

A Review of the Guidelines and Future Targets of Therapies

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Third Report of the National Cholesterol Education Program (NCEP)

Expert Panel on:
Detection, Evaluation, and Treatment of
High Blood Cholesterol in Adults
(Adult Treatment Panel III)
Final Report. 2002

ATP III Highlights

- *“Emerging risk factors that can be measured include elevations of Lp(a), remnant lipoproteins (IDL and VLDL₃), small LDL...”*
(ATP III 2002)
 - All are subclasses of LDL-C

ATP III – Metabolic Syn.

- *“The metabolic syndrome and its associated risk factors have emerged as a coequal partner to cigarette smoking as contributors to premature CHD.”* (ATP III 2002)
 - **Small LDL**, Low HDL, and elevated Triglycerides
 - Treated as a risk factor
 - Lower LDL Goal
 - Treatment Changes

ATP III – Lp(a)

- *“An elevated Lp(a) thus presents the option to raise a person’s risk to a higher level.”*
(ATP III 2002)
 - Increases risk to warrant lower LDL goal.
 - Potential treatment change.

ATP III – Small LDL (Pattern B)

- *“One component of atherogenic dyslipidemia is small LDL particles. They are formed in large part, although not exclusively, as a response to elevations of triglycerides. Their presence is associated with an increased risk for CHD” (ATP III 2002)*
 - Risk Changes
 - Therapy Changes

ATP III – Remnant Lipoproteins

- *“In persons with high serum triglycerides, elevated remnant lipoproteins should be reduced in addition to lowering of LDL cholesterol.” (ATP III 2002)*
 - Component of non-HDL-C
 - Risk Changes
 - Therapy Changes

National Cholesterol Education Program
Recommendations on Lipoprotein
Measurement: From the Working Group
on Lipoprotein Measurement

National Institute of Health and
National Heart, Lung, and Blood Institute
NIH Publication 1995

Working Group – LDL Subclass Measurements

- “...*the proportional contribution of IDL and/or Lp(a) to the “LDL cholesterol measurement” would be expected to be greater in at-risk populations.*”
- “*For all current and future methods, the nature of the lipoprotein particles that contribute to the LDL-cholesterol measurement should be specified.*”
(Working Group 1995)
 - Requires separation of all LDL subclasses for risk stratification (Lp(a), IDL and LDL including LDL pattern)

National Academy of Clinical
Biochemistry Laboratory (NACB)
Medicine Practice Guidelines:
Emerging Biomarkers of
Cardiovascular Disease and Stroke

A Summary of Recommendations
Draft Guidelines discussed at 2006
Beckman Conference

NACB Draft Comments

- Listed the following lipid classes as risk factors for CAD
 - Lp(a)
 - Independent Risk Factor
 - Useful in genetic predispositions
 - LDL and HDL subtypes
 - Remnant Lipoproteins

The American Association of
Clinical Endocrinologist (AAACE)
Medical Guidelines for Clinical
Practice for the Diagnosis and
Treatment of Dyslipidemia and
Prevention of Atherogenesis
2002 Amended Version

AACE Comments

- Listed the following lipid classes as risk factors for CAD
 - Small LDL subclass
 - Reference to insulin resistance
 - Lp(a)
 - *“The physician should also consider measuring **Lp(a)**, plasma homocysteine, and factors contributing to a hypercoagulant state, especially in patients with premature CAD.”*

Other Organizations

- American Diabetes Association (ADA)
- American Heart Association (AHA)
- National Lipid Association (NLA)
- Others...