

# Beyond Statins: Persistent Myths & Current Controversies in Managing Dyslipidemia

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## Program Overview

Coronary heart disease (CHD) is a major public health problem. It was responsible for one of five deaths in the United States in 2004. The estimated direct and indirect cost of CHD for 2007 is \$151 billion. Dyslipidemia is a major risk factor for CHD. More than 79 million American adults have high low-density lipoprotein (LDL) cholesterol levels (130 mg/dL or higher), and 44 million adults have low levels of the protective type of cholesterol, high-density lipoprotein (HDL) cholesterol (<40 mg/dL). Many patients with dyslipidemia also have the metabolic syndrome, a cluster of risk factors for CHD: low HDL cholesterol levels, high triglyceride levels, increased numbers of small, dense LDL particles, high blood pressure, elevated fasting glucose levels, and a large waist circumference. An estimated 47 million Americans have the metabolic syndrome.

The National Cholesterol Education Program (NCEP) Adult Treatment Panel updated its evidence-based guidelines with therapeutic goals for reducing LDL cholesterol concentrations based on CHD risk in 2004. A target HDL cholesterol level was not specified in the NCEP guidelines because of a lack of evidence on which to base such a recommendation, however the NHLBI guidelines for metabolic syndrome have identified target HDL cholesterol values. Recent research suggests that raising HDL cholesterol levels by more than 7.5% and substantially reducing LDL cholesterol is associated with regression of coronary atherosclerosis. These findings suggest the need to focus on HDL cholesterol as well as LDL cholesterol, triglycerides, and non-HDL cholesterol when treating patients with dyslipidemia.

Statins are considered first-line therapy for most patients with dyslipidemia because they are the most effective drugs for reducing LDL cholesterol and reducing risk of CHD. However, many patients fail to achieve their LDL cholesterol goal with statins alone, and some patients require additional dyslipidemia therapy to address hypertriglyceridemia and low HDL cholesterol levels. Niacin and fibrates produce greater increases in HDL cholesterol, reductions in triglycerides, as well as increases in LDL particle size than do statins, so adding niacin or a fibrate to statin-based therapy is a rational approach for a patient with an inadequate response to statin monotherapy. Niacin and fibrates have beneficial effects in patients with the metabolic syndrome.

The treatment of dyslipidemia remains complex despite the availability of NCEP guidelines and increasing knowledge from epidemiologic and clinical trials because of various persistent myths and unresolved controversies (e.g., the risk for drug interactions when certain combinations of antilipemic agents are used, the best approach to treating mixed dyslipidemia or dyslipidemia in patients with type 2 diabetes or the metabolic syndrome). Research is underway to dispel many of these myths and clarify these controversies. However, clinicians must balance these myths and controversies with scientific evidence to provide appropriate patient care in the management of dyslipidemia.

This program will provide a brief review of the relationship between dyslipidemia, the metabolic syndrome, and CHD and current NCEP guidelines for treating dyslipidemia. The importance of HDL cholesterol in determining CHD risk and the impact of raising levels on risk for CHD will be described. The role of statins, niacin, fibrates, and other agents in the treatment of dyslipidemia, including effects of the drugs on patients with mixed dyslipidemia, type 2 diabetes, and the metabolic syndrome, also will be presented. Persistent myths and unresolved controversies in dyslipidemia management that are not addressed in the NCEP guidelines will be discussed.