Cardiovascular disease (CVD) in the United States represents a continuing crisis of epidemic proportions, with nearly 960,000 individuals dying from heart disease and stroke each year. CVD has been the leading cause of death in this country every year since 1900, with the exception of 1918, the year of the great influenza epidemic. According to the most recent statistics, if all forms of major CVD were eliminated, life expectancy would rise almost 7 years. Furthermore, although often perceived as a disease of older age, approximately 50% of CVD diagnoses and 15% of CVD deaths are in patients under 65 years of age. Of greater significance, many young adults with no clinical evidence of CVD have two or more risk factors that predispose them to subsequent clinical events and death over the course of several decades. In apparently healthy young people, these risk factors usually go unrecognized and untreated.

The American Heart Association (AHA) updated its primary prevention recommendations, which are consistent with those of ATP III. Both sets of guidelines highlight what primary care providers, specialists, and subspecialists should do to assess, manage, and follow up patients who may be at risk for but have not yet manifested CVD.

What should health professionals be doing? Because a basic principle of prevention is that risk reduction therapy must be adjusted to a patient’s absolute risk, the first step is to assess risk status, including cholesterol levels, blood pressure, family history, smoking status, diabetes, sex, and age, in every adult, beginning at age 20. Although a 20-year-old would not be treated as aggressively as an older patient, modification of diet, lifestyle, exercise routine, and smoking status can reduce risk substantially over a lifetime.

Several new features are highlighted in the ATP III guidelines. Principal among these are a focus on triglycerides, the metabolic syndrome, assessment of global risk, and emphasis on diabetes as a CVD equivalent. The guidelines also recommend strategies for promoting healthy lifestyle changes to reduce CVD risk.

The new guidelines recommend lipid management beyond LDL lowering, including aggressive treatment of elevated triglycerides, noting that recent studies show that elevated levels significantly raise CVD risk. Even borderline-high triglyceride levels should be treated with diet and exercise; for higher triglyceride levels, medication is often indicated as well.

High triglycerides are often part of a constellation of major risk factors that constitute the metabolic syndrome. Other factors characteristic of the condition are abdominal obesity, low HDL, hypertension, and insulin resistance, with or without glucose intolerance. The NCEP guidelines emphasize that the metabolic syndrome increases the risk of CVD at any level of LDL, and that this syndrome should be targeted for therapy. Although subspecialists continue to debate which minimum number of coexisting factors and what minimum level of each constitute the metabolic syndrome, for purposes of ATP III, the metabolic syndrome is defined as the presence of any three of the constellation of these factors. The more factors that are present, the greater are the risk and the need for more aggressive treatment.

The guidelines also state that multiple risk factors pose as great a risk of a major coronary event in 10 years as does heart disease itself. Furthermore, the risk from diabetes alone can be equally great. Clearly, these patients should be treated as intensively as those with existing coronary heart disease.

Such treatment must employ a multifaceted lifestyle approach to reduce coronary heart disease risk. Among its features: reduced intake of saturated fats to fewer than 7% of total calories and of cholesterol to less than 200 mg per day;
increased intake of plant stanols and sterols to 2 g per day; weight reduction when necessary; and increased physical activity. This approach to diet, weight reduction, and physical activity takes on added urgency in view of the epidemic proportions of obesity in this country, with its attendant link to diabetes and CVD (Figure).

The NCEP guidelines also recognize that a patient with borderline elevations of cholesterol, triglycerides, weight, and blood pressure may be at greater risk of a major coronary event or stroke than a patient with a single established risk factor, such as a high LDL. Therefore, to better identify risk, physicians should use an assessment tool that determines global risk according to data from the Framingham Heart Study. The tool calculates 10-year CHD risk separately for men and women on the basis of age, total cholesterol, HDL, systolic blood pressure, and cigarette smoking. The aggressiveness of treatment is then determined by the 10-year risk. Although the simple tool is readily available on pocket-sized nomograms or can be downloaded onto a handheld PDA, and takes only 30 seconds to use, many primary care physicians and subspecialists have yet to integrate its use into their routine practice.

If the NCEP and AHA recommendations were followed, the number of Americans being treated for high cholesterol with dietary treatment would increase from about 52 million to about 65 million and the number prescribed a cholesterol-lowering medication would increase from about 13 million to approximately 36 million.

It is impossible to estimate the impact of following the primary prevention guidelines on CVD mortality rates, but according to secondary prevention data and the clinical trials of primary prevention in patients at high risk for CVD, it is clear these strategies could save lives.

Obstacles remain. Doctors work within a healthcare system designed to treat acute disease and one that rewards procedures to treat the advanced stages of chronic disease, rather than its prevention. These aspects of the healthcare system must be changed. The physician must forge a partnership with the patient, with the physician assessing and communicating risk and codeveloping a plan of preventive action with the patient. A team-based approach involving nurses and other healthcare professionals may be the most efficient method to achieve success in many settings.

The AHA’s Get With the Guidelines program, designed to implement secondary prevention guidelines, is an example of the kind of team-based patient-oriented system that can help physicians in establishing the team and forging the physician-patient relationship. Get With the Guidelines, however, is based on an easily identified inpatient population with acute myocardial infarction. Identifying the patients is relatively straightforward, and the components of the professional team centered in the coronary care unit are also well understood. Creating a similar system for a population-based primary prevention program is much more problematic.

But we have no choice. The ATP III guidelines serve as a wake-up call. We do a great job of treating patients with CVD; now we need to do a better job of preventing it.

References


KEY WORDS: Editorials ■ prevention ■ hypertension ■ obesity ■ smoking

Prevalence of overweight and obesity in the USA, 1960 to 2000. Data from the National Center for Health Statistics. Over the past 4 decades the prevalence of adults who are obese (body mass index >30 kg/m²) and those who are overweight (body mass index 25 to 29 kg/m²) has increased dramatically. In 1999–2000, 31% were obese and an additional 33% were overweight.