**S3 Table: Sensitivity analyses on data solely from the iDXA:** Associations between changes in body composition and changes in fasting lipid concentrations in 251 children and youths with overweight/obesity.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   | **ΔBMI SDS** | **Δ%BF SDS** | **Δ%BF** | **ΔFFMI SDS** | **ΔFFMI** | **Δ%TBF** |
|   | β | 95%CI | *p* | β | 95%CI | *p*  | β | 95%CI | *p* | β | 95%CI | *p*  | β | 95%CI | *p* | β | 95%CI | *p* |
| **ΔTC** | 0.38 | (0.26;0.51) | **8.1\*10-9** | 0.44 | (0.31;0.58) | **1.3\*10-9** | 0.05 | (0.04;0.07) | **3.2\*10-13** | 0.18 | (0.02;0.33) | 0.27 | 0.10 | (0.02;0.19) | 0.15 | 0.04 | (0.03;0.05) | **6.0\*10-13** |
| **ΔLDL** | 0.33 | (0.22;0.44) | **6.0\*10-9** | 0.40 | (0.29;0.51) | **6.2\*10-11** | 0.05 | (0.04;0.06) | **1.2\*10-14** | 0.12 | (0.00;0.26) | 0.28 | 0.06 | (-0.02;0.12) | 0.17 | 0.04 | (0.03;0.05) | **3.6\*10-14** |
| **ΔHDL** | -0.11 | (-0.16;-0.07) | **1.2\*10-7** | -0.11 | (-0.16;-0.06) | **1.4\*10-5** | -0.01 | (-0.01;0.00) | **1.5\*10-4** | -0.10 | (-0.16;-0.05) | **1.2\*10-4** | -0.06 | (-0.09;-0.03) | **5.7\*10-6** | -0.01 | (-0.01;0.00) | **1.1\*10-4** |
| **ΔNon-HDL** | 0.49 | (0.37;0.61) | **3.3\*10-14** | 0.55 | (0.42;0.68) | **1.4\*10-14** | 0.06 | (0.05;0.07) | **<2\*10-16** | 0.28 | (0.13;0.43) | **3.1\*10-4** | 0.16 | (0.08;0.24) | **1.1\*10-4** | 0.05 | (0.04;0.06) | **<2\*10-16** |
| **ΔLDL/HDL** | 0.44 | (0.32;0.57) | **1.2\*10-11** | 0.42 | (0.31;0.54) | **1.9\*10-11** | 0.05 | (0.03;0.06) | **5.9\*10-14** | 0.26 | (0.13;0.39) | **1.2\*10-4** | 0.14 | (0.07;0.21) | **1.0\*10-4** | 0.04 | (0.03;0.05) | **8.2\*10-14** |
| **ΔTG** | 0.36 | (0.24;0.48) | **1.2\*10-8** | 0.33 | (0.19;0.48) | **1.2\*10-6** | 0.03 | (0.02;0.05) | **6.1\*10-6** | 0.33 | (0.18;0.48) | **3.0\*10-5** | 0.23 | (0.16;0.31) | **1.5\*10-9** | 0.03 | (0.02;0.04) | **3.2\*10-6** |

Estimates (β), 95% confidence intervals (95%CI) and p-values of the association between changes in body mass index (BMI) standard deviation score (SDS), total body fat percentage (%BF) SDS, %BF, truncal body fat percentage (%TBF), fat free mass index (FFMI) SDS, and FFMI and changes in fasting plasma lipid concentrations. Estimates for changes in total cholesterol (TC), low-density lipoprotein cholesterol (LDL), high-density lipoprotein cholesterol (HDL), non-HDL, and triglycerides (TG) are in mmol/L. The data are linear regressions adjusted for baseline values of the dependent variables, baseline age, treatment duration, and sex. Significance level: *p*<0.0014. P-values meeting the significance threshold are marked with bold.