

**Substantial fat mass loss  
reduces low-grade inflammation and induces positive alteration in cardiometabolic  
factors in normal-weight individuals**

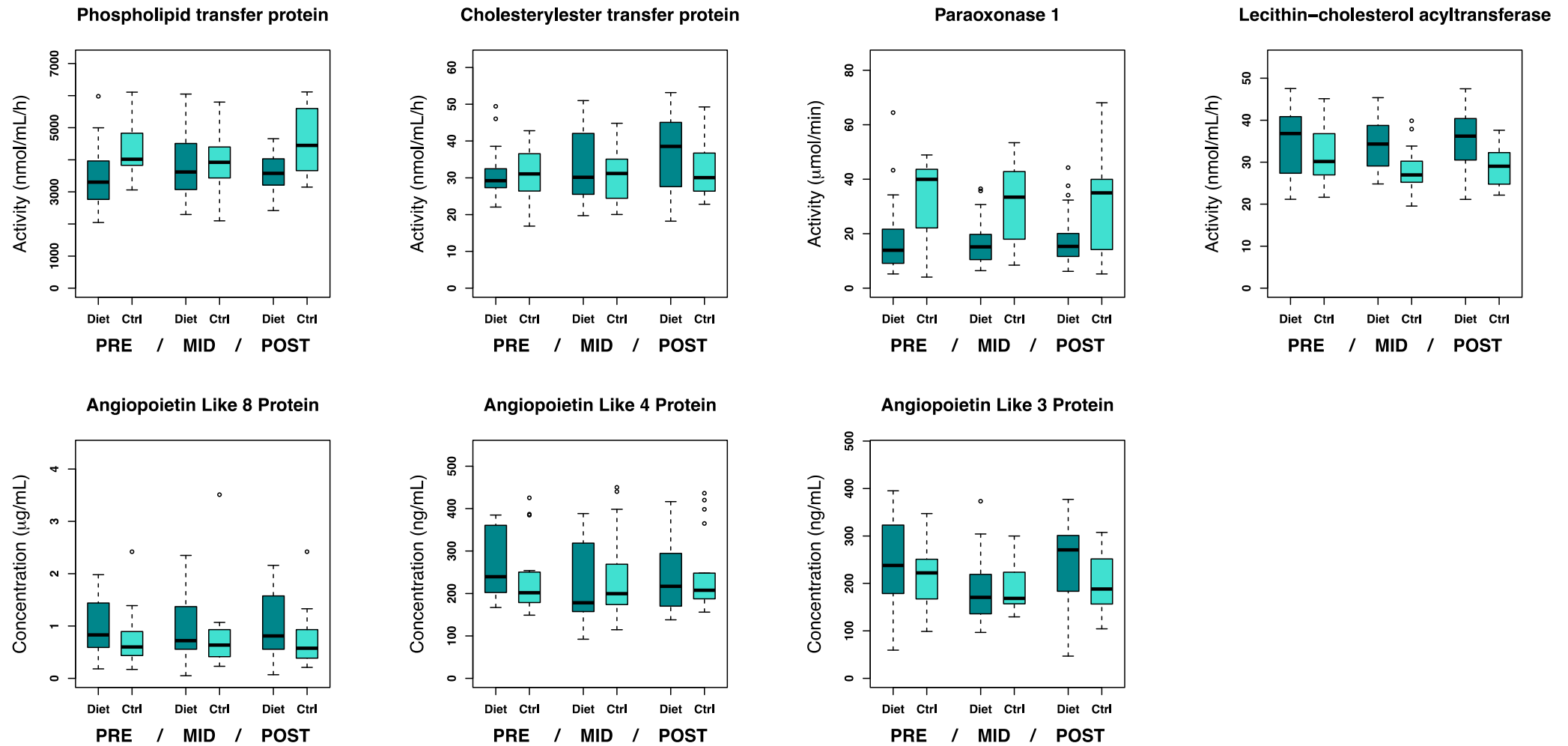
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## **Supplementary results**

### **Seasonal variation of body composition and metabolome profile in the control group**

Similar large changes in the metabolite concentrations were not observed in the control group (Fig. 2). Despite being instructed to maintain invariable lifestyle and body weight, the control group showed cardiometabolically adverse trends (FDR < 0.05) that were indicated in HDL-related parameters during the first half of the study (PRE-MID) which was accompanied by a small ~5% increase in total fat mass (DEXA) (Table 1). Specifically, reduction in the levels of 13 different HDL-metabolites (FDR < 0.05) was observed after the MID time point measurements (Supplementary Table S14.) but all of these changes dissipated by the end of the study (POST). No significant long-term seasonal changes were detected within control group after study protocol when comparing to baseline values (PRE-POST) (Supplementary Table S3).



**Supplementary Figure S1.** Box-plots of lipid metabolism-regulating factors. Plots are derived from raw-values where outliers based on 2 standard deviation from mean have been excluded. Phospholipid transfer protein = PLTP. Cholesteryl ester transfer protein = CETP. Paraoxonase 1 = PON-1. Lecithin-cholesterol acyltransferase = LCAT. Angiopoietin Like 8 Protein = ANGPTL8. Angiopoietin Like 4 Protein = ANGPTL4. Angiopoietin Like 3 Protein = ANGPTL3.