<table>
<thead>
<tr>
<th>Pollutants and IR biomarkers</th>
<th>% change</th>
<th>95% CI</th>
<th>SE</th>
<th>z-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM$_{2.5}$ and HOMA-IR</td>
<td>0.0378</td>
<td>(-0.6293, 0.7048)</td>
<td>0.3403</td>
<td>0.1110</td>
<td>0.9116</td>
</tr>
<tr>
<td>PM$_{2.5}$ and glucose</td>
<td>0.0088</td>
<td>(-0.0259, 0.0435)</td>
<td>0.0177</td>
<td>0.4957</td>
<td>0.6201</td>
</tr>
<tr>
<td>PM$_{2.5}$ and insulin</td>
<td>0.3130</td>
<td>(-0.5472, 1.1733)</td>
<td>0.4389</td>
<td>0.7132</td>
<td>0.4757</td>
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<tr>
<td>PM$_{2.5}$ and HbA1c</td>
<td>0.1069</td>
<td>(-0.1006, 0.3145)</td>
<td>0.1059</td>
<td>1.0097</td>
<td>0.3126</td>
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<tr>
<td>PM$_{2.5}$ and leptin</td>
<td>1.8871</td>
<td>(-1.6166, 5.3908)</td>
<td>1.7876</td>
<td>1.0556</td>
<td>0.2911</td>
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<tr>
<td>NO$_{2}$ and HOMA-IR</td>
<td>0.5132</td>
<td>(-0.6013, 1.6277)</td>
<td>0.5686</td>
<td>0.9026</td>
<td>0.3668</td>
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<tr>
<td>NO$_{2}$ and glucose</td>
<td>0.0356</td>
<td>(-0.0084, 0.0795)</td>
<td>0.0224</td>
<td>1.5864</td>
<td>0.1126</td>
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<tr>
<td>NO$_{2}$ and insulin</td>
<td>0.6673</td>
<td>(-0.8950, 2.2296)</td>
<td>0.7971</td>
<td>0.8371</td>
<td>0.4025</td>
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<tr>
<td>PM$_{10}$ and HOMA-IR</td>
<td>0.1624</td>
<td>(-0.6078, 0.9326)</td>
<td>0.3930</td>
<td>0.4133</td>
<td>0.6794</td>
</tr>
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</table>

SE (Standard error): The standard error of a statistic (usually an estimate of a parameter) is the standard deviation of its sampling distribution or an estimate of that standard deviation.
Table S2. Specifics of quality score of the included studies.

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</table>

**Selection**

1) **Representativeness of the exposed cohort**
   a) truly representative of the average ________ (describe) in the community
   b) somewhat representative of the average ________ in the community
   c) selected group of users eg nurses, volunteers
   d) no description of the derivation of the cohort

2) **Selection of the non-exposed cohort**
   a) drawn from the same community as the exposed cohort
   b) a
   c) b
   a) a
   a) a
b) drawn from a different source

c) no description of the derivation of the non-exposed cohort

3) Ascertainment of exposure

a) secure record (eg surgical records)

b) structured interview a a a a a a a

c) written self-report

d) no description

4) Demonstration that outcome of interest was not present at start of study

a) yes a b a a a a a

b) no

Comparability

1) Comparability of cohorts on the basis of the design or analysis

a) study controls for ________ (select the most important factor) b b b b b b b

b) study controls for any additional factor (This criteria could be modified to indicate specific control for a second important factor.)

Outcome

1) Assessment of outcome

a) independent blind assessment a a a a a a a

b) record linkage

c) self-report

d) no description

2) Was follow-up long enough for outcomes to occur

a) yes (select an adequate follow up period for outcome of interest) a a a a a a a

b) no
3) **Adequacy of follow up of cohorts**

a) complete follow up - all subjects accounted for

b) subjects lost to follow up unlikely to introduce bias - small number lost - > ____ % (select an adequate %) follow up, or description provided of those lost

c) follow up rate < ____% (select an adequate %) and no description of those lost

d) no statement