Effectiveness of dose adjustment for normal eating (DAFNE)
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CRD summary
The authors concluded that DAFNE was an effective education programme that can improve glycaemic control and quality of life in people with type 1 diabetes but the long-term effectiveness of the programme was limited. Methodological limitations of this review make the reliability of the results uncertain.

Authors' objectives
To examine the effectiveness of an educational programme called Dose Adjustment for Normal Eating (DAFNE) for self-management of type 1 diabetes.

Searching
CINAHL, BNI, EMBASE and MEDLINE were searched from January 2000 for publications in English; search terms were reported. The authors stated that the search was conducted to the "present day" but did not specify the date. A manual search of key journal and references of relevant articles included studies published before January 2000.

Study selection
Quantitative studies that examined the effects on glycaemic control (as measured by HbA1c) of the DAFNE five-day education programme for people with type 1 diabetes were eligible for inclusion. Conference abstracts were excluded from the review.

The age of the participants in the included studies was not always reported but most studies appeared to be of adults. Where reported, the last date of follow-up ranged from one to six years after programme completion; most studies had a follow-period two years or less. Included studies were published between 1983 and 2011.

The authors did not state how many reviewers selected studies for inclusion.

Assessment of study quality
The authors used the critical appraisal skills programme tools to assess the quality of the randomised controlled trials (RCTs) and cohort studies.

The authors did not state how many reviewers assessed study quality.

Data extraction
The authors reported study characteristics and results in tables and in the text.

The authors did not state how many reviewers performed data extraction.

Methods of synthesis
The results were presented as a narrative synthesis.

Results of the review
Twelve studies were included in the review (11,620 participants): nine cohort studies (11,123 participants), one RCT (169 participants) and two controlled trials (328 participants).

All 12 studies reported a significant reduction in mean HbA1c after the programme. Studies with the longest follow-up showed glycaemic control returning to baseline levels as time elapsed.

Quality of life was reported in three studies: two reported improved quality of life after programme participation and one demonstrated significant reductions in the negative impact of diabetes after DAFNE. Results for hypoglycaemia were mixed.
Authors’ conclusions
DAFNE was an effective education programme that can improve glycaemic control and quality of life in people with type 1 diabetes but the long-term effectiveness of the programme was limited.

CRD commentary
The review question and inclusion criteria were clear. Several databases were searched. It appeared that an unpublished paper was excluded, which introduced potential for publication bias. The search was restricted to publications in English so language bias may have been present and some studies may have been missed. The search of databases was conducted from January 2000 but four papers were included from before this date through manual searching. Extending the database search to an earlier start date would have helped maintain a systematic approach. Study quality was assessed using a valid tool but the results of this assessment were not reported. It was unclear whether study selection and data extraction were carried out with sufficient attempts to minimise error and bias.

Methodological limitations of this review make the reliability of the results uncertain.

Implications of the review for practice and research
Practice: The authors stated that DAFNE should be made available to everyone with type 1 diabetes. They stated that follow-up sessions may be needed to maintain the effects of DAFNE.

Research: The authors stated that more large RCTs were needed to assess the long-term effectiveness of DAFNE. More research was needed to identify how to maintain the positive effects of this educational programme.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.