

Whole-Grain Foods and Postprandial Glycemia

In patients with type 2 diabetes, less-processed whole-grain products are associated with lower postprandial glucose levels.

Dietary recommendations for patients with diabetes include consumption of whole-grain foods. However, whole-grain foods differ in the extent to which they are processed: For example, wheat, brown rice, and oats can be finely milled or less processed. To examine whether these differences in processing translate into differences in glycemia, researchers conducted this randomized, crossover trial that involved 31 patients with type 2 diabetes (mean age, 63; mean glycosylated hemoglobin [HbA_{1c}], 7.5%).

Patients were provided either with less-processed whole grains (i.e., intact oats, brown rice, and whole-grain bread made with coarsely ground flour and cracked wheat kernels) or with more-processed whole grains (i.e., instant oats, brown rice pasta, and bread made with finely milled flour), to substitute for usual grain intake. After 2 weeks on the randomized diet and a 2-week washout period, each patient crossed over to 2 weeks on the other diet. Most patients were on oral diabetes drugs alone or oral drugs plus insulin.

All patients had continuous glucose monitoring, and mean integrated postprandial glucose was calculated for the 3 hours after each meal. This measurement was 9% lower after breakfast ($P=0.007$), and 6% lower for all meals analyzed together ($P=0.022$) during the less-processed whole-grain intervention period compared with the more-processed whole-grain intervention period.

COMMENT

Intake of coarser whole grains has a favorable effect on postprandial glycemia. These less-processed products are less available than their more refined counterparts, but recommending them to patients with type 2 diabetes is worthwhile; nondiabetic patients following carbohydrate-restricted diets might also be interested in these findings. — **Allan S. Brett, MD**

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