

Cholesterol Monitoring to Detect Nonadherence to Statin Treatment

Monitoring cholesterol levels won't replace discussing the importance of adherence with patients on statins.

The National Cholesterol Education Program ([NCEP guidelines](#)) recommend monitoring blood cholesterol concentrations to assess and promote patient adherence to cholesterol-lowering drug treatment. How well such monitoring actually identifies nonadherence, however, is unknown. In this secondary analysis of pravastatin trial data, investigators assessed the accuracy of monitoring cholesterol concentration for detecting nonadherence.

More than 9000 patients with coronary heart disease were randomized to receive daily pravastatin (40 mg) or placebo. Patients who reported taking any of their pills were defined as "adherent," whereas those who stopped taking their pills were defined as "nonadherent." After 1 year, 6% of "adherent" patients and 50% of "nonadherent" patients exhibited increased LDL-cholesterol levels. Pill count data were used to define patients as "fully adherent" ($\geq 80\%$ of pills taken) or "partially nonadherent." After 1 year, 4% of "fully adherent" patients and 16% of "partially nonadherent" patients exhibited higher LDL-cholesterol levels. Overall, depending on the prevalence of treatment nonadherence in a given population, a patient with no change or a rise in LDL cholesterol level at 1 year would have a probability of 67% to 98% of having been "nonadherent" and a probability of 48% to 93% of having been "partially nonadherent." Similar associations were noted for total cholesterol level.

Comment: Cholesterol monitoring appears to have moderate ability to detect nonadherence and limited ability to detect partial nonadherence to statin treatment. The authors and the NCEP regard monitoring as an adjunct to initiating discussions with patients about adherence.

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