New guidelines for the treatment of high blood cholesterol in adults from the National Cholesterol Education Program

From controversy to consensus

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AN EDITORIAL in the May 1986 issue of this journal introduced readers to the National Cholesterol Education Program (NCEP). Launched by the National Heart, Lung, and Blood Institute (NHLBI) in November 1985, the NCEP is a nationwide cooperative effort by major medical and health organizations — the American Heart Association prominently among them — to reduce the prevalence of elevated blood cholesterol in the United States. The NCEP will seek to achieve this goal by mounting educational initiatives for health professionals and the public to raise their awareness that lowering high cholesterol levels will reduce the risk of heart attacks and to provide guidance on how to go about accomplishing such cholesterol lowering.

One of the most important early fruits of the NCEP is a set of guidelines for the management of high blood cholesterol in adults, due to be released this month. Officially titled the Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (NCEP Adult Treatment Panel, for short), the guidelines are a response to a need identified by surveys of physicians conducted by NHLBI in 1983 and 1986. They showed that physicians were, on the average, waiting until relatively high levels of blood cholesterol were reached before initiating diet and/or drug therapy for their adult patients. The report is directed primarily to health care professionals, especially to physicians, but also to nurses, dietitians, and pharmacists, who will all have to be actively involved in the care of patients with high blood cholesterol. The recommendations are intended to guide practitioners by giving them a practical and detailed approach for dealing with an individual adult patient’s elevated cholesterol. We are hopeful that the guidelines will be of interest and assistance to both generalists and specialists.

Development of the Cholesterol Adult Treatment Guidelines is part of the NCEP’s initial emphasis on a strategy of finding and treating adults who are at high risk for coronary heart disease by virtue of their elevated blood cholesterol levels. Two additional panels will address, respectively, a population- and community-based approach for cholesterol reduction, and treatment of high blood cholesterol in children. A fourth panel, the Laboratory Standardization Panel, will soon be unveiling its draft recommendations for improving the accuracy of blood cholesterol measurements and standardizing the reporting of cholesterol values.

The report of the NCEP Adult Treatment Panel marks an important milestone in the continuing evolution of the cholesterol field. For many years, despite substantial scientific evidence that elevated serum or plasma cholesterol levels were linked to increased rates of coronary heart disease, controversy reigned as to whether the role of cholesterol was in fact etiologic in the development of coronary atherosclerosis. In early 1984, the results of the Coronary Primary Prevention Trial showed that lowering high blood levels of cholesterol actually reduces the risk of heart attacks. Thereafter, the NIH Consensus Development Conference on “Lowering Blood Cholesterol to Prevent Heart Disease” concluded that (1) elevated blood cholesterol is a major cause of coronary heart disease and (2) lowering elevated cholesterol levels would help prevent coronary heart disease, and recommended in broad policy outlines the treatment of everyone with a blood cholesterol level above the 75th percentile. Now, with the report of the NCEP Adult Treatment

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Panel, we have for the first time a detailed set of
guidelines giving practical advice for dealing with an
individual adult patient's cholesterol problem.

Both the substance of the guidelines and the process
by which they were developed reflect the highly con-
sensual nature of the panel's report. Substantively, the
guidelines build on the consensus view that anyone
with a serum total cholesterol level at or above 240
mg/dl deserves careful medical evaluation, that a
desirable cholesterol level is below 200 mg/dl, and that
dietary change is the primary line of treatment for high
blood cholesterol. The basic approach reflected in the
guidelines is compatible with the recent recommenda-
tions of the European Atherosclerosis Society and the
British Cardiac Society Working Group on Coronary
Disease Prevention, and we are thus witnessing the
emergence of a broad international consensus.

In terms of process, the guidelines were developed
by a panel of experts representing a variety of disci-
plines and a range of expertise, including lipidology,
cardiology, epidemiology, dietetics and nutrition,
nursing, and primary care medicine. The panel worked
for over a year under the very able chairmanship of
DeWitt S. Goodman, M.D., Professor of Medicine at
Columbia University's College of Physicians and Sur-
geons, to forge a consensus position on such crucial
questions as: how to go about detecting and evaluating
high blood cholesterol, at which levels of cholesterol
to initiate treatment, what the goals of treatment are,
how to use dietary therapy, and how and when to use
drug therapy in addition to diet. Not surprisingly, the
panel counted among its members experts associated
in one way or another with the American Heart Associ-
ation, which has been active for many years in promot-
ing increased attention to cholesterol. These individ-
uals included Dr. Edwin Bierman, former chairman of
AHA's Council on Arteriosclerosis, and present and
former chairman of the AHA Nutrition Committee,
Drs. John LaRosa, Scott Grundy, and Virgil Brown.
The panel's report was reviewed and commented on
extensively by the NCEP Coordinating Committee,
the central body that recommends policy for the pro-
gram. Its members speak for the major health-related
organizations, representing health care professionals,
voluntary groups, community organizations, hospi-
tals, public health associations, and citizen groups.
Plans call for the report of the panel to be subject to a
vote of endorsement by the NCEP Coordinating Com-
mittee at its meeting October 5. When issued by the
NCEP, the Cholesterol Adult Treatment Guidelines
will thus represent a true consensus position.

The panel carried out its work through a structure of
three subcommittees: the Subcommittee on Preva-
ience, Detection, Diagnosis, and Evaluation, chaired
by Stephen Hulley, M.D.; the Subcommittee on Di-
etary Treatment, co-chaired by Drs. Virgil Brown and
Scott Grundy; and the Subcommittee on Drug Treat-
ment, chaired by Dr. Donald Hunninghake. The guid-
elines developed by the panel and its subcommit-
tees display several important characteristics:

1. The cutpoints or blood cholesterol levels that
signal the need for further action are not age- or sex-
specific. The panel chose to avoid a formal stratifica-
tion of risk by age or sex, while at the same time
mentioning these issues in the text, to develop an
approach that is as uniform and as simple as current
knowledge will allow.

2. Total cholesterol is used for initial case finding,
while low-density lipoprotein (LDL) cholesterol is
used thereafter to refine the assessment of coronary
heart disease risk and as the basis for decisions about
cholesterol-lowering therapy. The panel felt that it was
necessary to use the more specific determinant of coro-
nary heart disease risk, LDL cholesterol, to define the
trigger levels at which treatment should be initiated
and the goal levels for serum cholesterol lowering.
However, to make the approach as convenient as pos-
sible, the panel chose to use total cholesterol rather
than LDL cholesterol as the basis for monitoring the
progress of dietary therapy, which will be the corner-
stone of cholesterol-lowering treatment for the vast
majority of patients.

3. The guidelines incorporate the principle that
risk factors other than the serum cholesterol level, such
as hypertension or smoking, play a role in determin-
ing a person's overall risk for coronary heart disease. The
presence of other major risk factors for coronary heart
disease thus influences the choice of cutpoints and
goals for reduction of cholesterol levels.

4. The cutpoints and goals for drug treatment are
set in such a way as to create a protective barrier to the
overuse of cholesterol-lowering drugs. Without such a
barrier, the panel felt that drugs might be used merely
to achieve a goal cholesterol level that had not quite
been reached by diet alone.

The report is intended as the centerpiece of an over-
all educational effort directed to health professionals
and not as a stand-alone product. The NCEP plans to
distribute to primary care practitioners a physician's
kit, which will contain the report and other related
educational materials. To obtain a copy of the report,
please write to: National Cholesterol Education Pro-
gram, National Heart, Lung, and Blood Institute, C-
200, Bethesda, MD, 20892.
We are hopeful that the guidelines, together with materials in the physician’s kit and supporting activities such as CME modules, will help physicians integrate the detection and treatment of high blood cholesterol into their routine practices. If physicians make reduction of cholesterol levels a standard feature of their activities, much like treatment of hypertension, the guidelines will have made a major contribution to decreasing the still enormous toll of coronary heart disease.
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