**Supplemental Materials: Heavy Metals and Trajectories of Anti-Müllerian Hormone during the Menopausal Transition: The Study of Women’s Health Across the Nation**

*Ning Ding1\*, Xin Wang1\*, Siobán D. Harlow1, John F. Randolph Jr.2, Ellen B. Gold3, Sung Kyun Park1,4*

1 Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI

2 Department of Obstetrics and Gynecology, School of Medicine, University of Michigan, Ann Arbor, MI

3 Department of Public Health Sciences, University of California, Davis, School of Medicine, Davis, CA

4 Department of Environmental Health Sciences, School of Public Health, University of Michigan, Ann Arbor, MI

\* These authors contributed equally to this work.

**Corresponding author**: Sung Kyun Park, Department of Epidemiology, University of Michigan, M5541 SPH II, 1415 Washington Heights, Ann Arbor, MI 48109-2029. Phone: (734) 936-1719. Fax: (734)936-2084. E-mail: [sungkyun@umich.edu](mailto:sungkyun@umich.edu).

**Table S1.** Percent changes (95% confidence intervals, 95% CIs) in anti-Müllerian hormone (AMH) concentrations and rates of changes by tertiles of urinary metal concentrations in from multivariable linear mixed models, **with further adjustment for rice and seafood consumption**.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Metals** | **Main effects** | | | | **Interaction effects** | | | |
|  | Tertile 1 | Tertile 2 | Tertile 3 | *P*-trend | Tertile 1 | Tertile 2 | Tertile 3 | *P*-trend |
|  | Percent change  (95% CI), % | Percent change  (95% CI), % | Percent change  (95% CI), % | Percent change per year  (95% CI), % | Percent change per year  (95% CI), % | Percent change per year  (95% CI), % |
| Arsenic | Ref | -7.7 (-35.2, 31.4) | -27.1 (-49.7, 5.6) | 0.08 | Ref | 0.3 (-6.8, 7.9) | 1.2 (-6.2, 9.1) | 0.76 |
| Cadmium | Ref | -11.9 (-37.9, 24.9) | -16.1 (-42.5, 22.4) | 0.34 | Ref | -7.4 (-13.9, -0.3) | -8.9 (-15.5, -1.9) | 0.01 |
| Mercury | Ref | -25.2 (-47.1, 5.7) | -38.8 (-57.8, -11.4) | 0.009 | Ref | -4.7 (-11.5, 2.7) | -7.9 (-14.6, -0.7) | 0.03 |
| Lead | Ref | -6.2 (-34.3, 33.9) | -13.7 (-42.0, 28.4) | 0.46 | Ref | -1.3 (-8.4, 6.2) | -2.3 (-9.4, 5.3) | 0.54 |

Note: Models were adjusted for age at the FMP, race/ethnicity, study site, education, smoking status, parity at baseline, BMI, time to the FMP, urinary creatinine, time of metal measurement, and rice and seafood consumption. Interaction terms between metal and time to the FMP were also included in the models.

A screenshot of a document

Description automatically generated

**Figure S1**. Study Design Diagram. AMH = anti-Müllerian hormone; MPS = Multi-Pollutant Study; SWAN = Study of Women’s Health Across the Nation.

A black and white drawing of a pyramid

Description automatically generated

**Figure S2**. A directed acyclic graph (DAG) showing the hypothesized relations between heavy metals, confounders, and anti-Müllerian hormone (AMH).

Chart

Description automatically generated

**Figure S3.** Smoothed curves of log-transformed anti-Müllerian hormone (AMH) before the FMP.