Alkaline mineral supplementation decreased pain in rheumatoid arthritis: a randomized, controlled study.

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Objective The aim of the study was to investigate the efficacy of adding alkaline minerals in a supplementation form to the daily food intake (ordinary Western diet) as a means of suppressing the disease activity in rheumatoid arthritis (RA) patients, and to check whether any change occurs in the circulating beta-endorphin concentration.

Methods Thirty-seven patients with well-controlled RA of at least two years duration, who were receiving stable pharmacological treatment, were invited to participate in a 12-week study. All patients were randomly allocated to a supplementary diet (SD) group or to a control group (CG). Their usual diet and medication was maintained. Nineteen patients in the SD group were given 30g alkaline minerals supplement daily. Plasma immunoreactive endorphin (ir-EP) was measured in the study groups and also in healthy subjects (HS).

Results DAS 28 (Disease Activity Score 28) decreased in the SD group at Visit 2 versus Visit 1: 4.7-5.2 ($p<0.05$), and Visit 4 versus Visit 1: 4.5-5.2 ($p<0.05$). There was no change in disease activity score during the trial in the control group. Urine pH values increased statistically significantly in the SD group ($p<0.05$). The functions and emotional status (HAQ and RAQoL) of SD patients improved during the study. Negative ir-EP-DAS correlation was found in SD patients whereas in the CG patients a positive ir-EP-DAS correlation was observed.

Discussion To the best of our knowledge, up till now the acid-base balance in the diet of RA patients has not been investigated. Alkaline supplementation might act as supportive therapy.