

Effects of low dose of dried plum (50 g) on bone mineral density and bone biomarkers in older postmenopausal women.

Dina Metti, Pouneh Shamloufard, Amanda Cravinho, Paulina Delgado, Mark Kern, Bahram H. Arjmandi, Shirin Hooshmand

Our previous findings in osteopenic postmenopausal women indicated that daily consumption of 100 g dried plum for one year is highly effective in increasing bone mineral density (BMD), as well as improving indices of bone turnover. The objective of our current study was to examine whether 50 g dried plum would be as effective as 100 g dried plum in reversing bone loss in osteopenic older postmenopausal women. Forty Eight osteopenic women (65-79 years old) were randomly assigned into one of three treatment groups: 1) 50 g dried plum; 2) 100 g dried plum; and 3) control (0 g dried plum) with forty two subjects completing the study. All groups received 500 mg calcium and 400 IU vitamin D as a daily supplement. Blood samples were collected at baseline, three and six months to assess biomarkers of bone turnover. Physical activity recall and three-day food records were obtained at baseline, three and six months to examine physical activity and dietary confounders as potential covariates. Tartrate resistant acid phosphatase-5b (TRAP-5b, a marker of bone resorption) decreased at three months and six months in both dried plum groups. These results confirm the ability of dried plum in improving BMD in older postmenopausal women and suggest that lower doses of dried plum (i.e. 50 g) may be as effective as 100 g dried plum in preventing bone loss in older, osteopenic postmenopausal women. Hence, our findings suggest that the consumption of a reasonable amount of dried plum is beneficial for older, osteopenic women.

April 2015 The FASEB Journal vol. 29 no. 1 Supplement 738.12