

ABSTRACT

Adolescents grow at the greatest rate than any other age group after infancy and accumulate 37 percent of their total bone mass during this growth spurt. During this time of tremendous calcium need, most adolescents eat a diet that is very deficient in calcium. Girls consume twice less calcium than boys. In Sri Lanka about 30 percent of both males and females have low bone mass. Calcium intake studies are lacking for this age group. A cross sectional study was conducted to determine the usual dietary calcium intake of adolescents in the tea plantations in Nuwara Eliya district. Two hundred male (n=87) and female (n=113) adolescents aged between 12 to 19 years, from grades eight to thirteen were randomly selected. A pre tested general questionnaire and semi quantitative questionnaire were used to obtain general information of the subjects and usual intake of daily calcium. One day twenty four hour dietary recall was done to assess the one day calcium intake. The mean daily calcium (mg/day) intake were estimated using the FFQ and DR. Descriptive statistics, one way analysis of variance and correlation analysis were used to assess relationships of independent variables with calcium intake. The mean estimated daily calcium intakes were 445.71 ± 285.50 mg/day and 356.78 ± 189.40 mg/day ($p < 0.05$), for male and female adolescents respectively from DR. From FFQ intake for males and females were 649.55 ± 291.78 mg/day and 582.77 ± 255.54 respectively ($p = 0.253$). Daily calcium intake of 77 % of males and 83 % of females were lower than the respective RDA values by values obtained from DR. Daily calcium intake of 49 % of males and 51 % of females were lower than the respective RDA values by data given from FFQ. This study concluded a higher percentage of adolescents reported inadequate calcium intake. Among them, a higher percentage was reported in girls than boys. This study showed evidences that nutritional interventions and educational strategies are urgent to increase the calcium consumption among adolescents in order to reduce the future burden of osteoporosis in old age.