

BRUCIE: Better Regulation Using Carbohydrate and Insulin Education

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The Diabetes Control and Complication Trial showed that attention to both diet and insulin management produced better glycaemic control and reduced complication rates.¹ Previous dietary advice regarding carbohydrate concentrated on the young person being expected to eat the same quantity of carbohydrate on a daily basis and the insulin was matched to this. People with diabetes were expected to avoid all sources of refined carbohydrate and were not encouraged to adjust insulin doses. This may place misguided emphasis on quantifying carbohydrate, and therefore alter the nutritional balance of the diet compared with people without diabetes. Evidence has shown that the restriction in carbohydrate has led to a greater increase in fat,² potentially increasing cardiovascular risk.

BRUCIE

BRUCIE (Better Regulation Using Carbohydrate and Insulin Education) is an education programme delivered to young people with diabetes to support them with their eating habits and to achieve better glycaemic control through education and empowerment. The programme was initiated in Galway University Hospital to provide adolescents with diabetes attending the adolescent diabetes services with the

skills to understand which foods affect their blood glucose levels and then to relate this knowledge to their readings. BRUCIE is a 1-day practical education session provided by the dietitian and the advanced nurse practitioner in diabetes.

Individuals are followed up as a group at 3, 6 and 12 months, and are also provided with telephone and email support. The dietetic workshops are based on developing practical skills and involve the young people attending in groups of 6–8 to gain a greater understanding of the effect of diet on their blood glucose levels. Dietary education involves food games using food models, food labelling, mealtime scenarios, eating out and snack choices.

At this age, young people are making their own choices regarding the food they are eating and where they are eating it. Although what they eat may not be nutritionally optimal, it is important that they are not judged on their food choice, and education is key to ensuring that they have an understanding of the effect on blood glucose levels and insulin adjustment.

Education by the diabetes nurse involves insulin: carbohydrate ratio, insulin adjustment and sick-day rules, exercise, hypoglycaemia, alcohol and pre-conceptual advice.

The first BRUCIE education session took place in Galway in January 2008 and has been run on a monthly basis through out the year. HbA_{1c} levels and BMI are measured as primary outcomes at 3, 6 and 9 months. Treatment satisfaction and quality of life are measured using validated questionnaires at baseline and 9 months. All outcome measures are assessed again at 12 months post-BRUCIE. Verbal feedback from participants has been positive and suggests that BRUCIE has improved their quality of life. Evidence suggests that improved quality of life is associated with improved adherence to medication and glycaemic control.^{3,4} It is hoped that the BRUCIE programme will achieve similar results.

Joint education sessions with parents and adolescents, and evening education sessions for parents of adolescents who have attended a BRUCIE programme, are also provided by the team. ■

1. Diabetes Control and Complications Trial Research Group (1994) *J Pediatr* **125**: 177–88
2. Price KJ, Lang JD, Eiser C, Tripp SK (1993) *Diabet Med* **10**: 962–7
3. Guttman-Bauman I, Flaherty BP, Strugger M, McEvoy RC (1998) *Diabetes Care* **21**: 915–8
4. Hoey H, Aanstoot HJ, Chiarelli F et al (2001) *Diabetes Care* **24**: 1923–8

The IMPROVE™ Control Campaign

The Global Task Force on Glycaemic Control is a group of physicians and specialists in the field of diabetes from around the world that is working in collaboration with Novo Nordisk with the ultimate aim of identifying and developing practical solutions to the global problem of poor glycaemic control in people with diabetes. Since early 2008, the *Journal of Diabetes Nursing* has featured articles and submissions under the banner of IMPROVE™ Control – a global public awareness campaign focused on the need for improved control, which forms part of the Task Force's work. Throughout 2009, the journal will continue to bring you articles on the barriers to good glycaemic control, and submissions from *you*, our readers, outlining the strategies you have used to help people with diabetes improve their control.

For example, perhaps you have implemented a new educational session in your area that has helped break down barriers to control, or maybe you have set up a new referral pathway that has helped improve HbA_{1c} levels. The *Journal of Diabetes Nursing* would like to help you share your practical solutions for improving control, no matter how big or small, with other nurses working in diabetes. We encourage you to take part in this global initiative by calling 020 7627 1510, or emailing james@sbcommunicationsgroup.com.

