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[Osteoporos Int.](#) 2001;12(10):858-63.

Calcium requirement estimated by balance study in elderly Japanese people.

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Abstract

The recommended dietary allowance (RDA) for calcium (Ca) of Japanese adults is proposed to be 600 mg/day, which is lower than those of other countries. In this report we estimated the Ca requirement and the RDA for Ca in elderly Japanese utilizing a Ca balance method. Subjects were 10 men aged 65-72 years and 10 women aged 62-77 years. Following a 14 day adaptation period, each participant was subjected to a low Ca diet (Ca 250 mg as a meal) for 6 days. After an interval of 2 weeks or more, another 14 day adaptation period was set and then a high Ca diet (Ca 250 mg as a meal and 600 mg as CaCO₃) was served to the subjects for 6 days. Ca balance was calculated at each dose of Ca intake. Ca requirement was estimated by the intersection of the average Ca intake-retention diagram. Daily Ca requirement was 702 mg in the men and 788 mg in the women. The Ca requirement values were multiplied by 1.2 to obtain the RDA for Ca. As a result, RDA for Ca was 842 mg/day for men and 946 mg/day for women. When these values were normalized with the body weight, the RDA for Ca of Japanese and Caucasian women was similar (18.1 and 18.5 mg/kg body weight per day, respectively). Our results suggest the difference in Ca balance between the genders and among populations may be ascribed at least partly to differences in body size. In addition, body weight should be considered when comparing the RDAs among different populations.

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