FACT SHEET TWO

The Evidence Base for DAFNE

DAFNE has a solid evidence base. The programme has been developed over more than 25 years of rigorous research. [1, 2, 3, 4] This includes a randomised control trial in Northern Europe and a feasibility trial and economic analysis here in the UK.

The results of the DAFNE study were published in the BMJ [5] in 2002, and showed clinically and statistically significant improvement in:

✔ Glycaemic control, without increased severe hypoglycaemia.
✔ Quality of life.
✔ Treatment satisfaction.

Only 4 of the 141 participants in the feasibility study did not derive some benefit from DAFNE.

An economic evaluation of DAFNE by the York Health Economics Consortium showed that reduced complication rate expected of the observed improved diabetic control means DAFNE pays for itself within 5 years [6].

The following is a list of relevant references:


Patients from 2 centres in Vienna and Dusseldorf were observed for 22 months following 5-day structured in-patient teaching in intensive insulin therapy. There was a reduction in HbA1c of around 1.5% and reductions in episodes of severe hypoglycaemia, emergency admissions to hospital and sick days off work.


Similar results were obtained in a RCT in Bucharest. The control group followed a similar knowledge based in-patient group programme, but was taught conventional insulin therapy.

Adapted for out patient use in Austria there was a reduction of HbA1c of 1.2% subsequently up to 6 years.


636 patients were studied in detail 1, 2, 3 and 6 years after attending a single course. The benefits on glycaemia were sustained for 3 years and partially for 6 and the effects on hypoglycaemia sustained throughout.

5. DAFNE Study Group. Training in flexible, intensive insulin management to enable dietary freedom in people with type 1 diabetes: dose adjustment for normal eating (DAFNE) randomised controlled trial. *BMJ:* 2002; 325:746

Presents the results of the UK DAFNE feasibility study. The results reveal that the approach pioneered in Germany can be successfully transferred to a UK healthcare setting and can improve glycaemic control. This approach also leads to significant improvements in treatment satisfaction, psychological well being and quality of life measures.


DAFNE and the economic evaluation were considered by NICE as part of the initial consultation for NICE Technical Appraisal 60, in which DAFNE is the only programme named as an example of high quality structured education.


An economic evaluation of DAFNE by the York Health Economics Consortium showed that reduced complication rate expected of the observed improved diabetic control means DAFNE pays for itself within 5 years.


The study revealed reductions in HbA1c and severe hypoglycaemia along with improved quality of life, demonstrating that the hub and spoke method of delivery of DAFNE is a feasible and effective model of structured education service provision in units unable to develop a full DAFNE service due to resource issues.
9. Oliver L, Thompson G. The DAFNE Collaborative: Experiences of developing and delivering an evidenced based quality assured programme for people with Type 1 diabetes. *Practical Diabetes International* 2009; 26 (9); 371-377


Follow-up of 104 of the 140 original DAFNE feasibility study cohort at 44 months post course show mean improvement in HbA1c from baseline was 0.36%. Quality of Life outcomes remained improved from baseline, with no difference between 12 and 44-month; revealing that the impact of a single DAFNE course on glycaemic control is still apparent in the long term. Improvements in QoL and other patient reported outcomes are well maintained over approximately 4 years.


This observational and interview study explored how, and why, the group-based approach used on DAFNE courses enhances learning, promotes insulin dose adjustments and fosters diabetes self-care practices.


This study draws on DAFNE patients’ pre-course experiences to understand why they like and benefit from the comprehensive education provided on a DAFNE course.

15. Lawton J, Rankin D, Cooke D, Clark M, Elliot J, Heller S, for the UK NIHR DAFNE Study Group. Dose Adjustment for Normal Eating: A qualitative longitudinal exploration of the food and eating practices of type 1 diabetes patients converted to flexible
intensive insulin therapy in the UK. *Diabetes Research & Clinical Practice 2011; 91*:87-93.

This repeat interview study explored patients’ food and eating practices after attending a DAFNE course. Whilst allowing more flexible eating, a DAFNE approach did not normally result in excessive or unhealthy eating. Some patients, however, came to see ‘safe’ and ‘healthy’ food as those with a low carbohydrate rather than low fat/calorie content.


This repeat interview study explored patients’ experiences of, and views about, implementing DAFNE in their everyday lives. Whilst patients preferred DAFNE to previous regimens many found they had to simplify aspects of their lifestyles to sustain this approach.

### Conference Abstracts


5. Casey D, Murphy K, Lawton J, Brown F and Dinneen S. DAFNE is ‘the best thing really for diabetes management… but you need to know to stick to it!’ *Diabetic Medicine 2011; 28 (suppl 1): 115*


13. Jackson P. Can the effectiveness of our DAFNE programmes be predicted? *Diabetic Medicine* 2010, 27 (Suppl. 1) P290:122


17. Jackson P. Who is accessing DAFNE courses and are clinical aims being met? *Diabetic Medicine* 2009; 26 (Suppl. 1) A29:11

18. Sihota SS, Patmore J, Walton C. Referral of Type 1 diabetes patients to DAFNE. *Diabetic Medicine* 2009; 26 (Suppl. 1) P144:81


24. McGowan A et al. The Dose Adjustment for Normal Eating (DAFNE) education programme decreases frequency of severe hypoglycaemic episodes, doses of basal insulin and reported hypoglycaemia unawareness. Poster at Irish Endocrine Society Meeting, Kildare, 7th November 2008


26. McKillop-Smith A and Copland S: Reduction in Severe Hypoglycaemia and DKA following DAFNE. Occurrence of severe hypoglycaemia is less frequent following DAFNE education.

DAFNE training delivered in routine practice in Aberdeen results in avoidance of admissions for diabetic ketoacidosis and severe hypoglycaemia. Any reduction in severe metabolic complications of diabetes is of major personal benefit to patients and has implication for health care cost savings. Poster at Diabetes in Scotland Conference, Heriot Watt University, Edinburgh 7th October 2008


DAFNE Online is an independent community of DAFNE Graduates, Health Care Professionals, Management and friends and family of those with Type 1 diabetes. Please visit the website to find out more.

www.DAFNEonline.co.uk

For the latest information about DAFNE please check the website or email: dafne@northumbria-healthcare.nhs.uk

www.DAFNE.uk.com