

Bolus calculation, flexible insulin up diabetes control

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(HealthDay) -- A structured course teaching the benefits of automated bolus calculator (ABC) use and flexible intensive insulin therapy (FIIT) improves metabolic control and satisfaction in patients with type 1 diabetes, according to a study published online Feb. 16 in *Diabetes Care*.

Signe Schmidt, M.D., of Hvidovre University Hospital in Denmark, and associates evaluated a 16-week randomized clinical trial of 51 patients with [type 1 diabetes](#) to determine the effect of FIIT and ABC use. Eight participants were randomized to a control group; 21 to group teaching, which included FIIT and [carbohydrate](#) counting (CarbCount); and 22 to group teaching, which included FIIT and CarbCount using an ABC (CarbCountABC). The [control group](#) received FIIT education without carbohydrate counting.

The researchers found that, at 16 weeks, the within-group change in [hemoglobin A1c](#) (HbA1c) was -0.1 , -0.8 , and -0.7 percent in the control, CarbCount, and CarbCountABC groups, respectively. There was no significant difference between the change in the CarbCount and CarbCountABC groups. The relative change in HbA1c was -0.6 and -0.8 percent in the CarbCount and CarbCountABC groups, respectively, after adjusting for baseline HbA1c ($P = 0.082$ and 0.017 , respectively). In all the study groups there was a significant improvement in treatment satisfaction, with a significantly greater improvement found in the CarbCountABC group.

"The principles of FIIT were successfully communicated to patients in a structured three-hour course," the authors write. "In addition, the study gives indications of increased treatment satisfaction and adherence with the concurrent use of an ABC."

Several authors disclosed financial ties to Roche, which provided glucose meters and bolus calculators. Medtronic provided glucose sensors and iPro2s. The study was partially funded by Novo Nordisk.

More information: [Abstract](#)
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