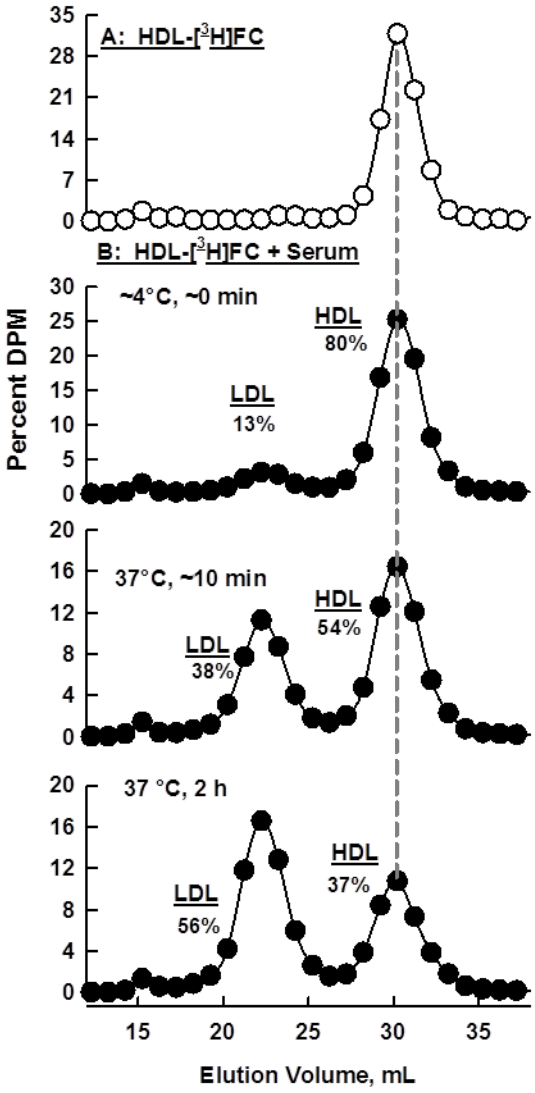
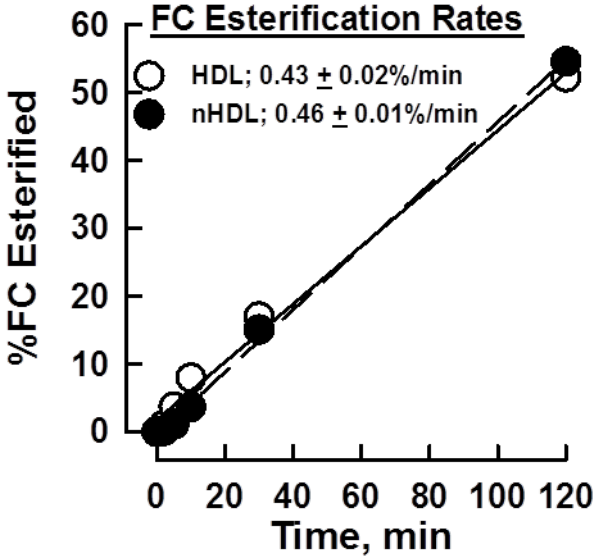
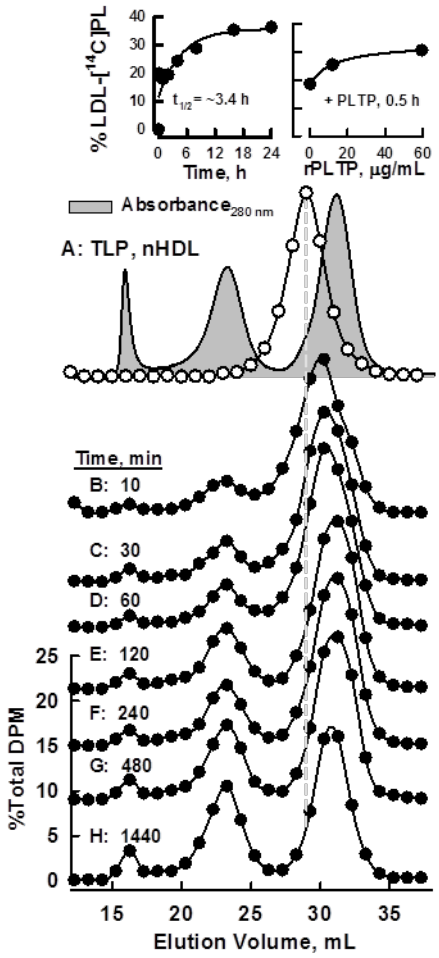


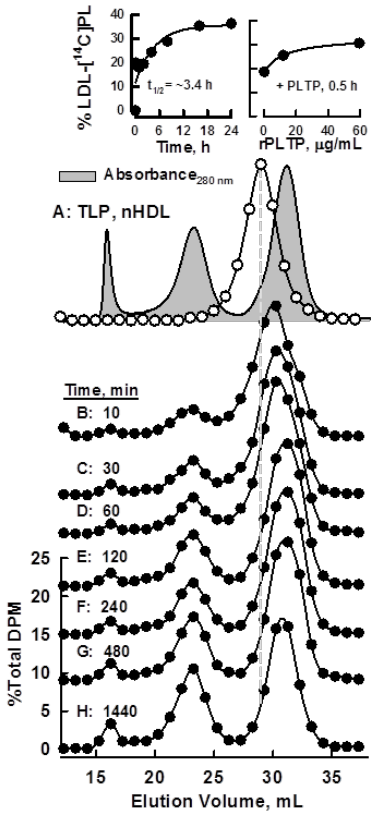
Supplementary Figure I. Transfer of HDL-[^{3}H]FC to Serum Lipoproteins. Grey dashed line indicates the peak elution volume for HDL. Experiments were conducted as in **Figure 2** for various incubation times and temperatures as labeled prior to SEC analysis.



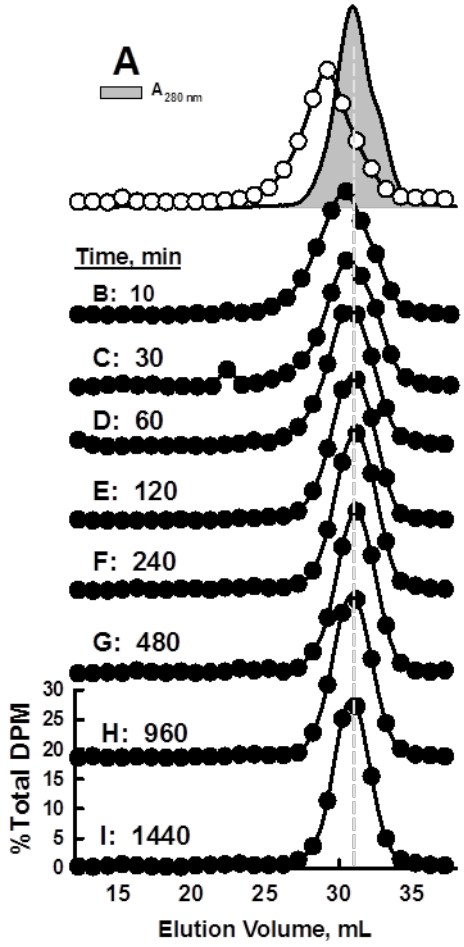
Supplementary Figure II. Mouse Plasma LCAT Activity vs. nHDL and HDL. [^{3}H]FC was evaporated onto a small piece of filter paper, which was incubated with nHDL or HDL in TBS for three hours at room temperature. nHDL- or HDL-[^{3}H]FC (~50 µg; 0.05 µCi) were added to 1 mL mouse plasma on wet ice, mixed and 50 µL were transferred to a scintillation vial for β-counting. The remaining mixture was transferred to a 37°C bath and additional 50 µL aliquots were transferred to test tubes containing 100 µL methanol at t = 2, 5, 10, 30, and 120 min and the lipids partitioned into 1 mL 2-propanol/hexane (2/3 v/v) with vortexing followed by low speed centrifugation. Aliquots (500 µL) of each organic phase were transferred to conical tubes and the volume reduced under a nitrogen stream. The residues were redissolved in chloroform/methanol (25 µL; 1/1; v/v) containing unlabeled CE and FC for visualization by I_2 vapor. Each sample was applied to silica gel thin-layer plates and eluted with hexane/ethyl acetate (80:20). CE- and FC-positive spots were visualized by exposure to I_2 vapor, collected by cutting the I_2-positive spots, transferred to vials containing scintillation fluid, and β-counted. LCAT activity was calculated as a ratio of CE_{DPM}/ (FC_{DPM} + CE_{DPM}). These data show that the activities of mouse LCAT vs. nHDL and HDL are similar. According to the slopes of the kinetic curves, ~ 5% of FC was esterified in 10 min.



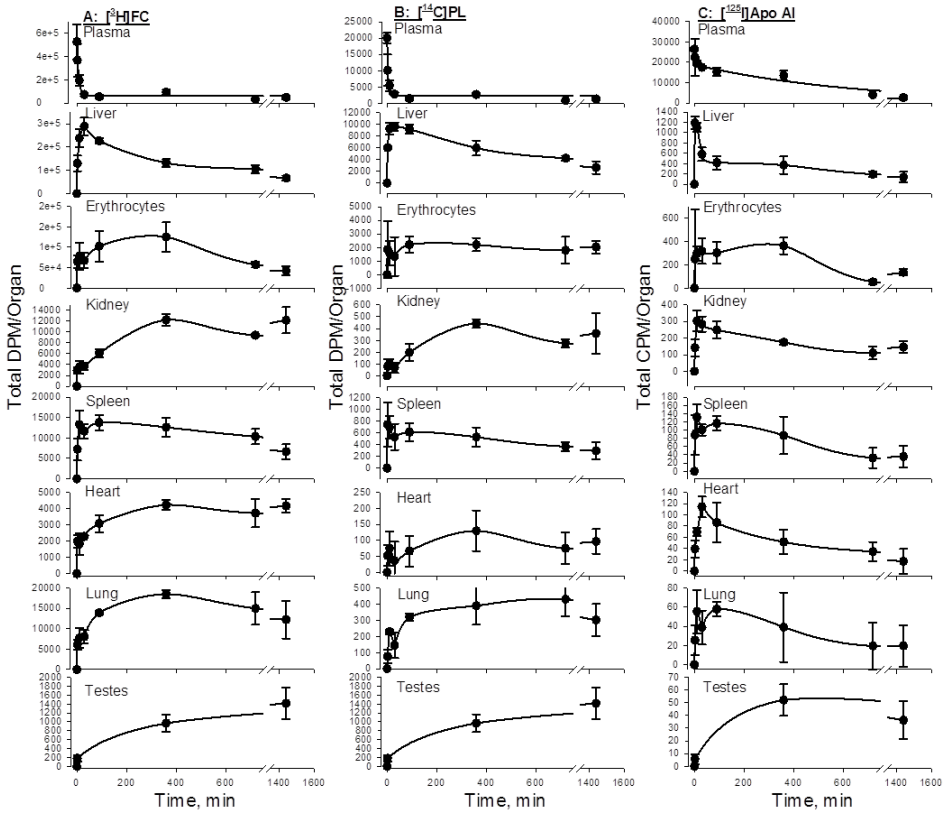
Supplementary Figure III. Transfer of nHDL-[^{14}C]PL to TLP (total lipoproteins without lipid-free proteins). A) SEC of TLP according to its absorbance; nHDL-[^{14}C]PL (○). B-H) SEC profile of [^{14}C]PL after incubation with TLP at 37^{o}C for various times as labeled (●). Grey dashed line indicates the peak elution volume for nHDL. Insert to A (left) shows the %[^{14}C]PL in LDL as a function of time; Insert to A (right) shows the rPLTP-mediated increase in the transfer of nHDL-[^{14}C]PL after 30 min incubation at 37 °C. TLP is obtained by ultracentrifugation of whole plasma for 3 d in buffer made d = 1.21 g/mL (Beckman 50Ti @ 40,000) by the addition of KBr; TLP floats to the top and is collected.



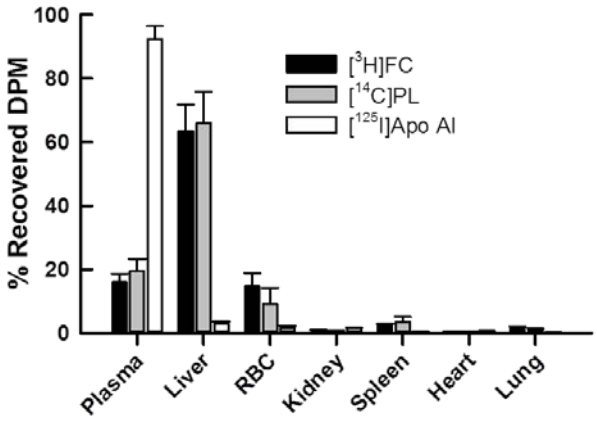
Supplementary Figure IV. Transfer of nHDL-[^{14}C]PL to Isolated LDL. A) SEC of LDL according to its absorbance, grey fill; nHDL-[^{14}C]PL (○). B-I) SEC profile of [^{14}C]PL after incubation with LDL at 37^{o}C for various times as labeled (●). Grey dashed line indicates the peak elution volume for nHDL. Insert to A shows the %[^{14}C]PL in LDL as a function of time; $t_{1/2}$ = 4.1 ± 0.4 h.



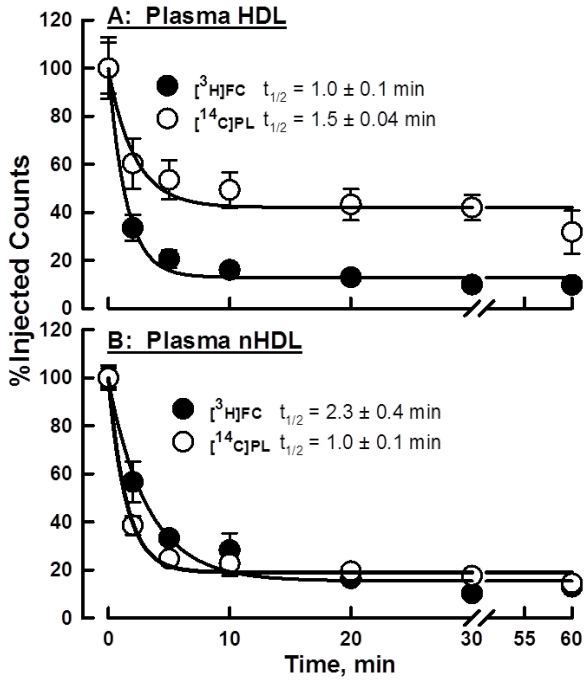
Supplementary Figure V: Transfer of nHDL-[^{14}C]PL to Isolated HDL. A) SEC of HDL according to its absorbance, grey fill; nHDL-[^{14}C]PL (○). B-I) SEC profile of [^{14}C]PL after incubation with HDL at 37^{o}C for various times as labeled (●). Grey dashed line indicates the peak elution volume for HDL.



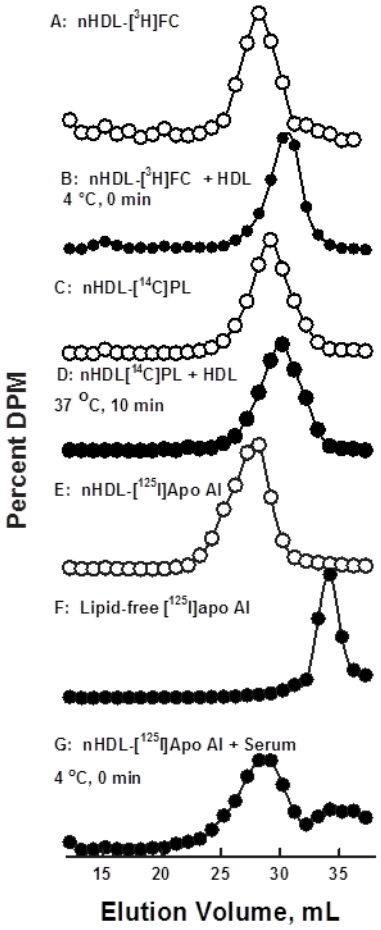
Supplementary Figure VI. In vivo distribution of ^{3}H, ^{14}C, and ^{125}I at various times after injection of nHDL-[^{3}H]FC, -[^{14}C]PL, and -[^{125}I]apo AI. Curves are fitted to the data using a smoothing function in Sigma Plot (Systat Software, Inc.). Other details are in the legend to **Figure 6** and in the **Materials and Methods**.



Supplementary Figure VII. In vivo distribution of ^{3}H, ^{14}C, and ^{125}I 30 min after injection of nHDL-[^{3}H]FC, [^{14}C]PL, and [^{125}I]Apo AI. Details are in the **Materials and Methods**.



Supplementary Figure VIII. In Vivo Plasma Kinetics of HDL- and nHDL-[^{3}H]FC and -[^{14}C]PL. As described in **Materials and Methods**, radiolabeled HDL and nHDL were injected into mice. At various times mice were sacrificed and their plasma collected and β-counted. The plotted data were fitted to a 2-parameter exponential decay curve from which the halftimes were calculated.



Supplementary Figure IX: SEC of nHDL-analytes before and after short term incubations (0 or 10 min) with HDL or serum as labeled. Taken from Figure 2, 4, and Supplementary Figure V.