ATHEROGENIC LIPID LEVELS IN 662,771 ELDERLY PERSONS: THE VERY LARGE DATABASE OF LIPIDS 10A (VLDL 10A)

Poster Contributions
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Background: With advancing age, atherogenic lipid levels are generally lower; however, comparatively less is known about whether this trend continues in the very elderly.

Methods: We examined age-associated changes in the lipid profiles of 662,771 elderly persons ≥60 years of age from the Very Large Database of Lipids. Lipoprotein cholesterol concentrations were directly measured by ultracentrifugation. By sex, we determined the median, 25th and 75th percentiles, and used Spearman’s rank correlation coefficients to assess associations with age.

Results: Total cholesterol and LDL-C were lower by decade for both sexes from age 60 forward until beyond the 10th decade when plateauing, or even reversal, of this trend was noted (see Figure). LDL-C remained above 80mg/dL in both sexes. Interquartile ranges by decade for each atherogenic lipid showed inter-individual variation within age groups and considerable overlap across groups. Coefficients for the association of age with total cholesterol, LDL-C, and triglycerides were -0.25, -0.27, and -0.11, respectively for men, and -0.03, -0.08, and 0.11 for women.

Conclusions: The decline in atherogenic lipids does not continue beyond the 10th decade of life and atherogenic lipid levels remain above younger age “ideal” levels into late life. This may reflect physiological changes, treatment differences, or survival bias. Overall, the association of age with atherogenic lipids is modest with expected inter-individual differences.