Metabolic responses to a four week Barley supplement

https://www.researchgate.net/publication/232053773

Cited in:

International Journal of Food Sciences and Nutrition (1992) 43,41-46.
Metabolic responses to a four week Barley supplement

J. P. Narain, Kalpana Shukla, R. L. Bijlani, Kanwal preet Kochhar
Department of Physiology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi-110029

Abstract

Metabolic responses to barley (Hordeum vulgare) were studied in six healthy human subjects (five male, one female). The trial comprised two dietary periods, control and experimental, of four weeks each, separated by a washout period of one week. The control diet was one to which the subject was normally accustomed. In the experimental diet, part of the daily cereal intake was replaced by 100 g of whole barley flour. The control and experimental dietary periods were random in sequence and a cross-over design was used. A meal tolerance test using a 50g carbohydrate portion of white bread was performed at the beginning and end of each dietary period. Fasting blood samples were collected for estimation of glycosylated haemoglobin, total cholesterol and triglycerides at the beginning and end of each dietary period. No measured variable changed significantly during the control period. At the end of the experimental period, the MTT incremental area under the 3h glucose curve decreased from 107.9 ± 54.8 to 91.5 ± 30.8 (mean ± s.d., mg/dl/3h; $P < 0.05$) and HDL cholesterol increased from 50.7 ± 9.2 to 65.5 ± 15.4 (mean ± s.d., mg/dl; $P < 0.05$). The observed changes are possibly mediated by the water soluble β-glucan fraction of barley dietary fibre and are favourable in relation to prevention and treatment of diabetes mellitus and atherosclerosis.

Reference

Bijlani RL, Gandhi BM, Gupta MC, Manocha S, Tandon BN. Effect of whole buckwheat (Fagopyrum esculentum) flour supplementation in lipid profile and glucose tolerance. Indian J. Med. Res 81: 162-168, 1985.