

The Effect of Soybean and Blackbean (Yak-kong; Rhynchosia Molubilis) on Bone Metabolism in Korean Postmenopausal Women

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Abstract

Osteoporosis is a major public health problem in elderly population around the world, in particular in women. The most common form of osteoporosis in postmenopausal women is associated with deficiency of estrogen. Phytoestrogens, especially soy-derived isoflavones, are receiving great scrutiny as a food supplement for preventing hormone dependent disease such as postmenopausal osteoporosis. To investigate the effects of supplementation of soybean and blackbean on parameters of bone mineral density and parameters of biochemical bone formation of Korean postmenopausal women were observed. Forty eight healthy postmenopausal women were randomly divided into three groups in a double-blind parallel design and consumed one of the supplements for 3 months; placebo of maltodextrins /sucrose mixture, soybean, and blackbean. During the 3 months of experiment no differences were found in bone mineral density (BMD) among the groups. The level of serum Ca and P showed a trend to be slightly increased after 3 months supplementation of blackbean. Apparent calcium absorption increased blackbean group, while in control group showed decreasing as compared with the baseline. The levels of serum osteocalcin and activity of ALP in soybean groups were lower than those of control groups. Supplementation of blackbean and soybean might increase calcium absorption and

improved osteoporotic condition in the Korean postmenopausal women.

Reference

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