The Dose Adjustment For Normal Eating (DAFNE) project: the end of the diabetic diet in Type 1 diabetes.

The DAFNE Study Group

Aim: Current treatment of Type 1 diabetes in the UK, fails to engage patients and is associated with poor glycaemic outcomes and reduced quality of life. We tested the feasibility of a German approach involving an unrestricted diet plus skills training to adjust insulin to maintain glycaemic control.

Method: We randomised 169 adults with Type 1 diabetes in 3 centres to either undergo 5 days outpatient training immediately, (immediate DAFNE (ID)) or be controls (delayed DAFNE (DD)), delaying training for 6 months. Biomedical and psychological outcomes (impact of diabetes on QoL (ADDQoL), treatment satisfaction (DTSQ), well-being (W-BQ12)) were compared at baseline, 6 and 12 months (3×2 mixed design ANOVA with quadratic planned comparisons).

Results: HbA1c improved 6 months after training (ID and DD) and was partially maintained at one year (ID) (F=57.2,p<0.0001) (mean±SEM): 6 months: -1.0±0.1%,p<0.0001; 12 months: -0.5±0.2%,p=0.001). ADDQoL scores showed a similar pattern of improvement (e.g. dietary freedom item: F=54.6,p<0.0001), fully maintained at 1 year as were DTSQ (F=125.9,p<0.0001) and W-BQ12 (F=40.3,p<0.0001). Severe hypoglycaemia, weight and lipids remained unchanged.

Conclusion: The principles of intensive flexible insulin therapy with an unrestricted diet translate well to people with Type 1 diabetes in the UK, resulting in improved glycaemic control and quality of life and should be more generally available.