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| Supplementary Table 1. Urinary levels of 3-HPMAa in adults pre and post an indoor hookah-only social event, by smoking status (N = 181/208).b | | | | | | |
|  | Hookah-only Social Event  3-HPMA pmol/mL c | | | |  | |
|  | Pre Event | | Post Event | | Post-to-Pre  Ratio d (95% CI) | *p* e |
| **Hookah Smokers** (n=90/105) |  | |  | |  |  |
| GM (95% CI) f | 1638 | (1334, 2011) | 2450 | (2025, 2964) | 1.51 (1.19, 1.92) | ***0.001*** |
| Median (25th-75th percentile) | 1967 | (826-3217) | 3108 | (1494-4377) |  |  |
| (Minimum-Maximum) |  | (143-15413) |  | (71-13013) |  |  |
| **Daily Smokers** (n=17/20) |  |  |  |  |  |  |
| GM (95% CI) | 2575 | (1610, 4118) | 3208 | (2397, 4293) | 1.25 (0.85, 1.82) | *0.254* |
| Median (25th-75th percentile) | 2746 | (1295-4394) | 3667 | (1747-5297) |  |  |
| (Minimum-Maximum) |  | (310-15413) |  | (1215-7196) |  |  |
| **Non-daily Hookah Smokers** g (n=73/85) |  |  |  |  |  |  |
| GM (95% CI) | 1474 | (1175, 1849) | 2301 | (1837, 2881) | 1.58 (1.20, 2.09) | ***0.001*** |
| Median (25th-75th percentile) | 1663 | (746-2702) | 2842 | (1423-4346) |  |  |
| (Minimum-Maximum) |  | (143-10485) |  | (71-13013) |  |  |
| **Non-Smokers** h(n = 91/103) |  | |  | |  |  |
| GM (95% CI) | 1593 | (1306, 1942) | 2117 | (1772, 2529) | 1.33 (1.07, 1.66) | ***0.012*** |
| Median (25th-75th percentile) | 1695 | (866-3065) | 2180 | (1227-3828) |  |  |
| (Minimum-Maximum) |  | (187-14541) |  | (251-16311) |  |  |
| a 3-HPMA = 3-hydroxypropylmercapturic acid, a metabolite of acrolein.  b Participants who had both pre event and post event valid 3-HPMA assay values were included; missing values: interference (n = 26) and missing samples (n = 1).  c 3HPMA values not corrected with creatinine (pmol/mL). All 3-HPMA values and percentages are rounded up.  d Post-to-pre ratio of geometric mean 3HPMA values derived from a log-linear regression model adjusted for age, gender, Middle Eastern vs. other racial/ethnic status, and BMI.  e *p* values derived from regression model.  f GM (95% CI) = Geometric Mean and 95% Confidence Interval.  g Weekly, monthly and occasional hookah smokers were combined and renamed non-daily hookah smokers.  All statistical tests were two-tailed; statistical significance was set to α ≤ .05 (bolded).  All urine samples had 3-HPMA values above the Limit of Detection (LOD); 3-HPMA LOD = 2 pmol/mL. | | | | | | |

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| Supplementary Table 2. Urinary levels of 3-HPMAa in adults pre and post hookah-only indoor social events at hookah-lounges vs. at home (N = 181/208). b | | | | | | | | | | | | | |
|  | **Hookah Lounge**  Hookah-only Social Event (n=92/108) b  3-HPMA pmol/mL | | | | | | **Home**  Hookah-only Social Event (n=89/100) b  3-HPMA pmol/mL | | | | | | |
|  | Pre Event | | Post Event | | Post-to-Pre  Ratio (95% CI) c | *p* d | Pre Event | | Post Event | | Post-to-Pre  Ratio(95% CI) c | *p* d | *p* e |
| **Hookah Smokers** | n=46/55 | | | | | | n=44/50 | | | | | |  |
| GM (95% CI) e | 1737 | (1297, 2327) | 2759 | (2176, 3499) | 1.59(1.15, 2.19) | ***0.005*** | 1540 | (1142, 2078) | 2164 | (1549, 2937) | 1.44(1.00, 2.06) | ***0.050*** | *0.462* |
| Median (25th-75th percentile) | 2054 | (902-2961) | 3526 | (1738-4641) |  |  | 1652 | (786-3652) | 2535 | (1459-3915) |  |  |  |
| (Minimum-Maximum) |  | (143-15413) |  | (353-7825) |  |  |  | (152-10485) |  | (71-13013) |  |  |  |
| **Non-Smokers** | n=46/53 | | | | | | n=45/50 | | | | | |  |
| GM (95% CI) e | 1526 | (1137, 2049) | 2333 | (1832, 2971) | 1.53(1.12, 2.09) | ***0.008*** | 1663 | (1261, 2194) | 1917 | (1467, 2506) | 1.15(0.848, 1.57) | *0.364* | *0.743* |
| Median (25th-75th percentile) | 1681 | (666-3065) | 2318 | (1615-3863) |  |  | 1695 | (1100-3000) | 1996 | (1044-3237) |  |  |  |
| (Minimum-Maximum) |  | (187-14541) |  | (251-16311) |  |  |  | (285-10913) |  | (386-11830) |  |  |  |
| a 3-HPMA = 3-hydroxypropylmercapturic acid, a metabolite of acrolein. 3HPMA values not corrected with creatinine (pmol/mL)  b Participants who had both pre event and post event valid 3-HPMA assay values / number of participants who attended event.  Missing values were due to interference (n = 26) and missing samples (n = 1).  c Post-to-pre ratio of geometric mean 3HPMA values, and 95% confidence interval of the ratio.  d *p* values for the post-to-pre ratio were derived from a log-linear regression model adjusted for age, gender, Middle Eastern vs other racial/ethnic status, and BMI.  e *p* values were derived from regression model.  f GM (95% CI) = Geometric mean and 95% confidence interval.  All statistical tests were two-tailed; statistical significance was set to α≤ .05 (bolded).  All urine samples had 3-HPMA values above the Limit of Detection (LOD); 3HPMA LOD = 2 pmol/mL. | | | | | | | | | | | | | |