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## Low prevalence of elevated levels of lipoprotein associated phospholipase A2 mass observed among persons with increased levels of high density lipoprotein cholesterol

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**Introduction:** High Density Lipoprotein Cholesterol (HDL-C) has been well described in the literature as being cardio-protective due to its anti-atherogenic properties; particularly in concentrations exceeding 60 mg/dL. Lipoprotein associated phospholipase A2 (Lp-PLA2) is an enzyme produced by macrophages in advanced, rupture prone atherosclerotic plaques and is postulated to be a surrogate measure of vascular injury. It is highly vascular-specific and unlike hs-CRP, it is not affected by sources of systemic inflammation such as infections or arthritis. The purpose of this study was to examine the prevalence of elevated levels of Lp-PLA2 among apparently healthy individuals with HDL-C levels in excess of 60 mg/dL. Due to protective nature of high levels of HDL-C, it was hypothesized that a low prevalence of elevated Lp-PLA2 (> 200 ng/mL) would be seen in this population.

**Methods:** Seven hundred and forty-eight apparently healthy adults (mean age = 58.7 yrs.) (76% female) who had previously participated in a cardiovascular risk screening were included in the analysis. Mean values for lipid measures were as follows: total cholesterol 196 mg/dL; LDL-C = 104 mg/dL; HDL-C = 72.5 mg/dL; total cholesterol/HDL = 2.7. Laboratory assessment for Lp-PLA2 mass was determined by an FDA approved ELISA assay (PLACTM test, diaDexus, Inc.).

**Results:** Among the group examined, only 10% had elevated levels of Lp-PLA2 mass (>200 ng/mL).

**Conclusion:** This study demonstrated a low prevalence of elevated levels of Lp-PLA2 mass among persons with high levels of HDL-C. These results reinforce the high specificity observed with Lp-PLA2.