### Supplementary Information

**Neighborhood Self-Selection: The Role of Pre-Move Health Factors on the Built and Socioeconomic Environment**

#### Table S1. Number of moves per participant among movers in the nurses’ health study from 1986–2008 (n = 14,159 participants) a.

<table>
<thead>
<tr>
<th>Number of Moves</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8081</td>
<td>57.07</td>
<td>8081</td>
<td>57.07</td>
</tr>
<tr>
<td>2</td>
<td>3810</td>
<td>26.91</td>
<td>11,891</td>
<td>83.98</td>
</tr>
<tr>
<td>3</td>
<td>1504</td>
<td>10.62</td>
<td>13,395</td>
<td>94.6</td>
</tr>
<tr>
<td>4</td>
<td>537</td>
<td>3.79</td>
<td>13,932</td>
<td>98.4</td>
</tr>
<tr>
<td>5</td>
<td>164</td>
<td>1.16</td>
<td>14,096</td>
<td>99.56</td>
</tr>
<tr>
<td>6</td>
<td>47</td>
<td>0.33</td>
<td>14,143</td>
<td>99.89</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>0.06</td>
<td>14,151</td>
<td>99.94</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>0.05</td>
<td>14,158</td>
<td>99.99</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>0.01</td>
<td>14,159</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: a All analyses adjusted for pre-move age in years.

#### Table S2. Age-adjusted predicted means of neighborhood environments based on pre-move BMI categories in nurses’ health study participants (n = 14,159 participants) a.

<table>
<thead>
<tr>
<th>Pre-Move BMI Categories</th>
<th>County Sprawl Index Predicted Mean (95% CI)</th>
<th>Census Tract Median Home Value Predicted Mean ($) (95% CI)</th>
<th>Census Tract Median Income Predicted Mean ($) (95% CI)</th>
<th>Census Tract Percent Below Poverty Predicted Mean (%) (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (BMI &lt; 25)</td>
<td>105.76 (105.27, 106.25)</td>
<td>$188.88K ($186.20K, $191.56K)</td>
<td>$66.71K ($66.17K, $67.25K)</td>
<td>6.63% (6.50%, 6.77%)</td>
</tr>
<tr>
<td>Overweight (BMI 25–30)</td>
<td>104.79 (104.18, 105.41)</td>
<td>$173.36K ($170.00K, $176.71K)</td>
<td>$63.46K ($62.78K, $64.13K)</td>
<td>6.82% (6.66%, 6.99%)</td>
</tr>
<tr>
<td>Obese (BMI &gt; 30)</td>
<td>103.92 (103.09, 104.76)</td>
<td>$163.09K ($158.55K, $167.64K)</td>
<td>$61.92K ($61.00K, $62.83K)</td>
<td>6.93% (6.71%, 7.16%)</td>
</tr>
</tbody>
</table>

Note: a All analyses adjusted for pre-move age in years.
Table S3. Age-adjusted predicted means of neighborhood environment based on pre-move health factors stratified by pre- and post-2000 moves in nurses’ health study participants (n = 14,159 participants) a.

<table>
<thead>
<tr>
<th>Pre-Move Health Factor Quartiles</th>
<th>County Sprawl Index</th>
<th>Census Tract Median Home Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predicted Mean</td>
<td>Predicted Mean</td>
</tr>
<tr>
<td></td>
<td>(95% CI)</td>
<td>(95% CI)</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;22.5)</td>
<td>106.78 (106.02, 107.54)</td>
<td>104.15 (102.52, 105.78)</td>
</tr>
<tr>
<td>Quartile 2 (22.5, 24.9)</td>
<td>105.42 (104.63, 106.20)</td>
<td>105.05 (103.46, 106.63)</td>
</tr>
<tr>
<td>Quartile 3 (24.9, 28.3)</td>
<td>105.45 (104.68, 106.22)</td>
<td>104.36 (102.91, 105.81)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;28.4)</td>
<td>103.90 (103.10, 104.70)</td>
<td>102.69 (101.27, 104.11)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.3546</td>
<td>0.1347</td>
</tr>
<tr>
<td><strong>Pre-Move Total Physical Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;4.0 MET Hrs/wk)</td>
<td>105.45 (104.66, 106.24)</td>
<td>104.35 (102.85, 105.86)</td>
</tr>
<tr>
<td>Quartile 2 (4.0, 11.0 MET Hrs/wk)</td>
<td>104.90 (104.13, 105.67)</td>
<td>103.53 (102.00, 105.07)</td>
</tr>
<tr>
<td>Quartile 3 (11.1, 25.1 MET Hrs/wk)</td>
<td>105.61 (104.83, 104.39)</td>
<td>103.77 (102.25, 105.30)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;25.2 MET Hrs/wk)</td>
<td>105.76 (104.98, 105.53)</td>
<td>104.30 (102.80, 105.80)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.9463</td>
<td>0.4478</td>
</tr>
<tr>
<td><strong>Pre-Move Walking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;1.2 MET Hrs/wk)</td>
<td>105.11 (104.30, 105.91)</td>
<td>104.91 (103.46, 106.35)</td>
</tr>
<tr>
<td>Quartile 2 (1.7, 3.1 MET Hrs/wk)</td>
<td>105.26 (104.45, 106.06)</td>
<td>103.40 (101.86, 104.94)</td>
</tr>
<tr>
<td>Quartile 3 (3.8, 7.5 MET Hrs/wk)</td>
<td>105.43 (104.65, 106.22)</td>
<td>103.17 (101.60, 104.74)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;7.5 MET Hrs/wk)</td>
<td>105.80 (105.08, 106.52)</td>
<td>104.33 (102.82, 105.83)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.3596</td>
<td>0.5769</td>
</tr>
</tbody>
</table>

Note: *All analyses adjusted for pre-move age in years.
Table S4. Predicted means of neighborhood environment based on pre-move health factors stratified by age 65 in nurses’ health study participants (n = 14,159 participants).

<table>
<thead>
<tr>
<th>Pre-Move Health Factor Quartiles</th>
<th>County Sprawl Index</th>
<th>Census Tract Median Home Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;Age 65</td>
<td>≥Age 65</td>
</tr>
<tr>
<td></td>
<td>Predicted Mean</td>
<td>Predicted Mean</td>
</tr>
<tr>
<td></td>
<td>(95% CI)</td>
<td>(95% CI)</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;22.5)</td>
<td>107.02 (106.19, 107.86)</td>
<td>104.82 (103.61, 106.02)</td>
</tr>
<tr>
<td>Quartile 2 (22.5, 24.9)</td>
<td>105.49 (104.62, 106.36)</td>
<td>105.07 (103.87, 106.26)</td>
</tr>
<tr>
<td>Quartile 3 (24.9, 28.3)</td>
<td>105.47 (104.61, 106.33)</td>
<td>104.78 (103.67, 105.88)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;28.4)</td>
<td>103.85 (102.97, 104.73)</td>
<td>103.19 (102.05, 104.34)</td>
</tr>
<tr>
<td><strong>Pre-Move Total Physical Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;4.0 MET Hrs/wk)</td>
<td>105.31 (104.44, 106.18)</td>
<td>105.04 (103.87, 106.20)</td>
</tr>
<tr>
<td>Quartile 2 (4.0, 11.0 MET Hrs/wk)</td>
<td>104.94 (104.09, 105.78)</td>
<td>104.03 (102.86, 105.21)</td>
</tr>
<tr>
<td>Quartile 3 (11.1, 25.1 MET Hrs/wk)</td>
<td>105.79 (104.93, 106.65)</td>
<td>104.20 (103.04, 105.37)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;25.2 MET Hrs/wk)</td>
<td>105.99 (105.13, 106.85)</td>
<td>104.50 (103.36, 105.64)</td>
</tr>
<tr>
<td><strong>Pre-Move Walking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;1.2 MET Hrs/wk)</td>
<td>105.04 (103.87, 106.20)</td>
<td>104.58 (103.42, 105.74)</td>
</tr>
<tr>
<td>Quartile 2 (1.7, 3.1 MET Hrs/wk)</td>
<td>104.03 (102.86, 105.21)</td>
<td>104.64 (103.43, 105.85)</td>
</tr>
<tr>
<td>Quartile 3 (3.8, 7.5 MET Hrs/wk)</td>
<td>104.20 (103.04, 105.37)</td>
<td>104.08 (102.87, 105.28)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;7.5 MET Hrs/wk)</td>
<td>104.50 (103.36, 105.64)</td>
<td>104.48 (103.39, 105.56)</td>
</tr>
</tbody>
</table>

*p for Interaction*

- BMI: 0.3091
- Pre-Move Total Physical Activity: 0.1611
- Pre-Move Walking: 0.5896
Table S5. Age-aAdjusted predicted means of neighborhood environment based on pre-move health factors stratified by husband’s highest education in nurses’ health study participants (n = 14,159 participants) a.

<table>
<thead>
<tr>
<th>Pre-Move Health Factor Quartiles</th>
<th>County Sprawl Index</th>
<th>Census Tract Median Home Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High School or Less</td>
<td>More than High School</td>
</tr>
<tr>
<td></td>
<td>Predicted Mean (95% CI)</td>
<td>Predicted Mean (95% CI)</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;22.5)</td>
<td>104.06 (102.62, 105.50)</td>
<td>106.68 (105.74, 107.62)</td>
</tr>
<tr>
<td>Quartile 2 (22.5, 24.9)</td>
<td>103.71 (102.37, 105.05)</td>
<td>105.40 (104.40, 106.41)</td>
</tr>
<tr>
<td>Quartile 3 (24.9, 28.3)</td>
<td>103.73 (102.49, 104.98)</td>
<td>105.48 (104.47, 106.49)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;28.4)</td>
<td>102.21 (101.00, 103.41)</td>
<td>103.71 (102.60, 104.81)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.9691</td>
<td>0.5678</td>
</tr>
<tr>
<td><strong>Pre-Move Total Physical Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;4.0 MET Hrs/wk)</td>
<td>103.54 (102.33, 104.75)</td>
<td>105.84 (104.75, 106.92)</td>
</tr>
<tr>
<td>Quartile 2 (4.0, 11.0 MET Hrs/wk)</td>
<td>102.50 (101.24, 103.77)</td>
<td>104.73 (103.71, 105.75)</td>
</tr>
<tr>
<td>Quartile 3 (11.1, 25.1 MET Hrs/wk)</td>
<td>103.86 (102.54, 105.18)</td>
<td>105.37 (104.37, 106.37)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;25.2 MET Hrs/wk)</td>
<td>103.58 (102.15, 105.01)</td>
<td>105.81 (104.86, 106.77)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.7837</td>
<td>0.6798</td>
</tr>
<tr>
<td><strong>Pre-Move Walking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 (&lt;1.2 MET Hrs/wk)</td>
<td>103.58 (102.32, 104.85)</td>
<td>105.73 (104.65, 106.81)</td>
</tr>
<tr>
<td>Quartile 2 (1.7, 3.1 MET Hrs/wk)</td>
<td>102.59 (101.29, 103.90)</td>
<td>105.54 (104.46, 106.61)</td>
</tr>
<tr>
<td>Quartile 3 (3.8, 7.5 MET Hrs/wk)</td>
<td>103.71 (102.37, 105.06)</td>
<td>104.67 (103.65, 105.68)</td>
</tr>
<tr>
<td>Quartile 4 (&gt;7.5 MET Hrs/wk)</td>
<td>103.51 (102.23, 104.80)</td>
<td>105.77 (104.87, 106.68)</td>
</tr>
<tr>
<td>p for Interaction</td>
<td>0.4490</td>
<td>0.0779</td>
</tr>
</tbody>
</table>

Note: a All analyses adjusted for pre-move age in years.