Supplementary Table 2. Results of the causal mediation analysis

<table>
<thead>
<tr>
<th>CMA</th>
<th>ACME (95% CI)</th>
<th>ADE (95% CI)</th>
<th>Total effects (95% CI)</th>
<th>Proportion mediated (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>Treated</td>
<td>Average</td>
<td>Control</td>
</tr>
<tr>
<td>CMA for IO, ALT, and IR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0.0463</td>
<td>0.0472</td>
<td>0.0468</td>
<td>0.0528</td>
</tr>
<tr>
<td></td>
<td>(0.0321 to</td>
<td>(0.0330 to</td>
<td>(0.0325 to</td>
<td>(-0.0132 to</td>
</tr>
<tr>
<td></td>
<td>0.06)</td>
<td>0.06)</td>
<td>0.06)</td>
<td>0.12)</td>
</tr>
<tr>
<td>Men</td>
<td>0.04195</td>
<td>0.04344</td>
<td>0.04269</td>
<td>0.05112</td>
</tr>
<tr>
<td></td>
<td>(0.03070 to</td>
<td>(0.03218 to</td>
<td>(0.03140 to</td>
<td>(0.00434 to</td>
</tr>
<tr>
<td></td>
<td>0.06)</td>
<td>0.06)</td>
<td>0.06)</td>
<td>0.10)</td>
</tr>
<tr>
<td>CMA for IO, Apo-B, and IR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0.02434</td>
<td>0.02505</td>
<td>0.0247</td>
<td>0.07568</td>
</tr>
<tr>
<td></td>
<td>(0.01228 to</td>
<td>(0.01259 to</td>
<td>(0.01244 to</td>
<td>(0.00643 to</td>
</tr>
<tr>
<td></td>
<td>0.04)</td>
<td>0.04)</td>
<td>0.04)</td>
<td>0.15)</td>
</tr>
<tr>
<td>Men</td>
<td>0.0212</td>
<td>0.0223</td>
<td>0.0218</td>
<td>0.0722</td>
</tr>
<tr>
<td></td>
<td>(0.0127 to</td>
<td>(0.0137 to</td>
<td>(0.0132 to</td>
<td>(0.0226 to</td>
</tr>
<tr>
<td></td>
<td>0.03)</td>
<td>0.03)</td>
<td>0.03)</td>
<td>0.12)</td>
</tr>
<tr>
<td>CMA for IO, TG, and Apo-B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0.02907</td>
<td>0.02114</td>
<td>0.02907</td>
<td>0.1153</td>
</tr>
<tr>
<td></td>
<td>(0.02114 to</td>
<td>(0.04)</td>
<td>(0.02114 to</td>
<td>(-0.00587 to</td>
</tr>
<tr>
<td></td>
<td>0.04)</td>
<td></td>
<td>0.04)</td>
<td>0.03)</td>
</tr>
<tr>
<td>Men</td>
<td>0.031608</td>
<td>0.025691</td>
<td>0.031608</td>
<td>0.013705</td>
</tr>
<tr>
<td></td>
<td>(0.025691 to</td>
<td>(0.04)</td>
<td>(0.025691 to</td>
<td>(0.000628 to</td>
</tr>
<tr>
<td></td>
<td>0.04)</td>
<td></td>
<td>0.04)</td>
<td>0.03)</td>
</tr>
<tr>
<td>CMA for IO, ALT, and TG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0.0782</td>
<td>0.05722</td>
<td>0.0782</td>
<td>0.221</td>
</tr>
<tr>
<td></td>
<td>(0.05722 to</td>
<td>(0.10)</td>
<td>(0.0572 to</td>
<td>(0.1385 to</td>
</tr>
<tr>
<td></td>
<td>0.10)</td>
<td></td>
<td>0.10)</td>
<td>0.30)</td>
</tr>
<tr>
<td>Men</td>
<td>0.1008</td>
<td>0.07856</td>
<td>0.1008</td>
<td>0.3153</td>
</tr>
<tr>
<td></td>
<td>(0.0785 to</td>
<td>(0.12)</td>
<td>(0.0785 to</td>
<td>(0.2546 to</td>
</tr>
<tr>
<td></td>
<td>0.12)</td>
<td></td>
<td>0.12)</td>
<td>0.38)</td>
</tr>
</tbody>
</table>

CMA, causal mediation analysis; ACME, average causal mediation effect; CI, confidence interval; ADE, average direct effect; IO, iron overload; ALT, alanine aminotransferase; IR, insulin resistance; Apo-B, apolipoproteins B; TG, triglyceride.

*P<0.05, †P<0.01, ‡P<0.001.