Use of antidepressants and the risk of the metabolic syndrome
The Netherlands Study of Depression and Anxiety

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Background
The metabolic syndrome (MetSyn) predisposes to cardiovascular disease (CVD) and diabetes mellitus.1 Antidepressant use may induce MetSyn side-effects, which could contribute to the increased CVD risk in depressed persons.2

The Metabolic Syndrome

<table>
<thead>
<tr>
<th>When ≥ 3 components</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>Abdominal obesity</td>
<td>Waist circumference &gt; 102 cm in men &gt; 88 cm in women</td>
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<tr>
<td>Hypertriglyceridemia</td>
<td>Triglycerides ≥ 1.70 mmol/L or drug treatment</td>
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<tr>
<td>Low HDL cholesterol</td>
<td>&lt; 1.03 mmol/L in men</td>
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<tr>
<td>Hypertension</td>
<td>&lt; 1.30 mmol/L in women or drug treatment</td>
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<tr>
<td>Hyperglycemia</td>
<td>Blood pressure ≥ 130/85 or drug treatment</td>
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<td>Glucose ≥ 5.6 mmol/L or drug treatment</td>
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Methods
We addressed the association of antidepressant use with risk of MetSyn and its components in DSM-IV diagnosed depressed and/or anxious participants of the NESDA study (n=1217). Participants were subdivided into non users (n=730), and users of selective serotonin reuptake inhibitors (SSRIs, n=328), tricyclic antidepressants (TCAs, n=49) or other antidepressants (n=110). We evaluated whether associations were independent of depression severity, and a range of potential confounders (i.e., age, sex, years of education, clinic site, oral contraceptive use, smoking status, alcohol use and physical activity).

Results
Overall MetSyn risk was significantly elevated when using TCAs (see figure), which was unaffected by adjustment for depression severity or other potential confounders. Specifically, those using TCAs demonstrated a higher risk on abdominal obesity, hypertriglyceridemia and hypertension, as compared to non users of antidepressants. Risk of the MetSyn or its components was not increased in users of SSRIs or other antidepressants.

Conclusion
TCA users are at risk for having the MetSyn, which is driven by the abdominal adiposity, hypertriglyceridemia and hypertension components. These results imply the possible importance to screen for these MetSyn components when considering or continuing TCA pharmacotherapy, in order to prevent CVD and diabetes mellitus.

No potential Conflicts of interest

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References