Supporting Information

**Phthalate exposure during pregnancy and male offspring growth from the intra-uterine period to five years of age**

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Table S1. Characteristics of the study population (PEnDevE) and comparisons with the whole EDEN cohort delivering boys

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Maternal characteristic** | **All male newborns, EDEN cohort** **(n = 995)a** |  | **EDEN cohort included in PEnDevE study**  **(n = 520)b** |  |
| **n** | **(%)** |  | **n** | **(%)** |  |
| **Age (years)**< 2525-2930-34≥ 35 | 200376285134 | (20)(38)(29)(13) |  | 8520015976 | (16)(38)(31)(15) |   |
| **Parity**01≥ 2 Missing  | 4343731871 | (44)(37)(19)(0) |  | 248192791 | (48)(37)(15)(0) |  |
| **BMI (kg/m2)**<18.5≥ 18.5 to < 25≥ 25Missing | 9163424921 | (9)(64)(25)(2) |  | 453311377 | (9)(64)(26)(1) |  |
| **Education**Less than 2y after high schoolHigh school + 2 years≥ High school + 3 yearsMissing | 45721829723 | (46)(22)(30)(2) |  | 2111241787 | (41)(24)(34)(1) |  |
| **Active smoking (cig/day)c**01 to 5> 5Missing  | 82581863 | (83)(8)(9)(0) |  | 45339271 | (87)(8)(5)(0) |  |
| **Passive smoking**NoYesMissing  | 7102778 | (71)(28)(1) |  | 4111081 | (79)(21)(0) |  |
| **Center**PoitiersNancy | 530465 | (53)(47) |  | 312208 | (60)(40) |  |
| **Gestational duration**< 37 gestational week≥ 37 gestational week | 63932 | (6)(94) |  | 23497 | (4)(96) |  |
| **Offspring’s growth characteristic** | **All male newborns, EDEN cohort** **(n = 995)a** |  | **EDEN cohort included in PEnDevE study**  **(n = 520)b** |  |
| **Mean** | **(SD)** |  | **Mean** | **(SD)** |  |
| **Estimated fetal weight (g)**At 1st ultrasound measureAt 2nd ultrasound measure | 5332013 | (102)(325) |  | 5272004 | (97)(320) |  |
| **Femoral length (mm)**At 1st ultrasound measureAt 2nd ultrasound measure | 38.961.9 | (3.2)(3.2) |  | 38.761.8 | (3.0)(3.2) |  |
| **Birth weight (g)** | 3340 | (537) |  | 3371 | (466) |  |
| **Birth length (cm)** | 50.0 | (2.3) |  | 50.1 | (2.1) |  |
| **Weight (kg)**6 months 1 year2 years3 years5 years | 7.910.012.614.819.0 | (0.8)(0.9)(1.2)(1.5)(2.2) |  | 7.910.012.614.819.1 | (0.7)(0.9)(1.2)(1.5)(2.3) |  |
| **Length or height (cm)**6 months 1 year2 years3 years5 years | 67.376.687.896.0110.9 | (2.2)(2.3)(2.8)(3.2)(4.2) |  | 67.276.687.996.1111.0 | (2.1)(2.3)(2.8)(3.3)(4.4) |  |
| **Weight growth velocity (g/month)**3 months6 months 1 year2 years4 years | 756481270189178 | (101)(76)(51)(35)(36) |  | 754479269190178 | (98)(76)(52)(37)(39) |  |
| **Height growth velocity (mm/month)**3 months6 months 1 year2 years4 years | 27.119.912.37.56.2 | (2.7)(1.6)(1.3)(0.7)(0.6) |  | 26.919.912.47.56.2 | (2.8)(1.6)(1.3)(0.7)(0.7) |  |
| **BMI at 5 years (kg/m2)** | 15.4 | (1.2) |  | 15.4 | (1.3) |  |

 a Singleton live births.

b Study population of this paper

c Second trimester of pregnancy

Table S2. Pearson correlation coefficients of ln-transformed phthalate metabolite standardized concentrations, as well as the sum of molar concentrations of parabens (methyl paraben, ethyl paraben, propyl paraben, and butyl paraben) and triclosan. Coefficients higher than 0.08 were significantly different from a null association. Individual DEHP metabolites correlations were not shown (all > 0.80 and mostly > 0.90)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ΣLMWP | MEP | MBP | MiBP | ΣHMWP | MCPP | MBzP | MCNP | MCOP | ΣDEHP | Σ*parabens* | *Triclosan* |
| ΣLow molecular weight Phthalates | 1 | 0.79\* | 0.59\* | 0.33\* | 0.18 | 0.40\* | 0.22\* | 0.02 | 0.10 | 0.12 | *0.17* | *0.12* |
| MEP |   | 1 | 0.12 | 0.06 | 0.05 | 0.05 | 0.08 | 0.00 | 0.04 | 0.04 | *0.25\** | *0.23\** |
| MBP |   |  | 1 | 0.29\* | 0.35\* | 0.67\* | 0.34\* | 0.06 | 0.14 | 0.25\* | *-0.01* | *-0.03* |
| MiBP |   |  |  | 1 | 0.34\* | 0.17 | 0.42\* | 0.08 | 0.16 | 0.26\* | *0.03* | *-0.02* |
| ΣHigh molecular weight Phthalates a |   |  |  |   | 1 | 0.38\* | 0.57\* | 0.29\* | 0.42\* | 0.93\* | *-0.08* | *-0.03* |
| MCPP |   |  |  |   |  | 1 | 0.24\* | 0.33\* | 0.31\* | 0.27\* | *0.00* | *-0.06* |
| MBzP |   |  |  |   |  |  | 1 | 0.15 | 0.21\* | 0.32\* | *0.00* | *-0.03* |
| MCNP |   |  |  |   |  |  |  | 1 | 0.40\* | 0.21\* | *0.02* | *0.03* |
| MCOP |   |  |  |   |  |  |  |  | 1 | 0.35\* | *0.03* | *0.02* |
| ΣDEHP metabolites |   |   |   |   |   |   |   |   |   | 1 | *-0.10* | *-0.02* |
| Σ*parabens* |  |  |  |  |  |  |  |  |  |  | *1* | *0.17* |
| *Triclosan* |   |  |  |   |  |  |  |  |  |   |  | *1* |

\* Coefficients > 0.20

a Including DEHP metabolites concentration

 Table S3. Adjusted associations between ln-transformed phthalate metabolite concentrations and prenatal biparietal diameter and pre and postnatal head circumference (observed measures at clinical time points, adjusted for continuous age). Results are expressed as beta regression coefficient (95% confidence interval) for one interquartile range increase in exposure variable.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Biparietal diameter (mm)a |  | Prenatal head circumference (mm) a |  | Postnatal head circumference (cm) b |  |
| Phthalate metabolite | 1st trimester(12 GW) | 2nd trimester(22.5 GW) | 3rd trimester(32.6 GW) | pc | 2nd trimester(22.5 GW) | 3rd trimester(32.6 GW) | pc | Birth | 1 year | 3 years | 5 years | p |
| *LMW* | -0.06 (-0.37,0.24) | -0.4 (-1.09,0.29) | -1.06 (-2.73,0.61) | 0.82 | 0.10 (-0.97,1.18) | 0.38 (-0.78,1.53) | 0.93 | -0.01 (-0.14,0.13) | 0.01 (-0.14,0.16) | 0.00 (-0.14,0.15) | 0.00 (-0.15,0.15) | 1.00 |
| MEP | -0.09 (-0.4,0.21) | -0.52 (-1.2,0.16) | -1.33 (-2.99,0.33) | 0.63 | 0.00 (-1.04,1.04) | 0.08 (-1.04,1.19) | 0.85 | -0.04 (-0.16,0.09) | -0.02 (-0.17,0.12) | -0.03 (-0.17,0.11) | -0.03 (-0.18,0.11) | 0.99 |
| MBP | -0.03 (-0.25,0.2) | -0.42 (-0.95,0.12) | -1.11 (-2.41,0.19) | 0.52 | 0.27 (-0.52,1.06) | 0.31 (-0.54,1.17) | 0.87 | -0.03 (-0.12,0.07) | 0.00 (-0.11,0.11) | 0.00 (-0.11,0.11) | -0.01 (-0.12,0.10) | 0.97 |
| MiBP | -0.12 (-0.41,0.18) | 0.1 (-0.58,0.78) | 0.27 (-1.33,1.88) | 0.85 | -0.06 (-1.12,1) | 0.03 (-1.1,1.16) | 0.30 | 0.06 (-0.07,0.19) | 0.13 (-0.02,0.27) | 0.10 (-0.04,0.24) | 0.13 (-0.02,0.27) | 0.37 |
| *HMWd* | -0.45 (-0.73,-0.17) | -1.08 (-1.75,-0.41) | -2.26 (-3.84,-0.68) | 0.01 | -0.51 (-1.47,0.44) | -0.50 (-1.55,0.55) | 0.62 | -0.04 (-0.16,0.07) | -0.09 (-0.22,0.05) | -0.04 (-0.17,0.09) | -0.06 (-0.19,0.08) | 0.50 |
| MBzP | -0.44 (-0.71,-0.16) | -0.68 (-1.33,-0.02) | -1.25 (-2.79,0.3) | 0.02 | -0.73 (-1.7,0.25) | -0.71 (-1.78,0.36) | 0.21 | 0.02 (-0.10,0.14) | 0.11 (-0.02,0.25) | 0.08 (-0.06,0.21) | 0.07 (-0.07,0.21) | 0.51 |
| MCOP | -0.06 (-0.35,0.23) | -0.4 (-1.1,0.29) | -1.14 (-2.86,0.58) | 0.73 | 0.27 (-0.72,1.26) | 0.53 (-0.53,1.59) | 0.79 | -0.01 (-0.13,0.11) | 0.02 (-0.11,0.15) | 0.08 (-0.06,0.21) | 0.06 (-0.08,0.19) | 0.38 |
| MCPP | -0.03 (-0.32,0.26) | -0.8 (-1.48,-0.13) | -2.19 (-3.81,-0.56) | 0.11 | 0.31 (-0.71,1.33) | 0.52 (-0.59,1.62) | 0.80 | -0.03 (-0.16,0.09) | -0.06 (-0.2,0.08) | -0.04 (-0.18,0.10) | -0.03 (-0.17,0.11) | 0.92 |
| MCNP | -0.22 (-0.48,0.04) | -0.58 (-1.27,0.1) | -1.31 (-2.92,0.3) | 0.41 | -0.30 (-1.19,0.59) | 0.33 (-0.64,1.3) | 0.62 | 0.05 (-0.06,0.16) | 0.02 (-0.10,0.15) | 0.04 (-0.08,0.16) | 0.02 (-0.11,0.14) | 0.77 |
| *DEHP* | -0.38 (-0.67,-0.09) | -1.1 (-1.81,-0.38) | -2.19 (-3.89,-0.49) | 0.02 | -0.45 (-1.45,0.55) | -0.30 (-1.39,0.80) | 0.82 | -0.02 (-0.14,0.10) | -0.10 (-0.24,0.03) | -0.05 (-0.18,0.09) | -0.05 (-0.20,0.09) | 0.43 |
| MECPP | -0.39 (-0.66,-0.11) | -1.03 (-1.7,-0.36) | -2.02 (-3.59,-0.45) | 0.01 | -0.54 (-1.49,0.40) | -0.37 (-1.41,0.67) | 0.70 | -0.02 (-0.14,0.09) | -0.10 (-0.23,0.03) | -0.05 (-0.18,0.08) | -0.05 (-0.19,0.08) | 0.43 |
| MEHHP | -0.33 (-0.61,-0.05) | -0.93 (-1.63,-0.23) | -1.86 (-3.53,-0.18) | 0.06 | -0.39 (-1.36,0.58) | -0.24 (-1.3,0.82) | 0.88 | -0.02 (-0.14,0.1) | -0.09 (-0.22,0.05) | -0.03 (-0.16,0.1) | -0.04 (-0.18,0.10) | 0.52 |
| MEOHP | -0.33 (-0.6,-0.05) | -1.04 (-1.72,-0.35) | -2.05 (-3.69,-0.42) | 0.03 | -0.39 (-1.34,0.57) | -0.19 (-1.23,0.85) | 0.87 | -0.02 (-0.14,0.10) | -0.10 (-0.23,0.03) | -0.05 (-0.18,0.08) | -0.05 (-0.19,0.08) | 0.53 |
| MEHP | -0.3 (-0.6,0.01) | -0.94 (-1.67,-0.2) | -1.81 (-3.56,-0.05) | 0.09 | -0.13 (-1.18,0.92) | -0.32 (-1.46,0.81) | 0.90 | 0.00 (-0.12,0.13) | -0.11 (-0.25,0.04) | -0.05 (-0.20,0.09) | -0.05 (-0.20,0.09) | 0.48 |

a. Mixed effect model adjusted for maternal height and BMI, maternal active and passive smoking, maternal education level, recruitment center, maternal age, weight gain during pregnancy and parity.

b. GEE model adjusted for maternal and paternal height and BMI, maternal active and passive smoking during pregnancy, maternal education level, recruitment center, maternal age, gestational age, weight gain during pregnancy and parity. Additionally adjusted for age at the measure in a mixed effect model.

c. P-value for the global difference (null hypothesis: no effect of the phthalate metabolite over all the age range)

d. Including DEHP metabolites

Table S4 Adjusted associations between ln-transformed phthalate metabolite concentrations and postnatal length, height and weight (observed measures at clinical time points, adjusted for continuous age). Results are expressed as beta regression coefficient (95% confidence interval) for one interquartile range increase in exposure variable.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Length or height (cm)a |  |  |  |  | Weight (g)a,b |  |  |  |
| **Phthalate****metabolite** | Birth | 1 year | 3 years | 5 years | p-valuec | Birth | 1 year | 3 years | 5 years | p-valuec |
| ***LMW*** | 0.01 (-0.22,0.24) | 0.10 (-0.16,0.37) | 0.05 (-0.31,0.42) | -0.02 (-0.52,0.47) | 0.81 | 9 (-26,43) | 19 (-74,113) | 111 (-22,243) | 224 (-2,449) | 0.38 |
| **MEP** | 0.06 (-0.16,0.28) | -0.12 (-0.38,0.13) | -0.02 (-0.37,0.33) | -0.18 (-0.66,0.30) | 0.22 | 0 (-33,33) | 58 (-33,149) | 159 (30,287) | 271 (52,490) | 0.16 |
| **MBP** | -0.05 (-0.22,0.12) | 0.19 (-0.01,0.38) | 0.04 (-0.23,0.31) | 0.04 (-0.32,0.40) | 0.07 | 8 (-18,33) | -28 (-97,41) | 24 (-73,121) | 47 (-116,210) | 0.68 |
| **MiBP** | -0.15 (-0.37,0.08) | 0.24 (-0.02,0.5) | 0.2 (-0.15,0.56) | 0.25 (-0.24,0.73) | 0.14 | 3 (-31,36) | 59 (-34,151) | 13 (-118,144) | 50 (-171,271) | 0.70 |
| ***HMWd*** | -0.02 (-0.23,0.18) | 0.14 (-0.10,0.38) | 0.08 (-0.25,0.41) | -0.06 (-0.50,0.39) | 0.28 | -12 (-43,19) | -2 (-88,84) | 37 (-85,159) | -24 (-229,182) | 0.57 |
| **MBzP** | -0.01 (-0.23,0.2) | 0.30 (0.06,0.55) | 0.24 (-0.10,0.58) | 0.02 (-0.44,0.47) | 0.002 | -4 (-36,28) | 60 (-28,147) | 55 (-69,179) | 129 (-80,337) | 0.60 |
| **MCOP** | 0.05 (-0.17,0.26) | -0.02 (-0.27,0.22) | 0.01 (-0.32,0.35) | 0.03 (-0.43,0.48) | 0.98 | -20 (-51,12) | 33 (-53,120) | 89 (-34,212) | -24 (-231,183) | 0.04 |
| **MCPP** | 0.02 (-0.20,0.24) | 0.09 (-0.16,0.34) | -0.08 (-0.43,0.27) | -0.10 (-0.57,0.37) | 0.52 | 10 (-22,43) | -55 (-145,34) | -15 (-142,112) | 3 (-213,219) | 0.67 |
| **MCNP** | 0.22 (0.02,0.41) | -0.09 (-0.31,0.13) | -0.09 (-0.4,0.21) | -0.08 (-0.5,0.33) | 0.13 | -26 (-54,3) | 3 (-76,82) | -21 (-134,91) | -52 (-241,136) | 0.48 |
| ***DEHP*** | -0.02 (-0.23,0.2) | 0.06 (-0.19,0.31) | 0.03 (-0.31,0.38) | -0.10 (-0.57,0.37) | 0.61 | -6 (-38,26) | -3 (-92,86) | 11 (-117,138) | -86 (-301,129) | 0.58 |
| **MECPP** | -0.01 (-0.21,0.20) | 0.07 (-0.17,0.30) | 0.05 (-0.28,0.38) | -0.04 (-0.48,0.41) | 0.79 | -6 (-36,25) | -11 (-96,73) | 0 (-121,121) | -81 (-285,123) | 0.71 |
| **MEHHP** | -0.06 (-0.27,0.15) | 0.06 (-0.18,0.30) | 0.04 (-0.29,0.38) | -0.11 (-0.56,0.35) | 0.35 | -2 (-34,29) | 13 (-74,99) | 24 (-99,147) | -76 (-284,132) | 0.49 |
| **MEOHP** | -0.04 (-0.24,0.17) | 0.07 (-0.17,0.30) | 0.06 (-0.27,0.39) | -0.08 (-0.53,0.37) | 0.43 | -5 (-36,25) | 6 (-79,91) | 15 (-105,136) | -66 (-271,138) | 0.67 |
| **MEHP** | 0.07 (-0.16,0.30) | 0.02 (-0.24,0.27) | -0.09 (-0.45,0.27) | -0.23 (-0.71,0.26) | 0.68 | -9 (-43,24) | -15 (-108,77) | -5 (-137,126) | -110 (-332,112) | 0.56 |

a. GEE model adjusted for maternal and paternal height and BMI, maternal active and passive smoking during pregnancy, maternal education level, recruitment center, maternal age, gestational age, weight gain during pregnancy and parity. Adjusted for age at the measure.

b. Additionally adjusted for height at the measure.

c. P-value for the global difference (null hypothesis: no effect of the phthalate metabolite over all the age range)

d. Including DEHP metabolites

Table S5. Adjusted associations between ln-transformed phthalate metabolite concentrations and model-predicted instantaneous height growth velocities (mm/month) at 3, 6, 12, 24 and 48 months. Results are expressed as beta regression coefficient (95% confidence interval) for one interquartile range increase in exposure variable. GEE model adjusted for maternal and paternal height and BMI, maternal active and passive smoking during pregnancy, maternal education level, recruitment center, maternal age, gestational age at birth, weight gain during pregnancy and parity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Age (months)** |  |  |
| **Phthalate metabolite** | **3**  | **6**  | **12**  | **24**  | **48**  | **Global test (p-value)a** |
| ***LMW*** | 0.08 (-0.21,0.37) | -0.03 (-0.20,0.14) | -0.06 (-0.20,0.08) | -0.01 (-0.08,0.07) | 0.03 (-0.03,0.10) | 0.50 |
| ***MEP*** | -0.16 (-0.44,0.13) | -0.12 (-0.28,0.05) | -0.03 (-0.17,0.10) | 0.02 (-0.06,0.09) | 0.01 (-0.05,0.08) | 0.49 |
| ***MBP*** | 0.17 (-0.04,0.39) | 0.01 (-0.11,0.13) | -0.07 (-0.17,0.03) | -0.03 (-0.09,0.02) | 0.02 (-0.03,0.07) | 0.19 |
| ***MiBP*** | 0.35 (0.06,0.63) | 0.16 (0,0.32) | 0.00 (-0.14,0.13) | -0.02 (-0.09,0.05) | 0.03 (-0.03,0.10) | 0.14 |
| ***HMWb*** | 0.11 (-0.15,0.38) | 0.06 (-0.09,0.21) | 0.00 (-0.13,0.12) | -0.03 (-0.10,0.03) | -0.02 (-0.08,0.04) | 0.47 |
| ***MBzP*** | 0.26 (-0.01,0.53) | 0.17 (0.02,0.33) | 0.04 (-0.09,0.17) | -0.03 (-0.10,0.03) | -0.03 (-0.09,0.03) | 0.13 |
| ***MCPP*** | 0.01 (-0.27,0.29) | 0.03 (-0.13,0.19) | 0.03 (-0.10,0.16) | 0.00 (-0.07,0.07) | 0.01 (-0.06,0.07) | 0.09 |
| ***MCOP*** | -0.08 (-0.35,0.19) | -0.06 (-0.21,0.10) | -0.02 (-0.15,0.11) | 0.01 (-0.06,0.08) | 0.03 (-0.03,0.09) | 0.54 |
| ***MCNP*** | -0.26 (-0.50,-0.01) | -0.13 (-0.28,0.01) | -0.03 (-0.15,0.09) | 0.01 (-0.05,0.07) | 0.00 (-0.05,0.06) | 0.32 |
| ***DEHP*** | 0.04 (-0.24,0.32) | 0.00 (-0.16,0.16) | -0.03 (-0.16,0.10) | -0.03 (-0.10,0.04) | -0.01 (-0.07,0.05) | 0.80 |
| ***MECPP*** | 0.06 (-0.21,0.32) | 0.01 (-0.15,0.16) | -0.03 (-0.16,0.10) | -0.02 (-0.09,0.04) | 0.00 (-0.06,0.06) | 0.83 |
| ***MEHHP*** | 0.07 (-0.20,0.34) | 0.04 (-0.12,0.19) | 0.00 (-0.13,0.13) | -0.03 (-0.10,0.04) | -0.02 (-0.08,0.04) | 0.80 |
| ***MEHP*** | -0.08 (-0.37,0.21) | -0.10 (-0.27,0.07) | -0.10 (-0.23,0.04) | -0.06 (-0.13,0.02) | -0.02 (-0.08,0.05) | 0.56 |
| ***MEOHP*** | 0.05 (-0.21,0.32) | 0.03 (-0.12,0.18) | -0.01 (-0.14,0.12) | -0.03 (-0.10,0.04) | -0.02 (-0.08,0.04) | 0.80 |

a. P-value for the global difference (null hypothesis: no effect of the phthalate metabolite over the whole age range)

b. Including DEHP metabolites

Figure S1. Directed acyclic graph (DAG) for multivariable prenatal growth models and the corresponding code, built using the Dagitty web interface (http://www.dagitty.net)

|  |  |
| --- | --- |
|  | Age 1 @0.227,-0.090Anthropometry 1 @0.453,0.780Centre 1 @0.210,1.031Education 1 @0.380,0.140Fetal\_growth O @0.974,0.528Parity 1 @0.955,0.013Phthalate E @0.000,0.653Pregnancy\_WG 1 @0.602,0.010Smoking 1 @0.632,1.046Age Anthropometry Education Fetal\_growth Parity Phthalate Pregnancy\_WG SmokingAnthropometry Fetal\_growth Phthalate Pregnancy\_WGCentre Age Anthropometry Education Fetal\_growth Parity Phthalate Pregnancy\_WG SmokingEducation Anthropometry Fetal\_growth Parity Phthalate Pregnancy\_WG SmokingParity Fetal\_growthPhthalate Fetal\_growth Pregnancy\_WGPregnancy\_WG Fetal\_growthSmoking Fetal\_growth Phthalate Pregnancy\_WG |

Figure S2. Directed acyclic graph for multivariable postnatal growth models and corresponding code, built using the Dagitty web interface (http://www.dagitty.net). The unobserved U variable can be dietary factors.

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| --- | --- |
|  | Age 1 @0.400,-0.170Anthropo\_father 1 @0.309,1.114Anthropo\_mother 1 @0.355,0.578Breasfeeding 1 @0.849,1.088Centre 1 @0.175,0.967Education 1 @0.063,-0.009Fetal\_growth 1 @1.020,0.485Parity 1 @0.955,0.013Phthalate E @-0.010,0.506Postnatal\_growth O @0.974,0.975Pregnancy\_WG 1 @0.681,0.219Smoking 1 @0.392,0.921U U @0.033,1.079Age Anthropo\_mother Breasfeeding Education Fetal\_growth Parity Phthalate Postnatal\_growth Pregnancy\_WG Smoking UAnthropo\_father Postnatal\_growthAnthropo\_mother Breasfeeding Fetal\_growth Phthalate Postnatal\_growth Pregnancy\_WGBreasfeeding Postnatal\_growthCentre Age Anthropo\_father Anthropo\_mother Breasfeeding Education Fetal\_growth Parity Phthalate Postnatal\_growth Pregnancy\_WG SmokingEducation Anthropo\_mother Breasfeeding Fetal\_growth Parity Phthalate Postnatal\_growth Pregnancy\_WG Smoking UFetal\_growth Breasfeeding Postnatal\_growthParity Breasfeeding Fetal\_growth Postnatal\_growth Pregnancy\_WG SmokingPhthalate Fetal\_growth Postnatal\_growth Pregnancy\_WGPregnancy\_WG Fetal\_growth Postnatal\_growthSmoking Anthropo\_mother Breasfeeding Fetal\_growth Phthalate Postnatal\_growth Pregnancy\_WGU Anthropo\_father Anthropo\_mother Phthalate |