

S3 Table. The relationship between urinary DEHP monoester and reproductive hormone concentration in children (n = 222)

| Urinary DEHP monoesters (µg/L) | LH (mIU/mL) | | FSH (mIU/mL) | | E2 (pg/mL) | |
|-----------------------------------|-------------------|------------------|----------------------|------------------|-------------------|------------------|
| | n (%) of > LOD | AOR [¶] | n (%) of > median | AOR [¶] | n (%) of > LOD | AOR [¶] |
| Boys (n = 132) | | | | | | |
| MEHP | | | | | | |
| <4.87 (n = 63) | 17 (27.0) | Reference | 25 (39.7) | Reference | 23 (36.5) | Reference |
| ≥4.87 (n = 69) | 14 (20.3) | 0.50 (0.17–1.45) | 39 (56.5) | 0.91 (0.36–2.25) | 12 (17.4) | 0.45 (0.16–1.19) |
| MEHHP | | | | | | |
| <20.97 (n = 62) | 16 (25.8) | Reference | 25 (40.3) | Reference | 20 (32.3) | Reference |
| ≥20.97 (n = 70) | 15 (21.4) | 0.70 (0.22–2.21) | 39 (55.7) | 0.74 (0.28–1.95) | 15 (21.4) | 0.97 (0.34–2.80) |
| MEOHP | | | | | | |
| <15.19 (n = 63) | 16 (25.4) | Reference | 24 (38.1) | Reference | 22 (34.9) | Reference |
| ≥15.19 (n = 69) | 15 (21.7) | 0.75 (0.25–2.29) | 40 (58.0) | 1.10 (0.43–2.81) | 13 (18.8) | 0.58 (0.21–1.62) |
| ∑MEHP | | | | | | |
| <41.95 (n = 61) | 16 (26.2) | Reference | 22 (36.1) | Reference | 22 (36.1) | Reference |
| ≥41.95 (n = 71) | 15 (21.1) | 0.66 (0.21–2.09) | 42 (59.2) | 1.41 (0.53–3.72) | 13 (18.3) | 0.52 (0.18–1.46) |
| Girls (n = 90) | | | | | | |
| MEHP | | | | | | |
| <4.87 (n = 48) | 5 (10.4) | Reference | 18 (37.5) | Reference | 20 (41.7) | Reference |

| | | | | | | |
|-----------------|----------|-------------------|-----------|------------------------|-----------|--------------------|
| ≥4.87 (n = 42) | 8 (19.1) | 3.10 (0.40–30.59) | 25 (59.5) | 3.81 (1.36–11.63)* | 20 (47.6) | 1.64 (0.58–4.74) |
| MEHHP | | | | | | |
| <20.97 (n = 49) | 4 (8.2) | Reference | 17 (34.7) | Reference | 19 (38.8) | Reference |
| ≥20.97(n = 41) | 9 (22.0) | 4.90 (0.53–59.68) | 26 (63.4) | 8.51 (2.21–39.01)** | 21 (51.2) | 2.39 (0.68–9.19) |
| MEOHP | | | | | | |
| <15.19 (n = 48) | 4 (4.4) | Reference | 15 (31.3) | Reference | 19 (39.6) | Reference |
| ≥15.19 (n = 42) | 9 (21.4) | 4.05 (0.46–43.12) | 28 (66.7) | 20.10 (4.84–109.05)*** | 21 (50.0) | 2.28 (0.69–8.05) |
| ∑MEHP | | | | | | |
| <41.95 (n = 50) | 4 (8.0) | Reference | 17 (34.0) | Reference | 19 (38.0) | Reference |
| ≥41.95 (n = 40) | 9 (22.5) | 5.10 (0.60–55.45) | 26 (65.0) | 10.54 (2.85–47.48)*** | 21 (52.5) | 3.28 (0.98–12.17)# |

All concentrations of urinary DEHP monoesters and reproductive hormones were log 10 transformed.

#p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

¶Adjusted for age, birth weight, and urinary creatinine concentration.

Some numbers do not add up to total n because of missing values.

Abbreviations: DEHP, di-(2-ethylhexyl) phthalate; MEHP, mono-(2-ethylhexyl) phthalate; MEHHP, mono-(2-ethyl-5-hydroxyhexyl) phthalate; MEOHP, mono-(2-ethyl-5-oxohexyl) phthalate; LH, luteinizing hormone; FSH, follicle-stimulating hormone; E2, estradiol; AOR, adjusted odds ratio; LOD, limit of detection value.

S3 Table (continued). The relationship between urinary DEHP monoester and reproductive hormone concentration in children (n = 222).

| Urinary DEHP monoesters ($\mu\text{g/L}$) | TT (ng/dL) | | Free TT (ng/dL) | | SHBG (nmol/L) | |
|--|-------------------|-------------------|----------------------|------------------|----------------------|------------------|
| | n (%) of > LOD | AOR [¶] | n (%) of > median | AOR [¶] | n (%) of > median | AOR [¶] |
| Boys (n = 132) | | | | | | |
| MEHP | | | | | | |
| <4.87 (n = 63) | 5 (7.9) | Reference | 26 (41.3) | Reference | 36 (57.1) | Reference |
| \geq 4.87 (n = 69) | 7 (10.1) | 1.94 (0.32–14.17) | 36 (52.2) | 1.17 (0.47–2.89) | 30 (43.5) | 1.08 (0.44–2.72) |
| MEHHP | | | | | | |
| <20.97 (n = 62) | 7 (11.3) | Reference | 25 (40.3) | Reference | 37 (59.7) | Reference |
| \geq 20.97 (n = 70) | 5 (7.1) | 0.60 (0.08–4.40) | 37 (52.9) | 1.46 (0.56–3.90) | 29 (41.4) | 0.77 (0.29–2.01) |
| MEOHP | | | | | | |
| <15.19 (n = 63) | 6 (9.5) | Reference | 26 (41.3) | Reference | 37 (58.7) | Reference |
| \geq 15.19 (n = 69) | 6 (8.7) | 1.49 (0.23–11.31) | 36 (52.2) | 1.21 (0.47–3.12) | 29 (42.0) | 0.90 (0.35–2.32) |
| ΣMEHP | | | | | | |
| <41.95 (n = 61) | 6 (9.8) | Reference | 26 (42.6) | Reference | 35 (57.4) | Reference |
| \geq 41.95 (n = 71) | 6 (8.5) | 1.53 (0.21–12.25) | 36 (50.7) | 1.02 (0.39–2.71) | 31 (43.7) | 1.11 (0.42–2.96) |
| Girls (n = 90) | | | | | | |
| MEHP | | | | | | |
| <4.87 (n = 48) | 9 (18.8) | Reference | 21 (43.8) | Reference | 25 (52.1) | Reference |

| | | | | | | |
|-----------------|----------|-------------------|-----------|------------------|-----------|--------------------------------|
| ≥4.87 (n = 42) | 6 (14.3) | 0.93 (0.16–5.27) | 23 (54.8) | 1.00 (0.35–2.79) | 20 (47.6) | 1.31 (0.47–3.80) |
| MEHHP | | | | | | |
| <20.97 (n = 49) | 7 (14.3) | Reference | 20 (40.8) | Reference | 25 (51.0) | Reference |
| ≥20.97 (n = 41) | 8 (19.5) | 3.76 (0.54–32.74) | 24 (58.5) | 1.37 (0.39–4.88) | 20 (48.8) | 2.17 (0.61–8.27) |
| MEOHP | | | | | | |
| <15.19 (n = 48) | 8 (16.7) | Reference | 20 (41.7) | Reference | 24 (50.0) | Reference |
| ≥15.19 (n = 42) | 7 (16.7) | 1.19 (0.18–7.58) | 24 (57.1) | 1.04 (0.31–3.40) | 21 (50.0) | 2.78 (0.83–10.18) [#] |
| ΣMEHP | | | | | | |
| <41.95 (n = 50) | 8 (16.0) | Reference | 22 (44.0) | Reference | 24 (48.0) | Reference |
| ≥41.95 (n = 40) | 7 (17.5) | 1.44 (0.23–9.16) | 22 (55.0) | 0.74 (0.22–2.44) | 21 (52.5) | 3.85 (1.11–15.03) [*] |

All concentrations of urinary DEHP monoesters and reproductive hormones were log 10 transformed.

[#]p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

¶Adjusted for age, birth weight, and urinary creatinine concentration.

Some numbers do not add up to total n because of missing values.

Abbreviation: DEHP, di-(2-ethylhexyl) phthalate; MEHP, mono-(2-ethylhexyl) phthalate; MEHHP, mono-(2-ethyl-5-hydroxyhexyl) phthalate; MEOHP, mono-(2-ethyl-5-oxohexyl) phthalate; TT, testosterone; SHBG, sex hormone-binding globulin; AOR, adjusted odds ratio; LOD, limit of detection value.