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## Effect of conjugated linoleic acids on some bone markers in patients with active Rheumatoid Arthritis who referred to the Rheumatology Research Center of Shariati Hospital: A double blind clinical control trial

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**Background & Objective:** Rheumatoid arthritis is a systemic, chronic disease which may increase the risk of osteoporosis. This study was carried out in order to examine the effect of conjugated linoleic acids (CLAs) on bone markers in rheumatoid arthritis disease which is the most common autoimmune disease.

**Materials & Methods:** The present study is a randomized double-blind clinical trial. Subjects included 46 patients with active rheumatoid arthritis who were divided into two groups. Group I received standard treatment plus 2 daily 1.25 gram capsules (containing about 2 grams of 9-cis 11-tans isomer and 10-cis 12-tans isomer in ratio of 50-50 CLAs in glycerinated form), Group II received standard treatment plus 2 placebo 1.25 gram capsules containing sunflower oil with high oleic acid. Telopeptide C, osteocalcin, MMP3 were analyzed by ELISA method, PGE2 was done by competitive enzymatic immunoassay method, IGF-1 was analyzed by IRMA method based on the sandwich method and ALK-P of bone. Before and after intervention the questionnaires about general information and medical history were filled. Nutrition assessment with 24-hour record questionnaire about three day's diet was done. The results were analyzed using SPSS version 18 software.

**Findings:** There was no significant difference between the groups in enzyme activity of ALK-P of bone, PGE2 and MMP3 variable. However, significant differences between the groups in terms of activity of telopeptide C, osteocalcin and IGF1 were significant ( $P < 0.05$ ).

**Conclusion:** There is a potential benefit effect of CLAs on bone markers in patients with rheumatoid arthritis. Therefore, in order to study the effect of CLAs on decrease bone density reduction in patients with RA as well as all patients with autoimmune and bone diseases, more studies are required with longer duration along with the evaluation of bone density.

### Biography

Aryaeian Naheed has her expertise is in Nutrition and Immunology. She is a Faculty Member in Nutrition Department at the Iran University of Medical Sciences, Iran. Her topics of interest are Functional Foods, Nutraceuticals and Nutrition Immunity.

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