

Food and inflammation: One-third of Swedish food plants have anti-inflammatory records

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It is commonly known among patients with rheumatoid arthritis that meat products will worsen their clinical symptoms. These patients therefore try instead a lacto-vegetarian diet, often with positive results. Several clinical studies on the relieving effect of a vegetarian diet on rheumatic pains have been published, although most are small and questionable in procedure.

The use of a vegetarian diet as therapy is often referred to as an elimination therapy with direct reference to the exclusion of meat and animal products or allergens from the diet. In a vegetarian diet animal products must however be replaced by an increased intake of products from a plant source, which in turn would lead to an increased consumption of phytochemicals compared with a mixed diet. If these phytochemicals have anti-inflammatory characteristics the effects of a vegetarian diet may not only be one of elimination but also one of supplementation.

The present study was conducted to establish a database of Swedish food components and identify materials reported to influence inflammatory processes *in vitro* and *in vivo*. Organisms yielding food raw materials, as reported in a major Swedish cookbook, were identified and computer searches were carried out in Medline and Biological Abstracts databases,

The results show that 32% of Swedish common food plants have been reported to exert anti-inflammatory effects, but only 3% a pro-inflammatory effect. Animal products are mainly reported as pro-inflammatory. It is concluded that food plants can positively interact with and affect inflammation and could have a considerable potential for the treatment and/or prevention of inflammatory diseases.

References:

1. Björck S, Bosaeus I, Ek E, et al. Food induced stimulation of the antisecretory factor can improve symptoms in human inflammatory bowel disease: a study of a concept. *Gut* 2000;46:824-829.
2. Ernst E, Chrubasik S. Phyto-Anti-Inflammatories, A Systematic Review of Randomized, Placebo-Controlled, Double-Blind Trials. *Rheum. Dis. Clin. North America* 2000;26:13-27.
3. Linos A, Kaklamani VG, Kaklamani E, et al. Dietary factors in relation to rheumatoid arthritis: a role for olive oil and cooked vegetables. *Am J Clin Nutr* 1999;70:1077-82.
4. Mangge H, Hermann J, Schauenstein K. Diet and rheumatoid arthritis - a review. *Scand J Rheumatol* 1999;28:201-9.