nurses Association (PCNA) supports the National Salt Reduction Initiative, begun in 2010 by the New York City Health Department. Since over 75% of salt intake comes from processed and prepared foods, the goal of the initiative is to cut the salt in packaged and restaurant foods by 25% over five years – an achievement that would reduce the nation’s salt intake by 20% and prevent many thousands of premature deaths. The recommended intake of sodium is no more than 2,300 mg a day.

Conclusion

PCNA recommends that the public clearly understands the:

- Risks associated with high blood pressure and the development of cardiovascular disease, such as heart attack and stroke
- Lifestyle interventions that may lower life-time risk of developing high blood pressure
- Need for better control of blood pressure to normal levels to reduce cardiovascular events
- PCNA members are a valued resource for questions and concerns regarding blood pressure management

PCNA recommends that all health care professionals:

- Communicate the need for life-style intervention to prevent high blood pressure including physical activity, weight control and dietary interventions

- Communicate and disseminate the NHLBI DASH eating plan information
- Ensure patients know their blood pressure number and goals and keep track of them on a regular basis
- Encourage the use of home blood pressure monitors to more adequately determine hypertension diagnosis and control rates
- Encourage patients to adhere to the prescribed antihypertensive medication regimen and to communicate any concerns to their healthcare providers.

References

Appel LJ, Frohlich ED, Hall JE, et al. The importance of population-wide sodium reduction as a means to prevent cardiovascular disease and stroke. A call to action from the American Heart Association. *Circulation* 2011;123:1138-1143.

Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: The JNC 7 Report. *JAMA*; 289:2560-2572.

Hertz RP, Unger AN, Cornell JA, Saunders E. Racial disparities in hypertension prevalence, awareness, and management. *Arch Intern Med* 2005;165:2098-2104.

Houston Miller, N. Aggressive Blood Pressure Management. *Journal of Cardiovascular Nursing*, 2003, Vol 18: 108-115.

Pickering TG, Houston Miller N, Ogedegbe G, et al. Call to action on use and reimbursement for home blood pressure monitoring. A joint scientific statement from the American Heart Association, American Society of Hypertension, and Preventive Cardiovascular Nurses Association. *Hypertension* 2008;52:10-29.

Roger VL, Go AS, Lloyd-Jones DM, et al. Heart and stroke statistics – 2012 update: A report from the American Heart Association. *Circulation* 2012;125:e12-e230.

Vasan RS, Larson MG, Leip LP, et al. Impact of high-normal blood pressure on the risk of cardiovascular disease. *N Engl J. Med.* 2001; 345: 1291-1297.

Updated 07/19/2012