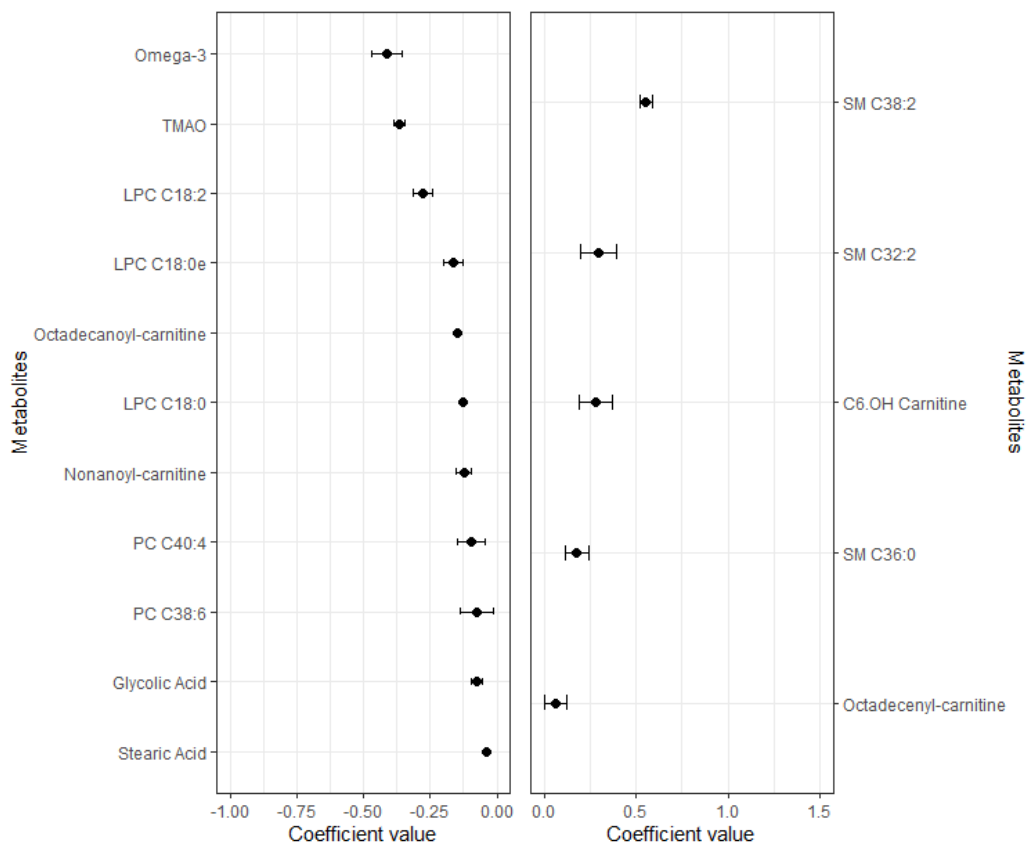
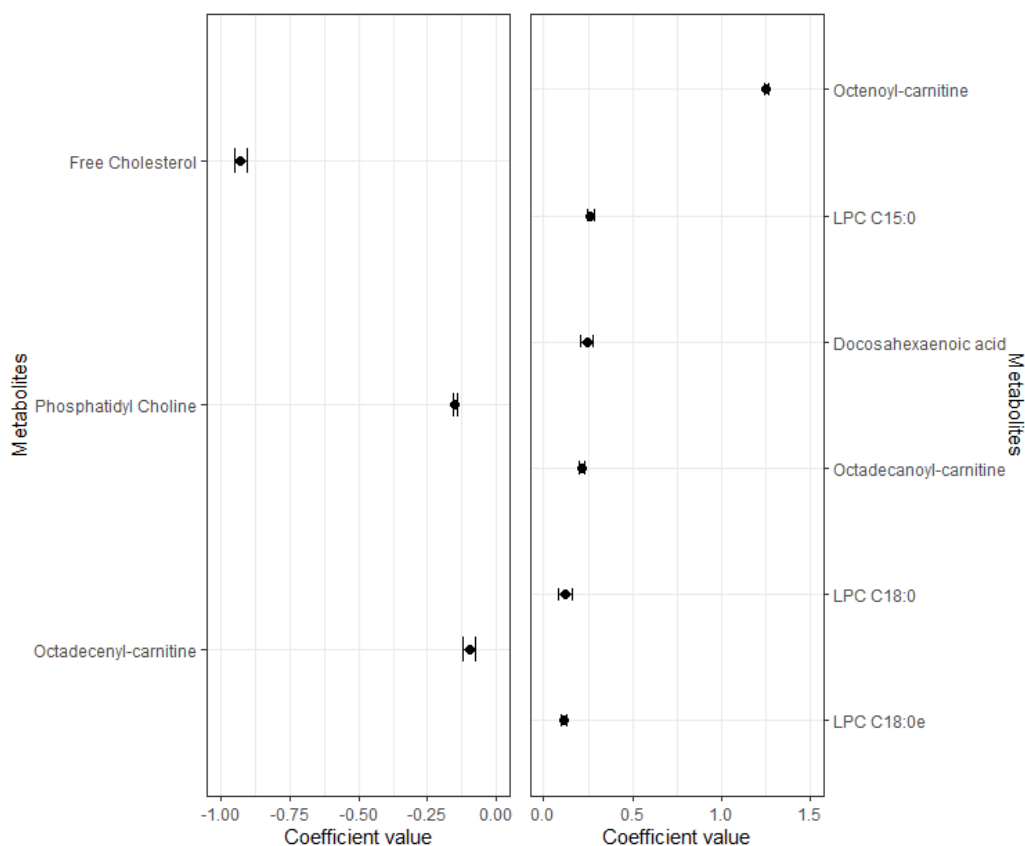


**Supplemental Figure 1.** Coefficients (mean  $\pm$  SD) for the metabolites selected 9-10 times in the 10-fold CV linear elastic regression and associated with % body fat adjusted for age and sex.



Mean and SD of the set of 16 metabolites selected 9-10 times in the 10-fold CV elastic linear regression procedure (using lambda.min). Metabolites with negative coefficients ( $m = 11$ ) are plotted in the left part, whereas those with positive coefficients ( $m = 5$ ) are shown in the right part. Abbreviations: LPC, Lysophosphatidylcholine; PC, Phosphatidylcholine; PE, Phosphatidylethanolamine; SM, Sphingomyelin; TMAO, Trimethylamine N-oxide.

**Supplemental Figure 2.** Coefficients (mean  $\pm$  SD) for the metabolites selected 9-10 times in the 10-fold CV linear elastic regression and associated with lean mass adjusted for age and sex.



Mean and SD of the set of 9 metabolites selected 9-10 times in the 10-fold CV elastic linear regression procedure (using lambda.min). Metabolites with negative coefficients ( $m = 3$ ) are plotted in the left part, whereas those with positive coefficients ( $m = 6$ ) are shown in the right part. Abbreviations: PC, Phosphatidylcholine.