

Description of Additional Supplementary Files

File Name: Supplementary Data 1.xlsx

Description: Descriptive statistics of each cohort included in the analysis

File Name: Supplementary Data 2.xlsx

Description: Summary of height, weight and body mass index data removed through the quality control implemented in growthcleanr

File Name: Supplementary Data 3.xlsx

Description: Model fit parameters from each cohort for each of the methods.

File Name: Supplementary Data 4.xlsx

Description: Correlation between each of the estimated phenotypes in each of the cohorts.

File Name: Supplementary Data 5.xlsx

Description: Correlation between each of the estimated phenotypes in ALSPAC and NFBC1986 in males and females where the within-individual variation (i.e. the random effects and correlation structure) is modelled differently.

File Name: Supplementary Data 6.xlsx

Description: Estimated genome-wide genetic correlations between the twelve estimated phenotypes summarising growth across early life and BMI in childhood and adulthood.

File Name: Supplementary Data 7.xlsx

Description: Summary statistics for the genome-wide significant SNPs ($P < 5 \times 10^{-8}$) from the inverse-variance-weighted fixed-effects meta-analysis of each estimated phenotype, including a two-sided association P-value.

File Name: Supplementary Data 8.xlsx

Description: Summary statistics for the genome-wide significant SNPs ($P < 5 \times 10^{-8}$) from the inverse-variance-weighted fixed-effects meta-analysis of each estimated phenotype and replication in the African American subset from CHOP, including a two-sided association P-value.

File Name: Supplementary Data 9.xlsx

Description: Summary statistics from the inverse-variance-weighted fixed-effects meta-analysis of each estimated phenotype for the previously identified childhood obesity and BMI associated SNPs, including a two-sided association P-value.