In patients with type 2 diabetes mellitus, do psychological interventions improve glycaemic control?

METHODS

Data sources: Cochrane Central Register of Controlled Trials (issue 4, 2002), Medline (1966 to January 2003), EMBASE/Excerpta Medica (1980 to January 2003), and PsycINFO (1974 to January 2003); proceedings of conferences on diabetes (1997–2002); reference lists of identified studies and reviews; and leading authors and experts in the field.

Study selection and assessment: published or unpublished randomised controlled trials (RCTs) in any language comparing psychological interventions (supportive or counselling therapy, cognitive behaviour therapy, brief psychodynamic therapy, or interpersonal therapy) with usual care, education, waiting list, or attention control in patients ≥18 years of age with type 2 diabetes. Studies with techniques not clearly described were excluded. Individual study quality was assessed using the criteria of Schulz and Jadad (randomisation procedure, allocation concealment, withdrawals, dropouts, intention to treat analysis, and masking of outcome assessors).

Outcomes: changes in glycated haemoglobin (HbA1c) and blood glucose concentrations. Secondary outcomes were changes in body weight and psychological distress.

MAIN RESULTS

25 studies met the selection criteria. Pooling of 12 RCTs showed lower HbA1c concentrations in patients who received a psychological intervention than in control group patients (table). Groups did not differ for changes in blood glucose concentration or body weight (table). 3 of 5 RCTs showed reductions in psychological distress with a psychological intervention (table).

CONCLUSION

In patients with type 2 diabetes mellitus, psychological interventions improve glycaemic control and reduce psychological distress.

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<table>
<thead>
<tr>
<th>Outcomes at 1–6 months</th>
<th>Number of trials (n)</th>
<th>Standardised effect size (95% CI)</th>
<th>Absolute difference (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycated haemoglobin</td>
<td>12 (522)</td>
<td>-0.32 (-0.57 to -0.07)</td>
<td>-0.7% (-1.34 to -0.18)</td>
</tr>
<tr>
<td>Blood glucose</td>
<td>8 (314)</td>
<td>-0.11 (-0.65 to 0.42)†</td>
<td>-0.20 mmol/l (-1.34 to 0.91)†</td>
</tr>
<tr>
<td>Body weight</td>
<td>9 (455)</td>
<td>0.37 (-0.18 to 0.93)†</td>
<td></td>
</tr>
<tr>
<td>Psychological distress</td>
<td>5 (197)</td>
<td>-0.58 (-0.95 to -0.20)</td>
<td></td>
</tr>
</tbody>
</table>

*Abbreviations defined in Glossary. Results based on a random effects model. †Not significant.
Review: psychological interventions reduce glycated haemoglobin concentrations in type 2 diabetes

*Evid Based Nurs* 2004 7: 109
doi: 10.1136/ebn.7.4.109

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