



Keeping Hypertension In Check

The past 10 years have seen a striking escalation in the number of adults with hypertension, a condition that, if left unchecked, is a precursor to heart attack.

THE AMERICAN HEART ASSOCIATION (AHA) recently reported that hypertension (high blood pressure), along with smoking and hyperlipidemia (high blood fat levels), are the top three risk factors for developing cardiovascular disease, which has long been identified as a leading cause of mortality and morbidity among both men and women.

At the same time, Emory University researcher Kenneth Thorpe, in a study published in the journal *Health Affairs*, ranked hypertension among the top five conditions contributing to an increase of more than 46 percent in U.S. health care spending between 1987 and 2000. At the top of Thorpe's list is heart disease, which can be caused by hypertension.

Call To Action

These statistics, and the fact that some 50 million Americans are affected by hypertension, should serve as a call to action for clinicians in all health care fields, especially those practicing among older adults. Recent data from the "Framingham Heart Study" suggest that individuals with normal blood pressure (BP) at age 55 have a 90 percent lifetime risk for developing hypertension. In fact, the aging of the U.S. population is considered by many

experts to correlate directly to the dramatic increase over the past decade in the number of Americans who suffer from hypertension (current control rates are defined as systolic BP <140 mm Hg and diastolic BP, 90 mm Hg).

on the topic, conducted an in-depth study of peer-reviewed scientific literature on hypertension published since 1997. Based on their findings, new guidelines were established, and a new category designated "prehypertension" was added. Patients with prehypertension are at increased risk for progression to hypertension; those within the 130/80 to 139/89 mm Hg range are at twice the risk of developing hypertension as those with lower BP values.

An important consideration when monitoring BP is that the higher the BP, the greater the chance of myocardial infarction, heart failure, stroke, and kidney disease. For individuals aged 40 to 70, each increment of 20 mm Hg in systolic BP or 10 mm Hg in diastolic BP

doubles the risk of cardiovascular disease across the range of pressures 115/75 to 185/115 mm Hg. Thus, health care providers need to review the changes in their patients' pressure on a weekly and monthly basis (*see chart, above*).

Along with monitoring blood pressure, prevention should focus on detection and management of risk factors for stroke, including atrial fibrillation,

SUZANNE WAMBOLD, RN, is associate professor and chairperson of the Department of Health Professions, College of Health and Human Services, the University of Toledo, Toledo, Ohio.

BLOOD PRESSURE CLASSIFICATIONS FOR ADULTS 18 AND OLDER

Category	Blood Pressure	Indicated Treatment
Normal	<120 systolic, <80 diastolic	No treatment indicated
Prehypertension	120-139 systolic or 80-89 diastolic	No antihypertensive drugs indicated unless there's a compelling indication such as diabetes or kidney disease.
Stage 1 hypertension	140-159 systolic or 90-99 diastolic	Treat with thiazide-type diuretics/ACE inhibitors/beta-blockers and drugs for compelling indications.
Stage 2 hypertension	>160 systolic or >100 diastolic	Two-drug combination for most patients and drugs for compelling indications.

Source: The Joint National Committee VII, 2003

Among the broad range of chronic conditions that are commonly found in the skilled nursing environment, hypertension stands out as a bellwether, according to the National Institutes of Health (NIH). It is both a symptom of conditions like sleep apnea and chronic kidney disease and the potential cause of life-threatening heart attacks and strokes. It may be induced by the medications a patient is taking or by chronic steroid therapy, and it may have few outward signs.

In 2003, NIH's Joint National Committee on the Prevention, Detection, and Treatment of High Blood Pressure, in its seventh report

smoking, diabetes, and elevated lipid levels. The onset of prehypertension signals the need to educate health care professionals and patients of the potential risks associated with hypertension. Furthermore, steps should be taken to decrease BP levels and prevent the development of hypertension in the general population. The Behavioral Risk Factor Surveillance Survey is utilized by the Centers for Disease Control and Prevention to collect and monitor health behaviors in the United States. For those with documented hypertension and prehypertension, prevention strategies are needed that include lifestyle modifications, along with adherence to medication regimens.

Other Contributing Factors

In addition to age-related factors, there is an increased prevalence of

■ Many individuals do not know they have hypertension.

hypertension among African Americans, individuals with lower educational levels, and those of lower socioeconomic status (SES). In general, the treatment for hypertension is similar for all demographic groups. However, some minority populations—individuals classified with lower SES and individuals with poor lifestyle behaviors, for example—tend to have barriers that prevent them from gaining control of their blood pressure. Many individuals do not know they have hypertension, and over 50 percent of the population who are diag-

nosed with hypertension still do not have their BP under control.

Compared with other minority populations in the United States, African Americans also demonstrate a lower response to therapies that rely on a single drug, such as a beta-blocker or angiotensin converting enzyme (ACE) inhibitor. However, responses are improved with drug combinations, such as a diuretic and beta-blocker. Thiazide-type diuretics have been found to prevent one or more major forms of cardiovascular disease (heart attack, stroke) and are less expensive than other medications.

Thus, thiazide-type diuretics are recommended as the drug of choice for initial therapy of hypertension. For patients who cannot tolerate a thiazide-type diuretic, calcium channel blockers and ACE inhibitors may be considered. ACE inhibitor-induced

angioedema occurs two to four times more frequently in African Americans with hypertension than other groups. Therefore, thiazide-type diuretics are recommended for these patients.

Lifestyle Modifications

Research shows that changes in lifestyle can lower blood pressure and reduce the risk of cardiovascular disease. For example, the sedentary lifestyle that is common among patients in long term care settings is recognized as a cause of a number of chronic diseases and premature mortality. In contrast, physical activity appears to have a direct effect in the

■ **Increases in either systolic or diastolic BP can dramatically increase mortality and morbidity.**

improvement of selected cardiovascular disease risk factors such as elevated BP, blood lipids, and body mass index.

Regular moderate physical activity, when possible, can provide substantial health benefits. Increases in either systolic or diastolic BP can dramatically increase mortality and morbidity and increase the risk of cardiovascular disease.

Conversely, decreases in either systolic or diastolic pressures can reduce hypertension-associated mortality and morbidity. Regular physical activity, for example, has been found to reduce BP by five-to-10 mm Hg in adult subjects with hypertension.

Changes in diet can also play a piv-

otal role in reducing a patient's BP. NIH recommends a diet rich in fruits and vegetables and low-fat dairy products, with a reduced content of saturated and total fat and a reduction in dietary sodium (no more than 2.4 grams per day). In addition to reducing hypertension, lifestyle changes, includ-

ing exercise, improve other cardiovascular risk factors such as elevated serum cholesterol levels. Therefore, when physicians fail to prescribe positive lifestyle changes, adequate antihypertensive drug dosages, or appropriate drug combinations, inadequate BP control may result. ■

For More Information

■ The author can be contacted at suzanne.wambold@utoledo.edu.