Fat, protein, glycemic index all modify postprandial glycemia

May 27 2015

(HealthDay)—Dietary fat, protein, and glycemic index (GI) modify postprandial glycemia in type 1 diabetes, according to a review published in the June issue of *Diabetes Care*.

Kirstine J. Bell, from the University of Sydney, and colleagues conducted a systematic review of relevant databases to examine research on the effects of dietary fat, protein, and glycemic index on acute postprandial glucose control in type 1 diabetes. Data were included from all studies examining the effect of fat, protein, and GI (seven each).

The researchers found that fat, protein, and GI modified postprandial glycemia. The predominant effect of dietary fat was late postprandial hyperglycemia; in some studies, there was a reduction in glucose concentrations in the first two to three hours, possibly as a result of

delayed gastric emptying. Ten studies were identified that examined insulin bolus dose and delivery patterns required for high-fat and/or high-protein meals. Study findings were inconsistent regarding the optimal bolus delivery pattern; studies indicated that more insulin was required for high-fat/protein meals versus lower-fat/protein meals with identical carbohydrate content.

"These studies have important implications for clinical practice and patient education and point to the need for research focused on the development of new insulin dosing algorithms based on meal composition rather than on carbohydrate content alone," the authors write.

More information: Abstract
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