Successful lifestyle modification in older patients with coronary artery disease
results from the RESPONSE-2 trial

Author(s)

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Successful lifestyle modification in older patients with coronary artery disease: results from the RESPONSE-2 trial

P. Jepma (p.jepma@hva.nl), H.T. Jorstad, M. Snaterse, G. ter Riet, J.A. Kragten, S. Lachman, M. Minneboo, S.M. Boekholdt, R.J.G. Peters, W.J.M. Scholte op Reimer, on behalf of the RESPONSE-2 group

1 Urban Vitality Centre for Applied Research, Faculty of Health, Amsterdam University of Applied Sciences, Amsterdam, the Netherlands; 2 Amsterdam UMC, University of Amsterdam, Department of Cardiology, Amsterdam, the Netherlands; 3 Zuyderland Medical Center, Department of Cardiology, Heerlen, The Netherlands.

Background
Lifestyle interventions are recommended for patients with coronary artery disease (CAD), however the evidence of the effects of lifestyle intervention programmes in older patients is less conclusive than for younger patients.

Aim
To compare the treatment effect on lifestyle-related risk factors (LRFs) in older (>65 years) versus younger (<65 years) patients with CAD attending a nurse-coordinated community-based lifestyle programme as part of the RESPONSE-2 randomized trial.

Methods
Secondary analysis of the RESPONSE-2 trial (multicentre RCT). The primary outcome was improvement in ≥1 objectively measured LRF, without deterioration in other LRFs, at 12 months follow-up (n=711). We compared the treatment effects in older (65-84 years) versus younger (32-64 years) patients using logistic regression analyses.

Intervention
In the RESPONSE-2 intervention up to three community-based lifestyle programmes were provided, depending on patients’ LRFs and preferences.
- The weight loss programme (Weight Watchers®) was focused on diet patterns, unhealthy behaviour and physical activity. Weekly group-based sessions and weigh-ins were provided.
- The physical activity programme (Philips DirectLife®) was offered as an internet-based programme with an accelerometer and personalized feedback by an online coach to monitor and improve physical activity.
- The smoking cessation programme (Luchtsignaal®) was a telephone counselling-based intervention. Trained professionals provided strategies of motivational interviewing and pharmacological treatments for smoking cessation were prescribed, as appropriate.

Results
Table 1. Baseline characteristics

<table>
<thead>
<tr>
<th></th>
<th>Age &lt; 65 (n=579)</th>
<th>Age ≥ 65 (n=245)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, mean ± SD</td>
<td>53.7 ± 6.6</td>
<td>69.2 ± 3.9</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Female</td>
<td>128 (22.1%)</td>
<td>50 (20.4%)</td>
<td>0.6</td>
</tr>
<tr>
<td>No known previous cardiovascular disease</td>
<td>402 (69.4%)</td>
<td>134 (54.7%)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>121 (20.9%)</td>
<td>62 (25.3%)</td>
<td>0.2</td>
</tr>
<tr>
<td>Hypertension</td>
<td>198 (34.2%)</td>
<td>128 (52.5%)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>69 (11.9%)</td>
<td>59 (24.1%)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Overweight (BMI &gt; 27 kg/m²)</td>
<td>427 (73.7%)</td>
<td>182 (74.3%)</td>
<td>0.9</td>
</tr>
<tr>
<td>Physically inactive</td>
<td>364 (62.9%)</td>
<td>158 (64.5%)</td>
<td>0.7</td>
</tr>
<tr>
<td>Smoking at baseline or quit smoking &lt; 6 months</td>
<td>334 (57.7%)</td>
<td>71 (29.0%)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

Figure 1. Outcomes in lifestyle-related risk factors after 12 months

Conclusion
Despite more adverse cardiovascular risk profiles and comorbidities among older patients, nurse-coordinated referral to a community-based lifestyle intervention was at least as successful in improving LRFs in older as in younger patients.

Older age alone should not be a reason to withhold lifestyle interventions in patients with CAD.