NUTRITION

Consumption of legumes might be beneficial in type 2 diabetes mellitus

A low glycaemic index diet that included high consumption of legumes reduced HbA_{1c} levels and systolic blood pressure in patients with type 2 diabetes mellitus (T2DM), reveal the results of a randomized controlled trial.

Legumes are foods with a low glycaemic index that are high in fibre, and legume consumption has been recommended in nutritional guidelines for diabetes mellitus. Nevertheless, few studies have assessed the effects of a diet with a high legume content in patients with T2DM, prompting Jenkins *et al.* to investigate the influence of such a diet on glycaemic control and cardiovascular risk factors in patients with this disease.

The researchers randomly assigned 121 patients with T2DM to receive a low glycaemic index legume diet or a whole wheat fibre diet for 3 months. The participants in the group consuming the low glycaemic index legume diet received dietary advice to increase their consumption of legumes to one cup per day of lentils, chickpeas or cooked

beans, whereas those in the whole wheat fibre diet group were advised to increase consumption of whole wheat or whole grain carbohydrates. “Our control was a very good diet high in fibre, low in saturated fat and *trans* fat and with 5–10 servings of fruit and vegetables daily,” explains lead author David Jenkins of the University of Toronto. “We did this to avoid the criticism of not using the best diet as a comparison.” Adherence to the diets was self-reported.

Levels of HbA_{1c} fell by a mean 0.5% and 0.3% in patients who had consumed the low glycaemic index legume diet and the whole wheat fibre diet, respectively. Blood pressure, heart rate and estimated coronary heart disease risk also fell in the group who had consumed the low glycaemic index legume diet.

Jenkins *et al.* conclude that their findings support consumption of legumes as a specific component of a low glycaemic index diet in patients with T2DM, despite the modest improvements in glycaemic control observed in their

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study. The researchers stress that T2DM is increasing rapidly in some urban environments in populations in which consumption of beans was traditionally high, such as Indian and Latin American populations. “As the bean-eating habit vanishes it leaves populations particularly vulnerable to diabetes mellitus,” Jenkins cautions.

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Original article Jenkins, D. J. *et al.* Effect of legumes as part of a low glycemic index diet on glycemic control and cardiovascular risk factors in type 2 diabetes mellitus: a randomized controlled trial. *Arch. Intern. Med.* doi:10.1001/2013.jamainternmed.70