

Eating more legumes may improve glycemic control, lower estimated heart disease risk

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Eating more legumes (such as beans, chickpeas or lentils) as part of a low-glycemic index diet appears to improve glycemic control and reduce estimated coronary heart disease (CHD) risk in patients with type 2 diabetes mellitus (DM), according to a report of a randomized controlled trial published Online First by *Archives of Internal Medicine*.

[Low glycemic index](#) (GI) foods have been associated with improvement in glycemic control in patients with type 2 (DM) and have been recommended in many national DM guidelines, the authors write in the study background.

David J.A. Jenkins, M.D., of the University of Toronto and St. Michael's Hospital, Toronto, Canada, and colleagues conducted a [randomized controlled trial](#) of 121 patients with type 2 DM to test the effect of eating more legumes on glycemic control, serum (blood) lipid levels and blood pressure (BP).

Patients were randomized to either a low-GI legume diet that encouraged patients to increase eating legumes by at least one cup a day or to increase insoluble fiber by eating whole wheat products for three months. Changes in [hemoglobin A1c](#) (HbA1c) values were the primary outcome measure and calculated CHD [risk score](#) was the secondary outcome.

"In conclusion, legume consumption of approximately 190 g per day (1 cup) seems to contribute usefully to a low-GI diet and reduce CHD risk

through a reduction in BP," the authors note.

The low-GI legume diet reduced HbA1c values by -0.5 percent and the high wheat fiber diet reduced HbA1c values by -0.3 percent. The respective CHD risk reduction on the low-GI legume diet was -0.8 percent, largely because of a greater relative reduction in systolic blood pressure on the low-GI legume diet compared with the high wheat fiber diet (-4.5 mm Hg), the study results indicate.

"These findings linking legume consumption to both improved glycemic control and reduced CHD risk are particularly important because type 2 DM is increasing most rapidly in the [urban environments](#) of populations in which bean intake has traditionally been high (e.g. India, Latin America, the Pima Indians of Arizona)," the authors conclude. "Support for the continued use of such foods in traditional bean-eating communities, together with their reintroduction into the Western diet, could therefore be justified even if the effect on glycemia is relatively small, given the magnitude of the problem and the need for acceptable dietary options, especially those options that may also have a BP and cardiovascular advantage."

In an invited commentary, Marion J. Franz, M.S., R.D., C.D.E, Nutrition Concepts by Franz Inc., Minneapolis, Minn., writes: "The importance of the glycemic index (GI) and fiber in diabetes mellitus (DM) [nutrition therapy](#) has been controversial."

"Legumes, as documented in the study by Jenkins et al, are components of a healthy eating pattern for people with DM and the general public. Whether people with DM can eat the amount necessary to improve glycemic control is debatable, and, if legumes do improve glycemia, is it because of their low GI or high soluble fiber content?" the commentary goes on to state.

"Nutrition therapy for DM is effective. However, just as there is no one medication or insulin regimen appropriate for all persons with DM, there is no one nutrition therapy intervention. A variety of nutrition therapy interventions have been shown to be effective. Nutrition education and counseling must be sensitive to the personal needs and cultural preferences of individuals and their ability to make and sustain lifestyle changes," Franz concludes.

More information:

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