Heart disease and stroke are the leading causes of death in the United States. Although most cardiovascular disease (CVD) is preventable, proven prevention approaches are not being adequately applied in clinical practice. This editorial discusses the major opportunities for preventing CVD in the primary care setting, focusing on 3 highly prevalent and treatable conditions: hypertension, high blood cholesterol, and obesity.

**Managing Cardiovascular Risk Factors: Evidence and Guidelines**

Hypertension affects at least 50 million people in the United States. Prevalence increases with age; people who are normotensive at age 55 years have a 90% lifetime risk for developing hypertension, and 75% of those aged 70 years or older are affected.

The latest guidelines of the National High Blood Pressure Education Program recommend regular screening for hypertension, identifying prehypertensive patients with blood pressures of 120–139/80–89 mmHg and targeting them for lifestyle modifications, and establishing a blood pressure goal of <140/90 mmHg for most hypertensive patients. 

Since the first hypertension treatment trials in the 1960s, diuretics have been the foundation of antihypertensive drug treatment. The largest hypertension clinical trial ever conducted, the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT), recently confirmed the advantages of beginning treatment with diuretics. It also determined that most hypertensive patients require 2 or more antihypertensive agents for blood pressure control.

High Blood Cholesterol

More than 100 million adults in the United States have elevated total cholesterol (TC) and low-density lipoprotein (LDL) cholesterol. Clinical trials of drugs, primarily HMG Co-A reductase inhibitors ("statins"), have established conclusively that lowering LDL cholesterol significantly reduces CVD events in people with and without existing CVD.

The latest in the series of Adult Treatment Panel (ATP III) reports recommends that physicians obtain a complete lipoprotein profile—including TC, LDL cholesterol, high-density lipoprotein (HDL) cholesterol, and triglycerides—for all adults 20 years of age and older at least once every 5 years. LDL cholesterol is the principal target of therapy. First-line therapy consists of lifestyle changes: a diet low in saturated fat and cholesterol, adequate physical activity, and weight control, which can lower LDL cholesterol by 20% to 30%. The metabolic syndrome, a cluster of CVD risk factors, including elevated triglycerides and low HDL cholesterol, develops in response to obesity and also increases CVD risk. Weight control and physical activity are the first-line treatments for these patients as well.

Medication should be added if lifestyle changes do not sufficiently lower LDL cholesterol, the principal target of drug therapy. The higher the CVD risk, the lower the LDL goal, and the greater the intensity of pharmacologic therapy.

Overweight and Obesity

An estimated 65% of the US adult population and, more alarming, 15% of children and adolescents are overweight or obese. Preventing overweight and obesity should be a goal of primary care; weight loss in overweight patients reduces blood pressure, serum triglycerides, blood TC and LDL cholesterol, and blood glucose levels, and increases HDL cholesterol.

Treatment of overweight and obesity remains a difficult challenge; however, clinical trials have demonstrated that a combination of behavior therapy, low-calorie diets, and increased physical activity provides better long-term weight reduction than programs using only 1 or 2 of these modalities. Evidence-based guidelines on assessing and treating adult patients who are overweight or obese are available, along with a variety of educational materials and interactive tools for health professionals and patients.
OTHER FACTORS
Smoking cessation lowers the risk for coronary heart disease by 50% in the first year. Thus, all smokers should be advised to quit and supported in their efforts. Aspirin use may prevent or delay almost one-third of first heart attacks.

TRANSLATING EVIDENCE INTO CLINICAL PRACTICE
APPROACHES TO PATIENT CARE
All prevention efforts involve changing, adopting, and sustaining complex behaviors. These efforts are more likely to be successful if approaches are individualized and basic behavioral principles are employed: self-assessment, individualized goal setting, self-monitoring, identifying barriers, problem solving, and reassessment. The US Preventive Services Task Force recently released strong evidence that when the goal is a healthy diet, medium-to-high intensity interventions that combine nutrition education with behavioral counseling can produce significant changes in adult eating behaviors. The patient's control of his or her “microenvironment,” such as modifying the food available in the home and soliciting social support from family and friends, is important as well.

ADHERENCE
Addressing patient nonadherence to medication regimens can increase the effectiveness of prevention efforts. Understanding the factors that influence nonadherence can help clinicians develop practical strategies for improving adherence. The complexity of the treatment regimen itself—dosing frequency, number of medications, and duration of therapy—is an important predictor. Good rapport and clear communication with healthcare professionals, and social support from family and friends also positively affect adherence. Psychologic distress, serious mental disorders, and substance abuse are barriers. Exploring with the patient at each office visit the reasons for nonadherence, then tailoring the intervention to address them, has been found to be an effective strategy for facilitating adherence. The clinician also should simplify the regimen where possible, provide clear written and oral instructions, involve relevant family members in the patient's care, and tailor the regimen to the patient's lifestyle. Behavioral strategies, such as reminder systems, cues, self-monitoring, feedback, and reinforcement, are also effective.

APPROACHES FOR CLINICAL PRACTICE
Publishing research results, developing and disseminating clinical guidelines based on research, and offering continuing education sessions do not maximize the application of new knowledge to clinical practice. Rather, it is necessary to involve the patient, clinician, and clinical care system. Helping patients adopt and maintain lifestyle change and adhere to medication require more time and different skills than most physicians have, which underscores the need for involving physician assistants, nurses, and dietitians. Providing this support, which allows physicians to focus on individual patients, is an important institutional function. In addition, clinic administrators may use quality-improvement programs to provide feedback on clinician behavior and patient treatment outcomes (eg, tracking the proportion of eligible patients whose lipids were tested or the proportion of hypertensive patients whose blood pressure is controlled). Implementing performance requirements are effective vehicles for improving care.

These types of interventions, involving coordinated efforts by a healthcare team, have shown more promise than traditional approaches.

Primary care physicians have a key responsibility and the opportunity to prevent CVD, the leading cause of death and a major contributor to premature death and disability in the United States. Prevention begins with implementing clinical guidelines based on decades of research: controlling hypertension and high blood cholesterol, preventing and treating obesity, smoking cessation, and appropriate aspirin therapy. These measures, if fully implemented, would lead to a substantial reduction in CVD morbidity and mortality. However, this implementation requires appropriate sustained behavior by both patients and clinicians, along with a supportive clinical practice environment.

References