

Low-carbohydrate diet reduced inflammation

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A low-carbohydrate diet, but not a low-fat diet, reduces inflammation in patients with type 2 diabetes, according to research at Linköping University in Sweden.

It is known that patients with type 2 [diabetes](#) have [higher levels](#) of inflammation than those who do not have the disease, and it is believed that this may contribute to a higher risk of [cardiovascular disease](#) and other complications. In a clinical trial at Linköping University a low-carbohydrate diet was compared with a traditional low-fat diet in 61 patients with type 2 diabetes. Only patients in the low-carbohydrate group exhibited reduced levels of inflammatory markers in blood, despite the fact that [weight loss](#) was similar in both groups.

The trial was conducted over a two year period and was led by Dr Hans Guldbrand and Professor Fredrik H Nyström. The patients were randomly assigned to a low-carbohydrate diet or a traditional low-fat diet and were given menu suggestions and advices by a dietician during three occasions of the first year. The effects on blood glucose, blood lipids and weight were recently published in the journal *Diabetologia* 2012.

In the present study, published in the journal *Annals of Medicine* the effects of diets on inflammation were studied in collaboration with cardiologist Professor Lena Jonasson. Compared with healthy individuals without diabetes, the patients exhibited significantly higher levels of [inflammatory markers](#) at baseline. New analyses were performed after six months, i.e. when adherence to the two diets was greatest and the weight loss had reached maximum. Weight reduction in

both groups was similar, around 4 kg, whereas glucose levels decreased more in the low-carbohydrate group (who had lowered their carbohydrate intake to 25% of total energy intake). After six months, inflammation was significantly reduced in the low-carbohydrate group while no changes were observed in the low-fat diet group.

In summary, the presented clinical trial resulted in a similar weight loss comparing low-carbohydrate diet and low-fat diet, but only the low-carbohydrate diet had a favourable impact on inflammation in [patients](#) with type 2 diabetes.

More information: Advice to follow a low-carbohydrate diet has a favourable impact on low-grade inflammation in type 2 diabetes compared with advice to follow a low-fat diet by L Jonasson, H Gullbrand, A K Lundberg and F Nyström. *Annals of Medicine* May 2014 Vol. 46, No. 3.

Provided by Linköping University

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