

# Carbohydrate counting – the West Suffolk way

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The National Service Framework for diabetes (Department of Health, 2001) identified the need for structured, audited, carbohydrate education for people with type 1 and 2 diabetes, particularly those on a basal-bolus insulin regimen. On this basis, in 2006, a carbohydrate-counting programme was developed by the diabetes team at West Suffolk Hospital using existing resources as no extra funding was available.

The programme involves two, 2-hour group sessions (average of 10 people) facilitated by a DSN and a dietitian. The sessions are aimed at those who already use a basal-bolus regimen (or contemplating changing to it) and those applying for insulin pump therapy. An information booklet is also given to accompany the sessions and assist in successful carbohydrate counting.

## Aims and objectives

- To provide information on different types of carbohydrates.
- To discuss the link between carbohydrate-rich foods and blood glucose levels.
- To discuss the link between insulin action and carbohydrates.
- To promote reading food labels.
- To improve quality of life.
- To promote healthy eating and weight management.
- To achieve target HbA<sub>1c</sub> levels.

## Session content

### Session 1

- Which foods affect blood glucose levels and how?
- Other important food groups.
- The different types of carbohydrates.
- Associated information: hypoglycaemic events, exercise, alcohol, injection sites, blood testing and illness.
- Revision on insulin actions (basal-bolus or twice-daily mixed insulin).

### Session 2 (only compulsory for people wanting an insulin pump)

- Individual carbohydrate ratios.
- Correction doses.
- Eating out.

## Evaluation

Attendee satisfaction data were collected at the end of each session. For the 250 attendees since the programme was started, the average Likert score was 4.6 (5 being most satisfied). Clinical data were also collected, including HbA<sub>1c</sub> level and weight at baseline, 6 and 12 months.

The mean baseline HbA<sub>1c</sub> level was 8.74% (72.4 mmol/mol). This was reduced to 8.35% (67.5 mmol/mol) at 6 months (-0.39% [-4.3 mmol/mol]) and 8.30% (67 mmol/mol) at 12 months (-0.44% [-4.8 mmol/mol]). Furthermore, improvement in achieving targets was seen, with a doubling of attendees achieving a

HbA<sub>1c</sub> level of <6.5% (<48 mmol/mol) and a 10% reduction in attendees having poor control (HbA<sub>1c</sub> level >8.5% [>69 mmol/mol]).

Although this programme allowed attendees to be more flexible with their diet, the results do not indicate weight gain any greater than could be expected in the general population – 0.30 kg and 0.56 kg weight gain at 6 and 12 months, respectively.

## Where next?

Session 2 has been changed to become an individual appointment (face-to-face or by telephone) to discuss the person's completed carbohydrate food diary. This allows for individual questions and calculation of carbohydrate ratios and correction doses.

The evaluations have been changed to collect quality-of-life data using the Problem Areas in Diabetes (PAID) score, which should be completed before session 1 and repeated at 3–6 months after the course. Practice nurses and GPs have been invited to join the sessions and can refer their patients.

With current funding, we cannot offer this programme in community locations; however, this maybe a viable option with the prospect of GP commissioning. We may also consider developing a session for those on alternative insulin regimens. ■

Department of Health (2001) *National Service Framework for Diabetes: Standards*. DH, London.

## 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, as part of the Task Force's work. Throughout 2011, 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<sub>1c</sub> 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 [jdn@sbcommunicationsgroup.com](mailto:jdn@sbcommunicationsgroup.com).

