

Supplemental Material

A Prospective Study of Arsenic Exposure, Arsenic Methylation Capacity, and Risk of Cardiovascular Disease in Bangladesh

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Table S1. Characteristics of subcohort members in the present study ($n = 1,109$) and participants in the overall cohort study ($n = 11,746$) [n (%) or mean \pm SD].

| | Subcohort members | Overall cohort participants |
|-----------------------------------------|-------------------|-----------------------------|
| Sex | | |
| Women | 633 (57.1) | 6704 (57.1) |
| Men | 476 (42.9) | 5042 (42.9) |
| Age (years) | 37.1 \pm 10.1 | 37.1 \pm 10.1 |
| Body mass index (kg/m ²) | 19.9 \pm 3.4 | 19.8 \pm 3.2 |
| Education (years) | 3.5 \pm 3.8 | 3.5 \pm 3.8 |
| Smoking status | | |
| Never | 700 (63.1) | 7568 (64.5) |
| Past | 59 (5.3) | 777 (6.6) |
| Current | 350 (31.6) | 3395 (28.9) |
| Systolic blood pressure (mmHg) | 114.4 \pm 17.5 | 114.7 \pm 17.9 |
| Diastolic blood pressure (mmHg) | 74.1 \pm 11.6 | 74.0 \pm 11.8 |
| Well arsenic (μ g/L) | 96.4 \pm 111.7 | 101.5 \pm 115.4 |
| Urinary arsenic (μ g/L) | 136.1 \pm 155.6 | 122.7 \pm 136.4 |
| Urinary creatinine (mg/dL) | 59.7 \pm 46.5 | 62.1 \pm 45.4 |
| Urinary arsenic (μ g/g creatinine) | 277.1 \pm 356.2 | 233.0 \pm 233.1 |

Table S2. Estimated joint effects of sex and baseline BMI, and urinary metabolite indices on heart disease risk.

| Urinary arsenic metabolite indices | Joint effect between urinary arsenic metabolite indices and sex | | | | Joint effect between urinary arsenic metabolite indices and BMI | | | |
|------------------------------------|-----------------------------------------------------------------|---------------------------|--------------------------|---------------------|-----------------------------------------------------------------|---------------------------|--------------------------|---------------------|
| | Sex | Cases/subcohort, <i>n</i> | HR (95% CI) ^a | RERI (95% CI) | BMI ^b | Cases/subcohort, <i>n</i> | HR (95% CI) ^c | RERI (95% CI) |
| MMA%^b | | | | | | | | |
| ≤ 12.4 | Men | 42/159 | 1.00 | | ≤ 19.3 | 27/261 | 1.00 | |
| >12.4 | Men | 106/314 | 1.43 (0.88, 2.33) | | ≤ 19.3 | 61/284 | 1.62 (0.98, 2.65) | |
| ≤ 12.4 | Women | 34/390 | 1.37 (0.70, 2.65) | | > 19.3 | 49/288 | 1.37 (0.76, 2.49) | |
| >12.4 | Women | 26/230 | 1.89 (0.95, 3.76) | 0.09 (-0.99, 1.17) | > 19.3 | 71/260 | 1.74 (1.03, 2.95) | -0.24 (-1.27, 0.78) |
| DMA%^b | | | | | | | | |
| > 72.2 | Men | 69/191 | 1.00 | | ≤ 19.3 | 38/250 | 1.00 | |
| ≤ 72.2 | Men | 79/282 | 1.45 (0.93, 2.26) | | ≤ 19.3 | 50/295 | 1.43 (0.88, 2.32) | |
| > 72.2 | Women | 38/354 | 1.48 (0.81, 2.70) | | > 19.3 | 69/295 | 1.21 (0.72, 2.03) | |
| ≤ 72.2 | Women | 22/266 | 1.71 (0.84, 3.45) | -0.22 (-1.30, 0.86) | > 19.3 | 51/253 | 1.55 (0.95, 2.52) | -0.09 (-0.97, 0.80) |

Abbreviations: BMI, body mass index; HR, hazard ratio; CI, confidence interval; RERI: relative excess risk for interaction; MMA, monomethylarsonic acid; DMA, dimethylarsinic acid; SMI, secondary methylation index.

^aAdjusted for baseline age (years), body mass index, smoking status (never and ever), educational attainment, hypertension, and diabetes status.

^bCut points were determined by median values in the subcohort.

^cAdjusted for sex, baseline age (years), smoking status (never and ever), educational attainment, hypertension, and diabetes status.