

Supplementary Material

Cotton pillow samplers for assessment of thirdhand smoke in homes of smokers and nonsmokers with children

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Supplementary Material

Supplementary Table 1. Individual TSNA concentration in pillowcase (normalized by days exposed), n=42

| Pillowcase–Individual TSNA concentration, pg/g-day | All samples Median % detected <i>Min, 25th, 75th, Max</i> | Nonsmokers n=5 % detected | Smokers with ban n=10 % detected | Smokers without ban n=27 % detected |
|---|--|--|---|--|
| NNK | 0.0, 11.9 <i>0.0, 0.0, 0.0, 0.13</i> | 0 | 0 | 18.5 |
| NNN | 0.0, 16.7 <i>0.0, 0.0, 0.0, 0.18</i> | 0 | 10.0 | 22.2 |
| NAB | 0.0, 2.4 <i>0.0, 0.0, 0.0, 0.07</i> | 0 | 0 | 3.7 |
| NAT | 0.0, 7.1 <i>0.0, 0.0, 0.0, 0.08</i> | 0 | 10.0 | 7.4 |
| Total TSNA concentration, pg/g-day | 0.0 28.6 <i>0.0, 0.0, 0.02, 0.18, 0.25</i> | 0 | 10.0 | 40.7 |

Supplementary Table 2. Estimated amount of nicotine in pillows by pillow component

| <i>Pillow Component – Nicotine content</i> | All samples Median (n) <i>Min, 25th, 75th, Max</i> | Nonsmokers Median (n) <i>Min, 25th, 75th, Max</i> | Smokers with ban Median (n) <i>Min, 25th, 75th, Max</i> | Smokers without ban Median (n) <i>Min, 25th, 75th, Max</i> |
|--|---|--|--|---|
| Entire Pillow, total nicotine, µg | 168.1 (41) <i>0.0, 44.9, 559.4, 2843.4</i> | 0.0 (5) <i>0.0, 0.0, 0.0, 0.0</i> | 73.8 (11) <i>20.5, 29.3, 126.5, 1089.8</i> | 393.9*** (25) <i>36.4, 158.2, 768.9, 2843.4</i> |
| Entire Pillow, total nicotine, µg per day exposed | 15.9 (41) <i>0.0, 4.8, 58.8, 236.4</i> | 0.0 (5) <i>0.0, 0.0, 0.0, 0.0</i> | 8.2 (11) <i>2.0, 4.1, 17.1, 77.9</i> | 30.5*** (25) <i>3.3, 14.0, 100.4, 236.4</i> |
| <i>Fraction of pillow nicotine in each pillow component (without nonsmokers^a)</i> | | | | |
| Pillowcase, fraction of total nicotine in pillow | 0.58^b (36) <i>0.16, 0.38, 0.73, 0.93</i> | NA | 0.47 (11) <i>0.23, 0.28, 0.78, 0.87</i> | 0.61 (25) <i>0.16, 0.45, 0.72, 0.93</i> |
| Pillow fabric cover, fraction of total nicotine in pillow | 0.13^b (36) <i>0.02, 0.08, 0.20, 0.33</i> | NA | 0.13 (11) <i>0.07, 0.08, 0.22, 0.29</i> | 0.12 (25) <i>0.02, 0.09, 0.16, 0.33</i> |
| Pillow filling, fraction of total nicotine in pillow | 0.29^b (36) <i>0.00, 0.14, 0.43, 0.76</i> | NA | 0.35 (11) <i>0.00, 0.13, 0.50, 0.65</i> | 0.18 (25) <i>0.01, 0.12, 0.40, 0.76</i> |
| <i>Nicotine collected per day on air filter, for comparison</i> | | | | |
| Air Monitor µg collected on filter per day exposed | 0.0454 (36) <i>0.001, 0.012, 0.117, 0.484</i> | 0.0001 (4) <i>0.0000, 0.0000, 0.0001, 0.0001</i> | 0.0188 (11) <i>0.001, 0.004, 0.039, 0.098</i> | 0.0821 (25) <i>0.011, 0.037, 0.148, 0.484</i> |

^aThe fraction of nicotine in non-smoker pillows was not included due to instability of the fraction for no and low detection of nicotine.

^bThe fraction of nicotine in pillow components was significantly different between components, all $p < 0.001$, pillowcase > pillow cover and filling, pillow filling > pillow cover

Supplementary Table 3. Nicotine loading of pillowcase (not normalized by days exposed) for comparison with other studies

| Pillow Component – Nicotine loading , $\mu\text{g}/\text{m}^2$ | All samples Median (n) <i>Min, 25th, 75th, Max</i> | Nonsmokers Median (n) <i>Min, 25th, 75th, Max</i> | Smokers with ban Median (n) <i>Min, 25th, 75th, Max</i> | Smokers without ban Median (n) <i>Min, 25th, 75th, Max</i> |
|--|---|--|--|---|
| Pillowcase | 288.2 (44) <i>0.0, 132.9, 1006.1, 6300.7</i> | 0.1 (5) <i>0.0, 0.1, 0.3, 0.5</i> | 151.3 (11) <i>49.8, 86.2, 207.1, 2662.1</i> | 648.1*** (28) <i>67.5, 244.5, 1715.4, 6300.7</i> |
| Pillow fabric | 59.1 (42) <i>0.0, 15.3, 171.3, 1643.3</i> | 0.2 (5) <i>0.0, 0.1, 0.4, 0.5</i> | 66.7 (11) <i>11.6, 29.6, 112.8, 954.5</i> | 247.1*** (26) <i>27.0, 120.4, 426.7, 1643.3</i> |