**SUPPORTING CONTENT**

**eFigure 1**: Spearman’ correlation matrix for postnatal toenail metal concentrations in μg/g for the total samples and stratified by sex (male *n* = 497; female *n* = 492; total samples *n* = 989).



**eFigure 2**: Spearman’s correlation between pair pre- and postnatal toenail samples metal concentrations in μg/g (*n* = 922).



**eTable 1**: Summary of the main findings according to sex and applied statistical methodology.

|  |  |  |
| --- | --- | --- |
|   | BKMR | Linear regression |
| Female  | Suggestive evidence of a positive linear effect of **As** on length and to a lesser extent with weight with little evidence of interactions with the other metals of the mixture.Suggestive evidence of a nonlinear effect of **Mn** on head circumference with a positive more precise association at lower levels that appears stronger at higher concentrations of the other metals of the mixture.Suggestive evidence of an inverse linear effect of **Pb** on head circumference, length, and weight that appears stronger at lower percentiles of the other metals of the mixture. | Positive association between **As** and length and to a lesser extent with weight.Positive association between **Mn** and head circumference.Inverse association between **Pb** and head circumference and weight, and to a lesser extent with length. |
| Male | Suggestive evidence of an inverse linear effect of **As** on head circumference with little evidence of interactions with the other metals of the mixture.Suggestive trend of a nonlinear effect of **Mn** on head circumference to a lesser extent compared to that for female infants with a positive more precise association at lower levels that appears stronger at higher concentrations of the other metals of the mixture.  | Inverse association between **As** and head circumference. Positive association between **Mn** and head circumference. |

**eFigure 3:** BKMR dose-response functions and interactions within the metal mixture.



Models adjusted for maternal age of enrollment (years, continuous), smoked cigarette during pregnancy (yes *vs.* no), maternal highest attained level of education (less than 11th grade or high school graduate or equivalent, junior college graduate or some college or technical school, college graduate, and any post-graduate schooling), maternal BMI (kg/m2, continuous), and infants’ sex (female *vs.* males). (**A**) Single pollutant association (estimates and 95% credible intervals, gray dashed line at the null). This plot compares infants’ size at birth when a single pollutant is at 75th vs. 25th percentile, when all the other exposures are fixed at either the 25th, 50th, or 75th percentile. (**B**) Univariate exposure-response functions and 95% confidence bands for each metal with the other pollutants fixed at the median.