Review: group-based education in self management strategies improves outcomes in type 2 diabetes mellitus


Clinical impact ratings Endocrine ★★★★★☆

In patients with type 2 diabetes mellitus, does group-based education (GBE) in self management improve clinical, lifestyle, and psychosocial outcomes?

Methods

Data sources: electronic databases that included the Cochrane Library, Medline, CINAHL, EMBASE, ASSIA, AMED, PsycINFO, and EMBASE/Excerpta Medica; bibliographies of relevant articles; and contact with experts in the field.

Study selection and assessment: randomised controlled trials (RCTs) or observational studies that compared GBE (delivered in primary or secondary care, based on learner/patient centred education, >6 participants in a group with >1 session) with a control condition that included usual care, no intervention, or a waiting list.

Outcomes: clinical (glycated haemoglobin, fasting glucose concentration, and medication use), lifestyle (diabetes knowledge), and psychosocial (quality of life empowerment/self efficacy).

Main results

8 RCTs (n = 1260) and 3 observational studies (n = 272) met the selection criteria. Random effects meta-analyses showed that glycated haemoglobin and fasting glucose concentrations were lower in the intervention group than in the control group (table) and that diabetes knowledge scores were greater in the intervention group than in the control group (standardised mean difference 0.95, 95% CI 0.78 to 1.35) (5 trials, n = 654). 1 RCT (n = 314) assessing empowerment and psychosocial self efficacy reported greater total empowerment scores in the intervention group than in the control group (table) and that glycated haemoglobin and fasting glucose concentrations were lower in the intervention group than in the control group reduced their use of diabetes medication over 12–14 months (relative benefit increase 825%, CI 202 to 2738) (5 trials, n = 654). 1 RCT (n = 314) assessing empowerment and psychosocial self efficacy reported greater total empowerment scores in the intervention group than in the control group throughout follow up (p value <0.05).

Conclusions

In patients with type 2 diabetes mellitus, group-based education in self management strategies improves clinical and lifestyle outcomes.

A modified version of this abstract appears in Evidence-Based Nursing.

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Sources of funding: National Health Service (Executive) North West UK and British Dietetic Association UK.

Group-based education (GBE) in self management strategies vs a control condition that included usual care, no intervention, or a waiting list in type 2 diabetes mellitus*

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Follow up in months</th>
<th>Number of trials [n]</th>
<th>Weighted means</th>
<th>Control</th>
<th>Weighted mean difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycated haemoglobin (%)</td>
<td>4–6</td>
<td>3 (395)</td>
<td>9.53</td>
<td>10.88</td>
<td>−1.35 (−1.93 to −0.78)</td>
</tr>
<tr>
<td></td>
<td>12–14</td>
<td>7 (1044)</td>
<td>7.93</td>
<td>8.75</td>
<td>−0.82 (−1.09 to −0.55)</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>2 (333)</td>
<td>6.54</td>
<td>7.51</td>
<td>−0.97 (−1.40 to −0.54)</td>
</tr>
<tr>
<td>Fasting blood glucose (mmol/l)</td>
<td>12–14</td>
<td>4 (641)</td>
<td>9.55</td>
<td>10.72</td>
<td>−1.17 (−1.63 to −0.72)</td>
</tr>
</tbody>
</table>

*CI defined in glossary.