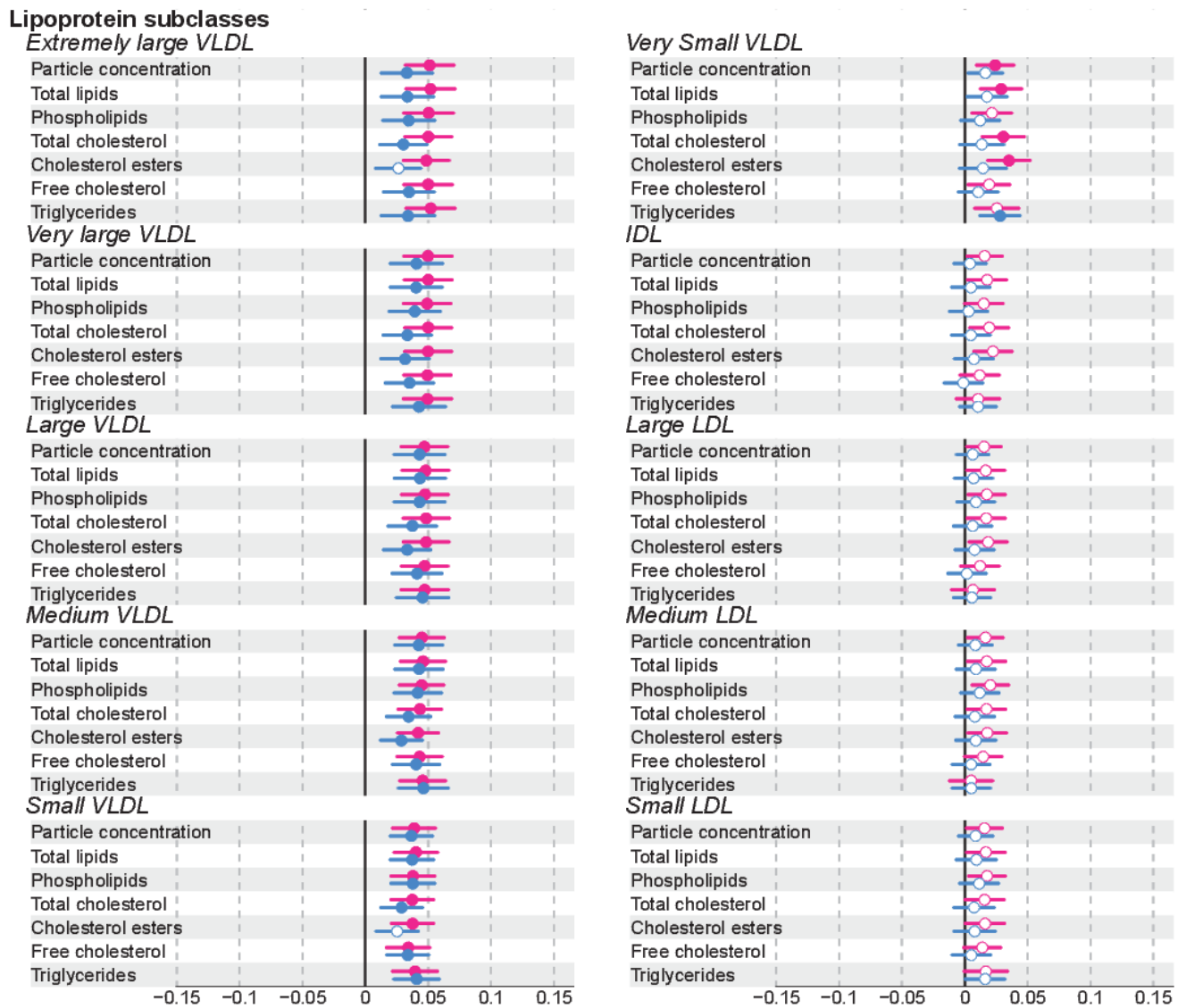


S4 Fig. One-stage IPD meta-analysis: offspring lipoprotein, lipids and metabolite differences in means in SD units per 1-SD higher maternal (pink) or paternal (blue) BMI, meta-analysed across ALSPAC, NFBC86 and NFBC66 cohorts.

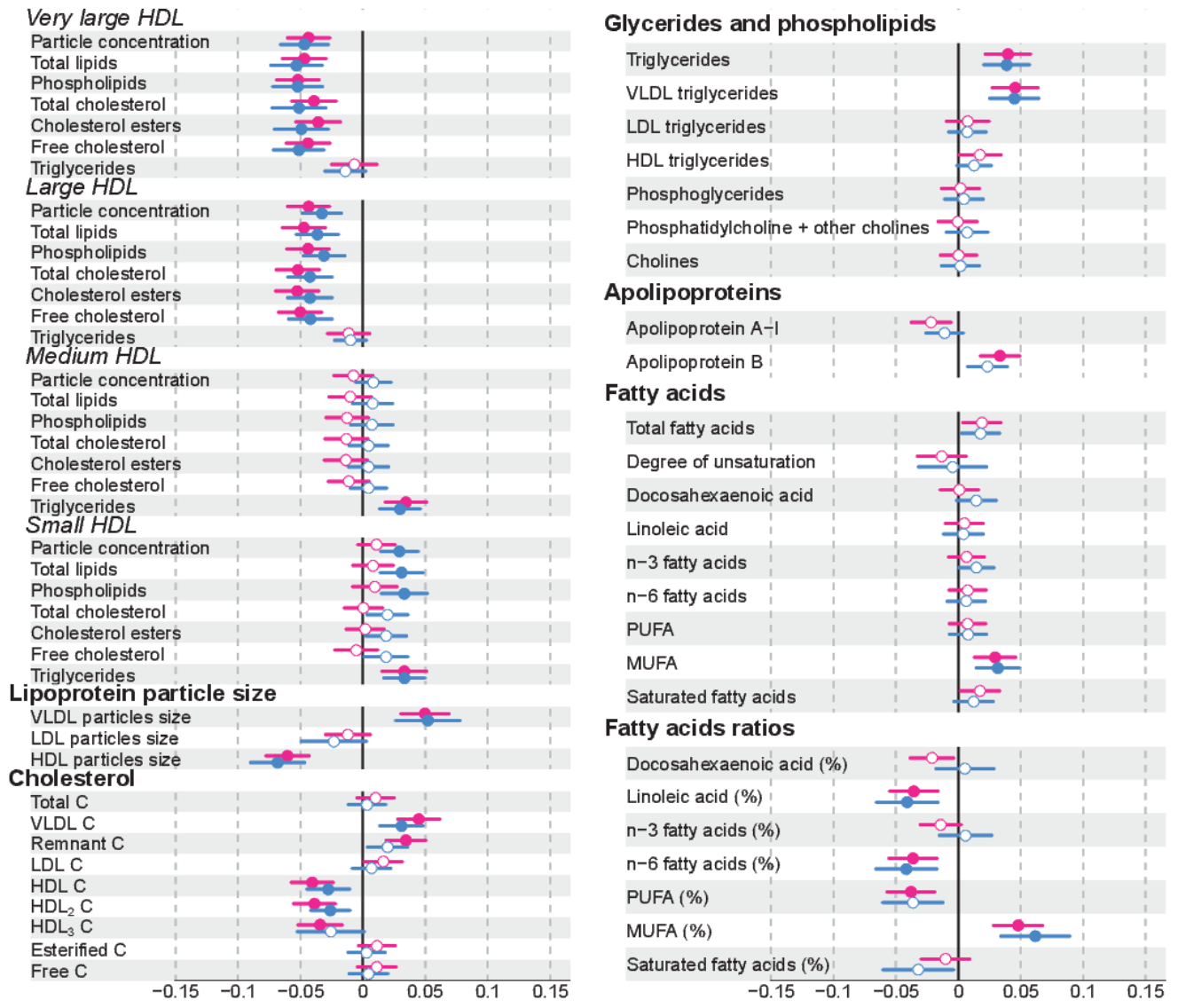


SD difference in offspring metabolite concentration (95%CI) per 1-SD of parental BMI increment

P ≥ 0.003 P < 0.003
Mother Father Mother Father
One-stage IPD ○ ○ ● ●

* P < 0.0035 for parental difference

S4 Fig continued.



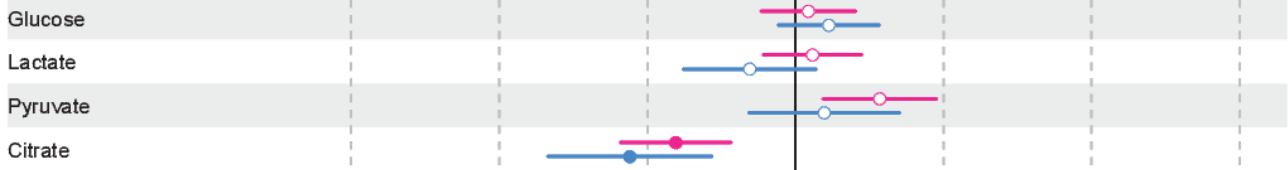
SD difference in offspring metabolite concentration (95%CI) per 1-SD of parental BMI increment

$P \geq 0.003$ $P < 0.003$
 Mother Father Mother Father
 One-stage IPD ○ ● ○ ●

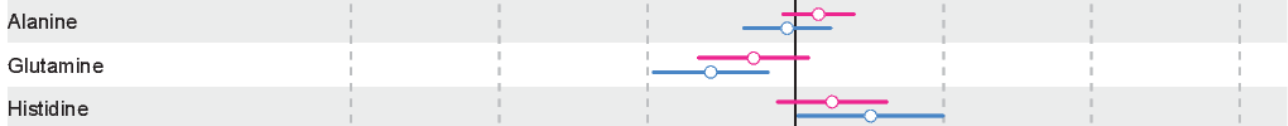
* $P < 0.0035$ for parental difference

S4 Fig continued.

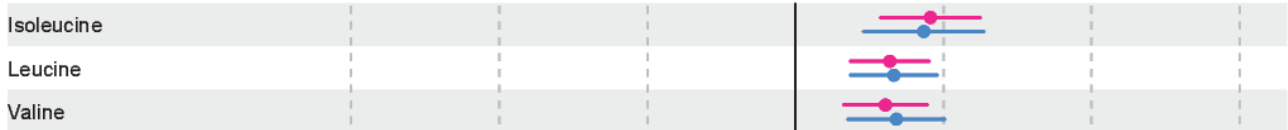
Glycolysis related metabolites



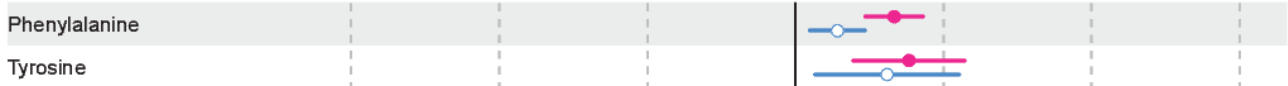
Amino acids



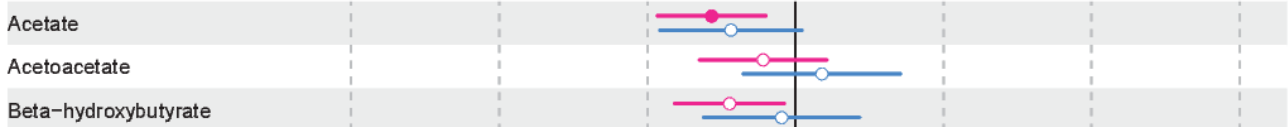
Branched-chain amino acids



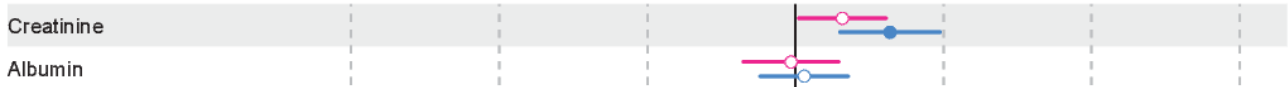
Aromatic amino acids



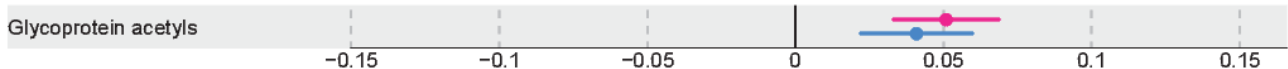
Ketone bodies



Fluid balance



Inflammation



SD difference in offspring metabolite concentration (95%CI) per 1-SD of parental BMI increment

P ≥ 0.003
P < 0.003
Mother
Father
One-stage IPD
○
○
●
●

* P < 0.0035 for parental difference

Associations were adjusted for parental age, smoking, education, head of household social class, maternal parity, offspring's age at blood collection, sex and cohort membership. Error bars= 95% confidence intervals (CI). VLDL=very-low-density lipoprotein; IDL=intermediate-density lipoprotein; LDL=low-density lipoprotein; HDL=high-density lipoprotein; C= cholesterol; MUFA=monounsaturated fatty acids; PUFA=polyunsaturated fatty acids.