

VALIDATION OF A FOOD FREQUENCY QUESTIONNAIRE FOR CALCIUM INTAKE ASSESSMENT IN MEN

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An adequate calcium intake is of outstanding importance for bone health. Osteoporosis has long been considered a disorder of postmenopausal women; however, in the last two decades, it has become apparent that a substantial proportion of osteoporotic fractures occur among men. Few years ago we validated a semiquantitative low cost and time-sparing food frequency questionnaire (FFQ) to assess calcium intake in women. The aim of this study was to validate a modified version of the above mentioned FFQ in men. The FFQ was administered to a series of 134 men (age range 20-80 years; mean age: 47.2 ± 18.1 years) randomly interviewed and who accepted to fill a 14-day diet diary as a gold standard for comparison. Mean dietary calcium intake was 706.5 ± 226.4 mg/day from the FFQ and 703.5 ± 230.1 mg/day from the diet records. The mean difference between the two methods was -3.3 ± 43.4 mg/day and did not significantly differ from zero ($p=0.45$). The fact that the mean difference was negligible (-3.3 mg/day) could say that on average the two methods fairly agree. A highly significant correlation ($r=0.91$, $p<0.001$) was obtained between calcium intake assessed by diet records and the FFQ.

To evaluate how well the two methods were likely to agree for an individual the differences between the diaries and the FFQs were plotted against the average of the two measurements and the 95% limits of agreement were calculated by using the Bland & Altman's plot. We got a range which was -96.1 to $+89.5$ mg/day, which is acceptable for the assessment of individual calcium intake. In conclusion the FFQ presented in this study is a valid tool for calcium intake assessment in Italian men and could be useful for both epidemiological studies and therapeutic intervention.